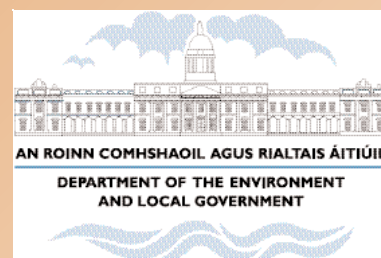


Guidelines for Group Housing for Travellers

April, 2002



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Contents

Part 1 General Page No.

1.1	Introduction	3
1.2	Guidelines issued by the Minister	3
1.3	Purpose and Application of these Guidelines	3
1.4	Scheme Design Considerations	3
1.5	Areas covered by these Guidelines	3

Part 2 Consultation and Information

2.1	Consultation with Travellers	5
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Part 3 Design Brief and Cost Control

3.1	General	6
3.2	The Design Brief	6
3.3	Content of the Brief	7
3.4	Cost Control	8
3.5	Budget Cost Approval	8

Part 4 Scheme Design and Layout

4.1	General Considerations	10
4.2	Dwelling Types and Densities	10
4.3	Design for Sustainability	10
4.4	Design for Security and Safety	12
4.5	Access	13
4.6	Services	13
4.7	Community Facilities and Other Amenities	14

Part 5 Dwelling Design

5.1	Design Approach	16
5.2	Layout and Space Provision	17

5.3	Sustainability and Energy Efficiency	17
5.4	Access and Circulation	18
5.5	Safety and Security in the Home	20
5.6	Kitchen Facilities and Layout	22
5.7	Sanitary Facilities and Bathroom Provision	23
5.8	Space Heating and Hot Water	24
5.9	Electrical and Other Services	25
5.10	Storage Facilities	26

Part 6 Bibliography

6.1	References	29
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PART I General

1.1 Introduction

Section 7 of the Housing (Traveller Accommodation) Act, 1998 requires that a relevant housing authority shall adopt, as respects their functional area, accommodation programmes for Travellers. Among the range of accommodation options which may be provided in an accommodation programme are Traveller-specific accommodation options. Group housing is one to those options.

1.2 Guidelines issued by the Minister

To date the Minister has issued Guidelines on Residential Caravan Parks for Travellers, Basic Services and Facilities for Caravans pending the Provision of Permanent Accommodation for Travellers and Guidelines for Accommodating Transient Traveller Families.

These Guidelines on group housing schemes will complete the series of such guidelines on specific accommodation for Travellers. The Guidelines have been prepared in consultation with the National Traveller Accommodation Consultative Committee.

1.3 Purpose and Application of these Guidelines

Essentially, the design, site selection, planning, environmental, technical and social aspects in relation to group housing schemes are matters for the local authorities. These guidelines, like other guidelines issued by the Department, are intended to assist local authorities in providing a reasonable standard of service at reasonable cost and set out guiding principles on selecting suitable sites, formulating a design brief, and meeting fire safety and emergency requirements. They are not comprehensive and regard should be had to other relevant requirements, consultation with prospective Traveller tenants, etc. The guidelines should be used as a basis to facilitate local authorities in making decisions specific to their own particular local circumstances. It is

not the intention to impose uniform solutions since situations may vary considerably in character across the country; therefore the guidelines should be applied in a flexible manner. Proposals, which depart from the guidelines as a result of local circumstances and requirements, will be considered on their merits. The guidelines are without prejudice to other statutory functions of local authorities including the exercise of emergency powers. The Guidelines will be kept under periodic review and amended if necessary.

1.4 Scheme Design Considerations

The successful design of group housing schemes depends on the balance struck between a range of factors. The needs and expectations of prospective Traveller tenants are of fundamental importance. In addition to adequate space and appropriate services, considerations such as sustainability, accessibility, security, safety, privacy, community interaction, etc. must be given due weight. It will generally be necessary to complete the design within a set time period and for the design solution to be such that the scheme can be constructed within given cost parameters. The achievement of a successful outcome represents a significant architectural challenge.

