

Sustainable Urban Housing: Design Standards for New Apartments

Guidelines for Planning Authorities

Storage Guidelines on
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AN ROINN COMHSHAOIL, OIDHREACHTA AGUS RIALTAIS ÁITIÚIL

**DEPARTMENT OF THE ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT**



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Chapter 1 - Introduction

- 1.1 Apartments¹ are becoming an increasingly popular form of dwelling in urban areas. There are a number of reasons for this trend, including the impact of both the urban renewal measures promoted by this Department since 1986 and of the Residential Density Guidelines issued in 1999, as well as smaller average household sizes.
- 1.2 The primary aim of these guidelines is to promote sustainable urban housing, by ensuring that the design and layout of new apartments will provide satisfactory accommodation for a variety of household types and sizes – including families with children² - over the medium to long term.
- 1.3 The guidelines are intended to replace the “Guidelines on Residential Developments in Urban Renewal Designated Tax Incentive Areas” published by the Department in 1995. Those guidelines were framed in the context of Section 47 of the Finance Act 1994 which required that a house or apartment in a designated urban renewal area would not qualify for residential tax incentives unless it complied with the minimum standards set out in the guidelines. In the absence of any guidelines with wider applicability, the 1995 standards were referred to in the 1999 Residential Density Guidelines. There is no longer any valid reason why the scope of guidelines on apartment standards should be confined to urban renewal areas. Moreover, there has been a general trend towards larger average apartment sizes over the past decade. A number of urban development plans, together with Planning Schemes in Dublin Docklands and in Adamstown in South Dublin, now specify minimum floor areas for apartments which are significantly higher than those contained in the 1995 guidelines.
- 1.4 Accordingly, these guidelines provide recommended minimum standards for:
 - floor areas for different types of apartments,
 - storage spaces,
 - sizes for apartment balconies / patios, and
 - room dimensions for certain rooms.

¹ An apartment, for the purpose of these guidelines, may be defined as “a residential unit in a multi-unit building with grouped or common access”.

² A “family” in this context refers to a household of two or more persons, where at least one person is aged under 18.

- 1.5 The National Economic and Social Council's report "*Housing in Ireland: Performance and Policy*" (November 2004), acknowledged that in recent years there have been very important developments in the principles, strategies – most notably the National Spatial Strategy – and procedures that govern spatial development and residential settlement in Ireland. In particular, NESC commended the concept of sustainable, integrated neighbourhoods.
- 1.6 The Department's statement on housing policy "Delivering Homes, Sustaining Communities" (2007) reiterated the importance of the quality of the housing environment in creating a sustainable community. Sustainability involves the construction of homes that are structurally sound, energy efficient, environmentally friendly, and adaptable over time to changing household needs.
- 1.7 The focus of this guidance is on the apartment building itself and on individual units within it. In this context, it is critically important that construction works comply with all relevant requirements of the Building Regulations. Given the higher densities involved, particular attention should be paid to meeting requirements in relation to Fire Safety (Part B), Sound Insulation (Part E), Conservation of Fuel and Energy (Part L), and Access for People with Disabilities (Part M). The Building Regulations and associated Technical Guidance Documents can be downloaded from the Department of Environment, Heritage and Local Government website "www.environ.ie".
- 1.8 More generally, sustainable urban housing requires a wider housing/planning policy context which will be provided in a series of inter-related guidance documents currently being prepared by the Department, including:
 - Best practice guidelines "Quality Housing for Sustainable Communities" (published 2007);
 - new draft planning guidelines, provisionally entitled "*Sustainable Residential Development*". It is envisaged that these new guidelines will incorporate material from a revision of the 1999 residential density guidelines; and
 - a new best practice handbook on urban design and housing layouts, which will illustrate how the policies set out in the Residential Development planning guidelines might be implemented, with examples drawn from current practice.

- 1.9 Having regard to the changed circumstances now prevailing in the urban housing market, and to evolving Government policy with regard to housing, the Department commissioned Mr. Toal O Muiré, an architect with extensive experience in the design of new residential developments and a former President of the Royal Institute of Architects in Ireland, to undertake a research study which would provide the evidential base for new guidelines. His detailed report³ involved a review of relevant published material, meetings with a variety of groups and individuals in both the public and private sectors, and site visits to some recently completed apartment schemes. Most of the recommended standards which follow are derived from Mr. O Muiré's research study. The Department is grateful to him and to all those who participated in the study.
- 1.10 These guidelines are issued by the Minister for the Environment, Heritage and Local Government under Section 28 of the Planning and Development Act 2000. Planning authorities and An Bord Pleanála are required to have regard to the guidelines in carrying out their functions under the Planning Acts 2000 – 2006.

³ Available on the Department's website www.environ.ie

Chapter 2 - Recommended Internal Design Standards

- 2.1 The research study commissioned by the Department indicates a general need to increase the minimum floor areas as originally specified in the 1995 guidelines, particularly with a view to meeting the space and amenity needs of families who choose to live in apartments. Accordingly, the Appendix to this document outlines the recommended minimum space standards and dimensions for apartments.
- 2.2 However, even with these increased recommended space standards, it would not be in the interests of sustainable development if all apartments barely met those standards. Accordingly, both planning authorities and developers should take appropriate steps to ensure that a significant proportion of apartments in a proposed scheme exceed the minimum standards.

Development plan standards

- 2.3 There are different housing needs in different areas, as reflected in the housing strategies of development plans, and even within different parts of a large urban area. Planning authorities should therefore consider the feasibility of specifying, either in development plans and/or local area plans, target average floor areas to be achieved in apartment developments. This could take the form, for example, of requiring that a specified percentage of all apartment units in a proposed development of more than (say) 20 apartments should exceed 80 sq. metres. Thus, while some units might just meet the minimum size standards set out in the Appendix, other units would need to exceed those standards in order to achieve the specified average. The use of target averages would allow developers and designers a certain flexibility in meeting market demand and site requirements, while providing the planning authority with a reasonable measure of control over unit sizes. The overarching aim in setting target averages is to ensure sustainable residential communities, having regard to local housing needs.
- 2.4 Where minimum overall apartment floor areas are recommended, the measurements should be internal wall-to-wall dimensions. The standards apply to units on one floor; duplexes should provide the additional floor area required to provide for stairways and landings in accordance with the Building Regulations. The minimum standards are intended to apply to new apartment developments; while it should be an objective to achieve such standards in refurbishment schemes, existing site/ structural configurations may require some flexibility of approach.

2.5 It is a matter for each planning authority to specify in a local area plan which mix of unit types and sizes would be appropriate in a particular development area. In doing so, it should have regard to:

- its development plan housing strategy⁴;
- the desirability of providing for a range of dwelling types / sizes within the development area or within a large site;
- the character of, and existing mix of dwelling types in, the area; and
- the capacity of existing services and facilities in the area.

2.6 However, it is recommended that the development plan or local area plan should place an upper limit on the proportion of one-bedroom units to be included in apartment schemes (save in exceptional cases, such as student accommodation), because of their incapacity to cater for families.

Planning applications

2.7 In order that planning authorities can monitor compliance with the standards recommended in these guidelines, developers of proposed apartment schemes should be requested to submit the following data regarding the number and size of apartment units (for each building) with planning applications:

- a) Total number of proposed apartments
- b) Floor/storage area data, in a format similar to the following table:

Unit type	Proposed no. of units	Floor area of each unit	Storage area provided with each unit⁵
<i>1- bedroom</i>	<i>5</i>	<i>50 sq m</i>	<i>3.5 sq m</i>
<i>2-bedroom</i>	<i>20</i>	<i>76 sq m</i>	<i>8 sq m</i>

Note: Figures shown are illustrative only

2.8 It would also be helpful if a 1:100 scale, dimensioned floor plan drawing were submitted for each apartment type (one-, two- or three-bedrooms, duplexes etc.), on which typical furniture layouts were indicated. For example, if an apartment is designed to accommodate 5 people, the layout of living/dining rooms should demonstrate that adequate seating – including visitor seating - can be accommodated. Storage areas and

⁴ Section 94(3)(c) of the 2000 Planning and Development Act requires that a housing strategy shall take into account “the need to ensure that a mixture of house types and sizes is developed to reasonably match the requirements of the different categories of households, as may be determined by the planning authority, and including the special requirements of elderly persons and persons with disabilities.”

⁵ See chapter 3 for storage requirements and definitions.

private balconies should be indicated (but not included as part of room measurements); again, the storage areas should be capable of accommodating bulky items, such as a child's buggy.

2.9 Applicants should also document how other development plan quantitative standards – such as the provision of communal open space and parking spaces – are being complied with as part of the proposed development.