1.5 Areas covered by these Guidelines

The guidelines provide general design guidance at the levels of both the overall scheme and the individual dwelling unit. The aim is to identify the principles and criteria that are important for the design of group housing schemes and to highlight specific design features, requirements and standards that, from experience, have been found to be particularly relevant. They do not purport to be comprehensive or seek to prescribe specific design solutions. The intention is to assist designers rather than lessen in any way the need for proper design input. In particular, these Guidelines should not be interpreted as discouraging innovative solutions either at overall scheme or dwelling level. Innovative approaches

to the provision of group houses are encouraged provided due regard is given to the principle of good design, capital costs and cost in use.

In preparing these guidelines for group housing, account has been taken of a number of developments in recent years, which have relevance for the design of social housing generally. These include:

- increased emphasis on sustainability, including energy efficiency and environmental protection;
- Government policy on architecture;
- the application of the planning system to local authority developments;
- the introduction of national building regulations.

However, the guidelines do not purport to provide guidance on compliance with statutory requirements, e.g. the building regulations and as far as possible, do not repeat guidance given in related publications, e.g. The Technical Guidance Documents of the Building Regulations.



St Francis Park, Rathfarnham, Dublin

PART 2. Consultation and Information

2.1 Consultation with Travellers

There should be consultation between local authorities and/or their consultants and local Travellers and Traveller organisations. This consultation should take place, in so far as is practicable from the initiation of the project through to the implementation stage. Authorities should take account of the expectations and aspirations of Travellers, subject to due regard to the need to provide group housing schemes at reasonable cost. Early identification of the Traveller families for which the houses are being designed and early consultation with them is desirable.

Social workers or community workers employed, either by the local authority or health board or by a voluntary body in the area, to work with Travellers should be fully involved in the initiation, development and implementation of proposals. The Local Traveller Accommodation Consultative Committee can play a key role in ensuring that adequate consultation mechanisms are in place.

Issues requiring consultation may include the question of site selection, design features, boundary treatment,

facilities and services including the storing or keeping of a caravan or the provision of space that would facilitate Travellers visiting Traveller families who are resident in the group housing scheme within the terms of the planning legislation and fire safety regulations.

Any special needs of Traveller families who will be occupying the site should be established and built into the design at the outset. In particular, regard should be had to the needs of any elderly and disabled people and account taken of the likely turnover on the site.

The provision of a group housing scheme for Travellers must comply with the public notice procedures now follow the procedure of Part 8 of Planning and Development Regulations 2001. (Section 179 of the Planning and Development Act 2000 refers). However local authorities should also consider what further measures might be desirable to inform local residents or their representatives about proposals to provide such schemes within their area.



Ballydavid, Athenry, Co. Galway

PART 3. Design Brief and Cost Control

3.1 General

Successful design of any group housing scheme for prospective Traveller tenants requires:

- (a) a clear statement of what is required by the client, e.g. the housing authority or approved housing body, and the constraints under which the designer must operate;
- (b) clear identification of those within the client organisation responsible for decisions with regard to the scheme and
- (c) adequate professional design input.

The statement of requirements should be in the form of a design brief which is coherent and unambiguous and which incorporates a specific cost target or estimate for the project. The design brief should be prepared before a formal decision is made regarding the designer of the scheme. A specific person should be assigned responsibility for the scheme and for clarification of the brief, if required, as the design progresses.

The degree of professional input required will depend on the location, nature, size and complexity of the scheme. The content of the brief and the level of design input should be such that the choice of scheme and dwelling design will be both cost effective and appropriate to the distinct needs of the prospective Traveller tenants and that possible imaginative or innovative solutions will have been properly assessed. Where appropriate professional resources are not available in-house, the local authority should avail of the services of the National Building Agency (NBA) or engage external consultants with appropriate qualifications, skills and expertise. Where an authority engages external consultants, it should have regard to the requirements of the Department of Finance as set out in the document "Public Procurement (1994 Edition)"¹. Copies of the booklet may be obtained from the Government Publications Sales Office, Molesworth

Street, Dublin 2. The booklet may be accessed through the Department of Finance website at www.irlgov.ie/finance.

3.2 The Design Brief

A design brief should be prepared for all schemes, no matter how small, and irrespective of whether the design is carried out in-house or by consultants. The brief provides the basic ground rules for the overall design and, as such, has a fundamental bearing on the development of the design and on the quality of the completed scheme.

The brief should clearly identify the requirements the scheme is intended to fulfill, should highlight the site characteristics which are considered to be of particular importance, set out the budget and timescale envisaged for the project and direct the designer's attention to any particular statutory or other requirements which must be met. Where appropriate the brief should indicate the relative importance of specific items contained in the brief, i.e. distinguishing items as being essential, highly desirable or desirable in the context of the completed scheme.

The initial brief should be seen as the starting point for the design. While it should be as comprehensive as possible, it will generally need to be augmented or clarified at various stages of the design process. This may involve:

- providing additional information as necessary;
- deciding between available options as the design progresses; or
- choosing between requirements as it becomes clear that not all requirements specified in the original brief can be met.

The degree to which this occurs will depend on the nature and complexity of the scheme. It is important that

adequate provision is made by all parties for continuing feedback and refining of the brief during the design process so as to ensure that the final design meets the best interests of the future Traveller tenants of the dwellings. Proper attention to the briefing process will prevent misunderstandings and omissions, which may otherwise occur and will help avoid abortive work, delays and related disputes.

3.3 Content of Brief

It is not possible to provide a standard design brief suitable for all schemes. In general, the brief should refer to the guidance given in this document in relation to scheme layout and dwelling design. It should take account of previous experience with similar group housing projects, local conditions, the characteristics of the site and the preferences of the prospective Traveller tenants. Much of the contents of the brief for a given project will relate to the characteristics of the site, the particular needs to be met by the scheme and special requirements which are considered appropriate to the circumstances. Sufficient investigation should take place initially to ensure that all of the costs involved are included in the original estimate and great care should be taken to ensure that no substantial additional costs would arise once work has started on the scheme. As set out in the Guidelines for Accommodating Transient Traveller Families² local authorities should in designing group housing schemes consider the opportunity to incorporate into the design, space that would facilitate Travellers who are visiting Traveller families resident in the group housing.

Areas and issues that should generally be addressed in the brief include:

- (i) The needs to be met and the type of dwelling required:
 - the size and number of dwellings required and the dwelling mix, having regard to the distinct needs of the prospective Traveller tenants, family size, special needs e.g. disabled persons etc;
 - the type of group housing envisaged, e.g. terraced, semi-detached, bungalows etc;
 - any specific requirements regarding consultation with prospective Traveller tenants, or others.
- (ii) The overall scheme design:
 - nature and extent of landscaping envisaged;
 - inclusion, or otherwise, of an art project;
 - provision of a play area for children.
- (iii) External design of unit
 - the area of private space associated with each dwelling and the treatment of boundaries to all adjoining properties;
 - provision of parking space where required and identified at consultation;
 - storing or keeping of a caravan or the provision of space that would facilitate Travellers visiting Traveller families who are resident in the group housing within the terms of the planning legislation and fire safety regulations.
- (iv) The design of individual dwelling units:
 - space standards to be achieved within the individual dwellings, including the relationship between individual rooms, circulating areas etc;
 - the extent and nature of storage space to be provided;
 - the type of heating systems, bathroom facilities, sanitary and other services;

- preference for particular materials components or equipment for reasons such as their being indigenous to the area or compatible with the existing built environment.
- (v) Other requirements relevant to the site which might affect the design of the site:
- statutory planning and environmental assessment procedures, including compliance with the requirements of the development plan for the area;
 - requirements with regard to roads and services within or adjacent to the site;
 - the treatment of boundaries between the proposed scheme and adjoining properties;
 - the impact of the scheme in the context of its surroundings;
 - where the scheme under consideration relates to part of the overall site, the proposed uses of the remainder of the site;
 - ensuring that the scheme is generally appropriate in the context of economic, environmental and social sustainability policies relating to the wider neighbourhood.