2.10 While planning applications which do not include the type of information recommended above cannot be invalidated, applicants should be advised that failure to do so may result in delays as a result of a request for further information.

2.11 Where applications are submitted in respect of proposed changes to previously permitted (but not completed) apartment developments, applicants should demonstrate how such changes affect the overall scheme, e.g. how the target average size of unit is being complied with as a result of the revised layout.

Chapter 3 - Storage areas and communal facilities

General storage

- 3.1 In addition to the recommended minimum room floor areas as outlined in the Appendix, provision should also be made in all new apartment schemes for general storage, particularly for bulky items not in daily use (e.g. suitcases, sports gear, winter clothing etc.).
- 3.2 General storage should be additional to kitchen presses and bedroom furniture, but may be partly provided in these rooms. A store off a hallway or landing will facilitate access, but hot presses or boiler space do not count as general storage. As a rule, no individual storage room within an apartment should exceed 3.5 sq metres. Some apartment schemes may provide storage for bulky items outside individual units (e.g. at basement level), and this may satisfy part of the general storage requirement.

Refuse storage

- 3.3 Adequate provision needs to be made for the storage and collection of waste materials, with appropriate reference to the projected level of waste generation, collection frequencies, and types and quantities of receptacles required. If insufficient provision is made, problems of dumping, odour and vermin are likely. Developers should therefore ascertain the relevant local authority requirements for waste management storage and collection.
- 3.4 The following general design considerations should be taken into account in the provision of refuse storage facilities:
 - Sufficient communal storage area to satisfy the 3-bin system for the collection of mixed dry recyclables, organic waste and residual waste;
 - Consideration should also be given to the provision of separate collection facilities for other recyclables such as glass and plastics;
 - Adequate ventilation of waste storage areas so as to minimise odours and potential nuisance from vermin / flies;
 - The provision of purpose-built deep collection waste bin systems where appropriate (i.e. bin opening at ground level with about two-thirds of bin stored underground);
 - Provision of appropriate signage and instructions with respect to communal waste storage and collection services;

- Provision in the layout for sufficient access for waste collectors, proximity of, or ease of access to, waste storage areas from individual apartments, including access by disabled people;
- Waste storage areas should not present any safety risks to users and should be well-lit;
- Waste storage areas must not be on the public street, and should not be visible to or accessible by the general public. Appropriate visual screening should be provided, particularly outside apartment buildings;
- Waste storage areas in basement car parks should be avoided where possible, but where they are provided, adequate manoeuvring space for collection vehicles is essential;
- Facilities for washing down waste storage areas, with wastewater discharging to the sewer;
- Provision of adequate space within apartments for the temporary storage of segregated materials prior to deposition in communal waste storage; and
- In-sink macerators should be discouraged, especially where there is adequate provision within the apartment scheme for the management of biodegradable waste, as they place a burden on drainage systems.

Shared circulation areas

- 3.5 Shared circulation areas should be well lit, preferably with some natural light and ventilation. The apartment building should be navigable by all users, including people with buggies. Internal corridors should be kept as short as possible, with good visibility along their length. Acoustic wall and ceiling treatments should be considered. Entrances to apartment buildings should be clearly identified and welcoming; hallways should not be unduly narrow.

Service ducts

- 3.6 Service ducts serving two or more apartments should as far as practicable be accessible from common circulation areas to facilitate maintenance. Running services overhead, particularly above the ceiling of a different unit, should be avoided.

Drying facilities

3.7 Communal facilities for drying clothes may be provided in well-ventilated areas in some larger schemes. Where this is not done, consideration will need to be given to the provision of drying facilities within each unit, such as screened balconies (see next chapter).

Parking

3.8 While the level of car parking provision for residential developments generally is a matter to be decided by individual planning authorities having regard to local circumstances (notably access to public transport), it is important that adequate provision be made for residents and visitors within the site. Otherwise conflicts between occupants over the use of available spaces are likely to arise, and access for emergency vehicles and delivery vehicles on internal access roads may be blocked by inappropriate parking. Most higher density schemes will incorporate underground car parking, which needs to be well lit and adequately ventilated. In such cases, designers should consider the potential to provide limited “drop-off” spaces near the apartment entrance. Where surface parking is provided, it should be lit and landscaped, and sited as close as possible to, and overlooked by, the units it serves. Designated parking spaces for disabled drivers should be provided⁶.

3.9 The need for adequate, secure bicycle parking should be addressed at the design stage. Where external racks are provided, they should be under cover.