3.4 Cost Control

In developing the design, the designer should have regard to the implications of decisions for both capital costs and costs-in-use, i.e. costs associated with the ongoing operation and maintenance of the completed dwellings. The aim should be to produce a design of high quality, incorporating innovative solutions where appropriate, while maintaining capital costs within the cost estimate developed for the scheme. Durability, maintenance characteristics and overall suitability of materials, components and fittings should be given due weight so as to ensure that cost-in-use does not prove excessive.

Factors which can be particularly significant from the point of view of cost include:

- the house type and density;
- the degree to which the topography of the site is taken into account in the design, particularly as it affects the amount of excavation required for foundations and services;
- the lengths of service runs, roads, footpaths, etc. relative to the number of dwellings provided;
- the extent of “hard” landscaping, including screen walling and front garden walls, relative to the number of dwellings being provided;
- the use of forms of construction, components or materials known to have a short life or to require a high level of maintenance;
- the use of forms of construction, components or materials which are novel, likely to be unfamiliar to the contractor or require specialist skills and a high degree of supervision to ensure proper installation.

Designers should give particular attention to features and characteristics of the site which have the potential to adversely affect the development costs of the scheme, e.g. existing streams and waterways, sharp changes of level, pockets of ground of poor load bearing capacity and features which must be preserved such as trees, buildings or other structures.

3.5 Budget Cost Approval

To ensure that a proposal is dealt with as quickly as possible by the Department, local authorities should ensure that all the relevant documents are included with a submission, i.e. a layout plan of the scheme, plans for the dwellings, a complete bill of costs/completed Form HCA 2³ and a completed Form HCA IA³ showing the overall cost of the proposal (the same documents as would be submitted with a standard local authority housing proposal).

To ensure that proper cost control procedures are observed and to avoid schemes being delayed, all proposals must have received prior approval and an approved budget cost from the Department before proceeding to invite tenders.



Pottleboy, Cootehill, Co. Cavan



Merlin/Castle Park, Galway

Part 4. Scheme Design and Layout

4.1 General Considerations

In general, the provision of a satisfactory living environment for the Traveller tenants and the long-term sustainability of the scheme should be the main considerations underpinning the approach to the overall scheme design. Key criteria include:

- maximising amenity and energy efficiency by climate sensitive design which takes account of orientation, topography and surrounding features to control wind effects while optimising the benefits of sunlight, daylight and solar gain;
- ensuring that, in so far as is practicable, the design minimises barriers to accessibility for all users - particularly the elderly and those with mobility impairment or other disability;
- ensuring that the scheme can be constructed, managed and maintained at reasonable cost and in a way which is economically, socially and environmentally sustainable. Materials should be chosen with this in mind. The design should aim to maximise the use of indigenous materials, optimise the area of roads and other hard surfaces and minimise the length of service runs. Small, poorly-defined or poorly integrated areas of public open space which may be unusable, costly to maintain and a source of nuisance to residents should be avoided;
- ensuring restraint in the use of excessively high boundary walls and in the use of excessive concrete surfaces around the houses.

Where the area of the site is greater than that required for the current proposed scheme, consideration should be given as to how the balance of the land is to be developed. With a view to ensuring the sustainability of the overall development, an action plan should be prepared for the whole site outlining, in a general way, possible uses for the remainder of the land and indicating

their relationship to each other and to their surroundings. Care should be taken to ensure that the location and layout of the group housing scheme will enhance the attractiveness of the overall development for the Traveller tenants and other users and minimise the risk of social segregation.

4.2 Dwelling Types and Densities

The choice of dwelling types should be determined primarily by the nature of accommodation needs being addressed, the location and characteristics of the site and density of the scheme being proposed.

Terraced dwellings afford advantages in terms of security, privacy, and economic use of building land and economy with regard to construction and running costs while providing reasonable scope for architectural expression.

In some cases the site will not be serviced by public water supply or sewerage services and in such circumstances, the site size will be dictated by the need to provide for water supply and sewerage treatment on site. In particular, the area must be adequate to allow for the disposal of waste from the sewage treatment plant without contamination of the water supply source for the scheme or adjacent dwellings or of the ground water generally. Guidance on the design and installation of septic tank drainage systems capable of serving more than one house is contained in BS 6297 1983⁴.

4.3 Design for Sustainability

A key design aim should be to ensure that each group housing scheme meets the distinct needs of the prospective Traveller tenant. In addition the aim should be to achieve a scheme that is economically, socially and environmentally sustainable. This is facilitated by:

- the provision of a pleasant living environment which meets the needs, and as far as possible, the

preferences of the Traveller tenants and fosters the development of community;

- the encouragement of energy efficiency both at construction stage and during the lifetime of the scheme, e.g. by climate sensitive design which takes account of the orientation, topography and surrounding features to control wind effects while optimising sunlight, daylight and solar gain benefits;
- having due regard to the social and environmental consequences associated with the use of materials and resources, e.g. minimising the use of scarce non-renewable resources and using renewable resources and materials which have minimum environmental consequences, wherever practicable; and
- the integration of the new group housing into the existing natural and built environment in a way that makes a positive contribution to the overall environment of the locality.

The scheme design should aim to maximise the use of existing natural drainage patterns and to limit the requirement for separate disposal of surface water offsite. The extent of new impervious surfaces should be limited so as to reduce peak surface water run off. The judicious use of permeable and semi-permeable surfaces and vegetation can contribute to maintaining water balance and delaying runoff.

Microclimate

The creation of a satisfactory micro-climate at the level of the group housing scheme involves a balance between the provision of wind shelter and the optimisation of the availability of daylight, sunlight and solar gain. Wind shelter, in addition to reducing the risk of wind-induced damage to buildings, can provide protection from driving rain, reduce energy requirements for space heating and make external spaces warmer and more usable, particularly for the young and elderly. Sunlight provides a

feeling of warmth and well-being. Adequate daylighting contributes greatly to a satisfactory living environment and, together with solar gain, can help reduce energy consumption and cost.

The degree to which the designer can favourably influence micro-climate is frequently determined by the size, location and nature of the site. In deciding on the site layout, designers should have regard to:

- the scope for optimising daylighting and solar gain from dwellings through the orientation and spacing of buildings;
- the scope for optimising the advantages of shelter and direct sunlight through the location and orientation of play areas, courtyards and gardens relative to existing features both on and adjacent to the site, e.g. buildings, walls, trees, hedges;
- the scope for ground shaping and landscaping to provide greater shelter and limit the extent of overshading of buildings, play areas and other areas which are intended to be extensively used by Traveller tenants; and
- the need to limit funnelling and channelling of the wind, e.g. appropriate building spacing and orientation, avoidance of long straight building lines, avoidance of passageways through buildings.

Decision regarding the retention or otherwise of on-site features, e.g. trees, vegetation or structures, should have regard to their potential to contribute to a satisfactory micro-climate for the finished scheme e.g. the degree to which they may provide overshading or act as windbreaks.

Site Drainage

The group housing scheme design should aim to maximise the use of existing natural drainage patterns and to limit the requirement for separate disposal of surface water offsite. The extent of new impervious surfaces should be

limited so as to reduce peak surface water runoff. The judicious use of permeable and semi-permeable surfaces and vegetation can contribute to maintaining water balance and delaying runoff. Existing waterways, ponds and lakes should be utilised where possible and, in specific cases, the provision of artificial detention ponds for surface water may be appropriate. Designers should have particular regard for safety requirements in such situations.

Landscape and Ecology

New group housing schemes should respect the environment in which it is situated. The natural topography should be retained, where practicable, with earthworks minimised and little or no transfer of material onto or off the site. Every effort should be made to retain existing trees and vegetation. In choosing vegetation for landscaping and planting, indigenous species and those likely to provide an attractive habitat for local fauna should be preferred.