Communal satellite dishes

3.10 To avoid subsequent demands for the installation of numerous individual satellite dishes on apartment complexes, developers should be encouraged to consider the potential for locating communal dishes as part of the overall design, e.g. at roof level.

⁶ See para. 5.8 below.

Chapter 4 Communal and private open spaces

Introduction

- 4.1 The provision of adequate and well-designed communal and private open space for each apartment is crucial in meeting the amenity needs of residents; in particular, usable outdoor space is a high priority for families. (The provision of public open space will be addressed in the Sustainable Residential Development guidelines).

Communal open space

- 4.2 Communal open space will commonly be provided within the landscaped courtyards of perimeter blocks; designers need to ensure that the heights and orientation of adjoining blocks permit adequate levels of sunlight to reach such space throughout the year. Roof gardens may offer a satisfactory alternative where climatic and safety factors are fully considered, but children's play is not passively supervised as with courtyards. All communal and private open spaces need adequate sunlight – see "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" (Building Research Establishment, 1991).

Private open space

- 4.3 Private open space can be provided in the form of rear gardens or patios for ground floor units, and balconies at upper levels. It is important that in the latter case adequate semi-private or communal open space, in the form of landscaped areas, should also be provided. Private open space at ground floor level needs some form of boundary treatment to ensure privacy and security.

Balconies

- 4.4 Balconies (or glass-screened "winter gardens", separated from living spaces) need to be of a certain minimum depth to be useful from an amenity viewpoint, being able to accommodate chairs and a small table. A minimum depth of 1.5 metres is recommended, generally extending for the full length of the external living room wall. While deeper balconies might be desirable in certain cases, this has to be balanced against the need to avoid overshadowing the living room. Balconies should be accessed from living rooms, not bedrooms.
- 4.5 Site conditions, such as elevations facing north or overlooking busy streets, or tall buildings, may diminish the amenity value of balconies. In such cases, it will be the designer's responsibility to provide some form

of compensating amenity for the occupants. This might take the form, for instance, of above-average sized living rooms and generous landscaped communal open spaces.

- 4.6 Balustrading to balconies should be safe for children. Vertical privacy screens should be provided between adjoining balconies.

Chapter 5 – Overall design issues

Introduction

5.1 While, as has already been stated, proposed new planning guidelines will address the wider planning issues involved in new residential developments, there are a number of specific issues which need to be considered at the design stage of individual apartments.

Facilities for children

5.2 As a general principle, all apartments with two or more bedrooms should be designed with the needs of children in mind. In the case of larger schemes, the 2001 planning guidelines on childcare facilities⁷ recommend the provision of one child-care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units. However, the threshold for provision should be established having regard to the existing geographical distribution of childcare facilities and the emerging demographic profile of areas, in consultation with [any] local childcare committees.

5.3 The recreational needs of children need to be planned for from the outset. Experience in Ireland and elsewhere has shown that children will play everywhere; therefore, as far as possible, their safety needs to be taken into consideration and protected throughout the entire site, particularly in terms of safe access to larger communal or public open spaces⁸. Their play needs around the apartment building should be catered for:

- within the private open space associated with individual apartments (see chapter 4);
- within small play spaces (about 85 – 100 sq. metres) for the specific needs of toddlers and children up to the age of six, with suitable play equipment, seating for parents/guardians, and within sight of the apartment building, in a scheme of 25 or more units; and
- within play areas (200–400 sq. metres) for older children and young teenagers, in a scheme of 150 or more apartments.

The perimeter block with a central communal open space is particularly appropriate for children's play, especially if access from the street is controlled. The landscaping and orientation of play areas can contribute significantly to their amenity value. However, the noise from courtyard play areas can diminish residential amenity, particularly in smaller

⁷ Available on www.environ.ie

⁸ The issue of public open space will be addressed as part of the proposed Sustainable Residential Development guidelines..

schemes, and designers need to find solutions which balance all the factors involved.

- 5.4 Higher density housing, particularly apartment schemes, require attention at the design and construction stages to prevent undue noise transmission between units, as this can be a common source of nuisance. While this is primarily a matter for the Building Regulations, children's requirements for study space also need to be considered at the design stage. The second bedroom in a two-bedroom unit should be of a sufficient size and shape to be also used for study purposes.