Materials

The choice of materials for siteworks should have regard to cost, performance, durability, maintainability and overall environmental impact. Insofar as information is available, due regard should be had to the full lifecycle cost and environmental impact of the materials used. The potential for recycling and reuse should also be taken into account. There should be a preference for material from renewable or recycled sources, where available, economic and appropriate for the function. In order to limit the environmental impact and reduce the need to transport material on or off site, the design should take account of the natural topography of the site with any surplus material being used for filling or other purposes, where appropriate. The design should aim to ensure that all materials should be used efficiently with a minimum of waste.

4.4 Design for Security and Safety

Design and Security

The layout should be such as to provide the greatest possible degree of natural surveillance consistent with needs for privacy and the particular site characteristics. All public and semi-public areas should be overlooked. Roads and footpaths should be adequately lit. Dark, hidden or secluded public areas should be avoided. The fronts of houses should be overlooked from other houses or from well-trafficked public areas. “Blind” gables next to public areas and gables not open to surveillance should be avoided.

Alternative access routes both to the scheme as a whole and to individual dwellings within the scheme should be kept to a minimum. Back gardens should back on to other back gardens or secure private areas and not on to roadways or other public areas. Particular attention should be paid to security where dwellings adjoin open spaces or areas, which are difficult to secure, e.g. open land, industrial estates, railway lines or sidings.

Service meters should be located within the private garden area where they can be subject to surveillance and can be read without the need to enter the dwelling.

Materials used in public areas and in the boundaries between public and private areas should be sufficiently robust to discourage vandalism.

Design for Safety

The layout and design of roads within a group housing scheme should aim to ensure that traffic volumes and speeds are appropriate and that all forms of through traffic are discouraged. Materials used for hard surfaces, play areas, etc, should be chosen with due regard for safety in use. The general layout and design of the scheme should have regard for the need to minimise potential

hazards, e.g. in the treatment of changes of level and of open watercourses that may be retained or created. Adequate lighting should be provided for routes designed for pedestrian use, including routes to dwelling entrances and from dwellings to shops.

4.5 Access

General

The design and layout of the scheme should aim to provide safe and convenient access to all dwellings within the scheme and to adjacent facilities and services. The layout chosen should be based on the nature and size of the site and the accommodation being provided and should take account of any specific requirements of the local authority.

The needs of pedestrians, particularly children, persons with impaired mobility and the elderly, should be accorded particular importance. The design should aim to minimise vehicle flows and speeds within the scheme and, as far as practicable, to exclude through vehicular traffic from the scheme. However, care should be taken to ensure that access provision is adequate for fire, ambulance and other emergency services, as well as for refuse collection and other service and delivery vehicles.

Footpaths and Footways

Footways (paths associated with roadways) and footpaths (paths separate from roadways) should be provided to facilitate pedestrian movement within and through the scheme and to provide easy and convenient access to facilities and services adjacent to the scheme. Where dwelling access is confined to one side of the roadway, a footway on one side of the road should suffice. Footways and footpaths where provided should be as short as possible and in the interest of security, it is desirable that no part is hidden from general view, either from the

roadway or nearby dwellings.

Parking

Parking provision should be limited to that necessary to meet the needs of the Traveller tenants, visitors and users of service vehicles. Account should be taken of the likely level of vehicle ownership and excessive provision should be avoided.

Provision for Traveller tenants' parking should be within the curtilage of each dwelling as close as practicable to the dwelling entrance. The approach from the car-parking space to the dwelling should be level or gently sloping. Where required, individual curtilage parking spaces should be capable of enlargement to allow sufficient space for wheelchair access.

4.6 SERVICES

Water Supply

Every dwelling should be provided with an adequate supply of potable water. The water supply should comply with standards set down in the European Communities (Quality of Water intended for Human Consumption) Regulations, 1988 (S.I. No.81 of 1988)⁵. Supply from a public or approved group water scheme is preferred, but if not available, a suitable private supply may be used. Where it is proposed to use a private water supply, the chemical and microbiological quality of the water should be assessed for compliance with the above mentioned Regulations prior to acceptance. The adequacy of the water supply for fire fighting purposes should be considered.

Sewerage

Where possible, discharge of foul water should be to a public sewer or a sewer which forms part of an approved sewerage scheme. Where this is not possible, provision

should be made for the treatment of sewerage disposal or effluent using an appropriate wastewater treatment system.

Other Services

Every dwelling should be connected to the electricity and telephone networks and provided with a natural gas supply and TV signal via cable, where such services are available. The pipework and cabling associated with such provision should be accommodated underground. This should be facilitated by the provision of the necessary trenching and ductwork at the scheme development stage, following consultation with the various public utility providers regarding their requirements.

Location of Underground Sewers

The position of sewers, watermains and other underground services relative to each other in public areas should be clearly identified, and should, as far as possible, remain constant throughout the scheme. The layout should generally be in accordance with the established practice of the local authority and, as far as practicable, should accord with the preferences of the relevant utilities and non-statutory service providers.

In general, the preferred location for all such services is beneath footways and road verges. Sewers should generally be given priority because of the specific requirements of line and level that apply. Where space restrictions make it unavoidable, sewers may be sited under roadways.

The location of sewers, drains and other services in private areas adjacent to dwellings should be such as to allow for possible future extensions without the need for significant re-routing of such services.

4.7 Community Facilities and other

Amenities

Community Facilities

In selecting sites for group housing schemes, local authorities should give consideration to the need for and the availability of key services and amenities, e.g. shops, schools, churches, parks and playing fields, community meeting places, recreation and leisure facilities.

Children's Play Space

In deciding on the location of appropriate play areas, regard should be had to the needs of different age groups. Play spaces for small children should be provided close to the dwellings, e.g. within one minute's walk of each front door, and should be overlooked from the dwellings.

Where playgrounds appropriate for older children are not already available in reasonable proximity to the scheme, consideration should be given to providing such facilities. Playground equipment should only be installed where there is a clearly identified demand from prospective Traveller tenants and, where relevant, the residents of adjacent housing. Where this demand has not been identified at design stage, decisions on such provision should be deferred. Playgrounds should be located so that nuisance is minimised but should be overlooked informally from dwelling or frequented roads or footpaths.

Landscaping

Provision should be made for appropriate soft and hard landscaping of all common space areas. Plant species and landscaping materials with good resistance to vandalism and with low maintenance characteristics should generally be chosen while having due regard to the need to ensure variety and adequate diversity of species. Vegetation requiring regular watering in dry periods should be avoided. Every effort should be made to retain existing trees, shrubs and other landscape features. Landscaping work should be carried out by specialists and provision

for this should be included in the building contract.

Arts Projects

The Department of the Environment and Local Government “Per Cent for Art Scheme” is applicable to all local authority schemes, including Traveller group housing schemes. This scheme provides that, within the overall budget, limited funding can be allocated for the purpose of carrying out a suitable art project that would enhance the layout and visual impact of the scheme. Authorities may accumulate the funding allowed for a number of projects or combine funding from this scheme with funding from other similar schemes operated by other Departments or public bodies and apply the accumulated fund for a single appropriate art project. Authorities should avail of this facility to support public art and should seek to involve the Traveller tenants in the commissioning process as far as practicable.

The conditions of the scheme, including the funding allowed, are outlined in Department of Environment and Local Government Circular LS 1/97.



Blacklion, Maynooth, Co. Kildare

Part 5. Dwelling Design

5.1 Design Approach

The general design approach should be to create dwellings, which provide pleasant and suitable living environments for prospective Traveller tenants, are functional and have low cost-in-use over their full lifetime. Insofar as required by the brief, the designer should assess the particular needs and preferences of prospective Traveller tenants and their likely response to particular design solutions. Frequently direct consultation will not be possible and the designer will have to rely on, experience with similar type of group housing elsewhere or guidance from relevant statutory and voluntary organisations or Traveller support groups.

Regard should be had to traditions, customs and other factors or characteristics peculiar to the area or location in which the scheme is situated, e.g. preference for house types, types of external finish, fuels for space and water heating, etc. All relevant factors should be clearly identified in the brief.