Daylight and sunlight

- 5.5 The amount of sunlight reaching an apartment significantly affects the amenity of the occupants. Dual-aspect apartments are likely to maximise the availability of sunlight, and should be the norm, but this solution may not always be possible (e.g. with corner units). Single-aspect apartments should allow the main living rooms to face south, west or east; north-facing units should be excluded. Particular care is needed where windows are located on lower floors which may be overshadowed by adjoining buildings.
- 5.6 The orientation of apartment blocks within a site to maximise the availability of sunlight and daylight will also assist in minimising energy consumption and reducing CO₂ emissions. As many as possible of the elevations with most glazing (e.g. living rooms, main bedrooms) should face within 30 degrees of south, and should not be overshadowed by other buildings or trees⁹. The feasibility of installing solar panels on the roofs of apartment blocks should be considered at the design stage.
- 5.7 Floor-to-ceiling heights affect the internal amenities of apartments, in terms of sunlight / daylight, storage space, and ventilation. Designers should consider the potential for increasing the minimum to 2.7 metres generally, and to 3.0 metres on the ground floor of multi-storey buildings.

Access for all

- 5.8 The aim of ensuring effective access for all should be addressed by planning authorities in dealing with planning applications for residential development, particularly in relation to the approach to apartment buildings. The aim should be to ensure that apartments can meet the

⁹ Further guidance on passive solar layouts will be provided in the proposed guidelines on Sustainable Residential Development.

changing needs of occupants over their lifetimes¹⁰. Access for people with disabilities is governed by Part M of the Building Regulations. However, a survey by the National Disability Authority¹¹ showed that in practice difficulties are frequently caused for wheelchair users because of stepped thresholds at entrances and a lack of dished pavements. Planning authorities should therefore remind designers about such issues at the pre-application stage. Ease of access can benefit the elderly and households with young children, as well as those with physical disabilities.

5.9 Consideration should be given to making parking provision on a proportional basis for apartment occupants and / or their visitors who carry a Disabled Person's Parking Card. As a guide, it is suggested that at least 5% of the total parking capacity of an apartment building should be so designated, with a minimum provision of at least one such space.

Safety and security

5.10 Apartment design should provide occupants and their visitors with a sense of safety, for example by:

- maximising natural surveillance of streets, open spaces, play areas and surface parking by making buildings overlook the public realm;
- providing a clear distinction between private and communal or public open space, including robust boundary treatment;
- minimising the number of households which share a common entrance. Entrance points should be clearly indicated, well lit, and overlooked by adjoining dwellings;
- paying particular attention to the security of ground floor apartments. An Garda Síochána's Crime Prevention Design Advisor should be consulted in this regard.

¹⁰ Guidance in relation to the design of "Lifetime Homes" is given in Appendix (ii) of the Department's best practice guidelines "Quality Housing for Sustainable Communities" (2007).

¹¹ "A review of the effectiveness of Part M of the Building Regulations" (2005). For further design guidance, see the National Disability Authority website (www.nda.ie)

Appendix

Recommended Minimum Floor Areas and Standards

Minimum overall apartment floor areas

One bedroom	45 sq m (38 sq m)*
Two bedroom	73 sq m (55 sq m)*
Three bedrooms	90 sq m (70 sq m)*

* Figures in brackets refer to 1995 guidelines

Minimum aggregate floor areas for living/dining/kitchen rooms, and minimum widths for the main living/dining rooms

Apartment type	Width of living/dining room	Aggregate floor area of living / dining / kitchen area*
One bedroom	3.3 m	23 sq m
Two bedrooms	3.6 m	30 sq m
Three bedrooms	3.8 m	34 sq m

* Note: An enclosed (separate) kitchen should have a minimum floor area of 6.5 sq. metres. In most cases, the kitchen should have an external window.

Minimum bedroom floor areas/widths

Type	Minimum width	Minimum floor area
Single bedroom	2.1 m	7.1 sq m
Double bedroom	2.8 m	11.4 sq m
Twin bedroom	2.8 m	13 sq m

* Note: Minimum floor areas exclude built-in storage presses.

Minimum aggregate bedroom floor areas

One bedroom	11.4 sq m
Two bedroom	11.4 + 13 sq m = 24.4 sq m
Three bedrooms	11.4 + 13 + 7.1 sq m = 31.5 sq m

Minimum storage space requirements

One bedroom	3 sq m
Two bedrooms	6 sq m
Three or more bedrooms	9 sq m

Minimum floor areas for main apartment balconies

One bedroom	5 sq m
Two bedroom	7 sq m
Three bedroom	9 sq m