Key issues to be addressed by the designer include:

- ensuring ease of access, circulation and use of the dwelling. In addition to guidance on general layout (Section 5.2) the guidance on access and circulation (Section 5.4) is relevant;
- provision of an adequate level of basic amenities. Sections 5.6, 5.7, 5.8, 5.9 and 5.10 deal with kitchen facilities, sanitary and bathroom facilities, space heating and hot water electrical and other services and storage provision, respectively;
- facilitating the range of diverse activities likely to be met in normal day-to-day living. In this context, designers should have regard to the availability of an increasing diversity of domestic appliances, communications and home entertainment equipment. It is also important to ensure that the design facilitates social interaction between the

regular Traveller tenants and between the Traveller tenants and visiting family and friends. The guidelines regarding general layout (Section 5.2) and provision of electrical goods and services (Section 5.9) are relevant.

- ensuring social and environmental sustainability, taking account of the needs of the Traveller tenants and the wider environmental impact associated with the construction and use of dwellings. Sustainability issues, with special reference to energy efficiency are dealt with in Section 5.3;
- providing for safety and security of the Traveller tenants. Relevant guidance is given in Section 5.5.

New group housing schemes commencing on or after 1 January 2001 should comply with Part M (Access for people with disabilities) of the Building Regulations 2007. The main features of which are:

- level or gently sloping approaches to dwellings;
- level access at entry door;
- sufficiently wide doors and corridors to accommodate a wheelchair;
- ground floor toilet facilities for wheelchair users and other people with disabilities.

Flexibility and Adaptability

Designers should consider not only the immediate needs of the prospective Traveller tenants but also the changing needs of the Traveller tenants over the life of the dwelling. Insofar as practicable, the design should ensure flexibility in use, accessibility and adaptability. In this connection, particular attention should be paid to the design of shared areas, e.g. kitchens, bathrooms and circulation areas. The aim should be to ensure that dwellings for general use can meet the varying needs of Traveller tenants over their lifetimes, including needs associated with moderate mobility difficulties and the

normal frailty associated with old age. Elderly or moderately disabled persons, who wish to remain independent in their own home, should be able to do so without the need for costly and disruptive remodelling of the dwelling. Special housing provision should only be necessary for those with more severe mobility difficulties or suffering from extreme frailty.

5.2 Layout and Space Provision

Layout - General Principles

In general, floor plans should aim at simplicity and convenience taking account of the main activities likely to occur in each room or space over the normal family lifecycle. The design should facilitate the accommodation of related or compatible activities in the same room or adjacent rooms or spaces, e.g. dining areas should be close to food preparation areas. It should also provide scope for the separation of incompatible activities, as far as possible, e.g. there should be scope for noisy group activities remote from study and relaxation. The plan should provide reasonable privacy for living rooms and bedrooms, taking due account of likely internal and external sources of noise.

The layout should be designed to make effective use of daylight and sunlight, as far as practicable. Dwellings should be oriented so that the main rooms get some sunlight at some time during the day. Windows should be adequately sized and room shapes should be designed to allow good daylight penetration. Daylight obstruction of nearby windows by protruding extensions or outbuildings should be avoided.

The size, shape and location of windows should also take account of the view available and the need for privacy. Views should facilitate the supervision of children at play and the immediate surroundings. Living room windows should be normally below eye level of seated persons, e.g.

glazing should begin at 800mm above floor level or lower, and there should be no transoms between this level and 1.4m above floor level. It should be noted that the use of safety glazing or guarding may be required where glazing is less than 800mm above floor level.

Space Requirements and Room Sizes

Space requirements and room sizes are primarily determined by the proposed uses of individual rooms and spaces. Provision should be adequate to allow for free circulation within each area, while accommodating appropriate furniture and equipment. In general, adequate space should be provided for the following:

- reasonable arrangement of appropriate furniture in each room;
- reasonable degree of freedom of circulation, appropriate to the likely activities;
- movement of larger items of furniture;
- accommodation of family gatherings, including occasional visitors;
- working area and storage facilities appropriate to the likely activities;
- door swings which do not interfere with other doors, furniture or circulation.

Floor plans of each room should be prepared indicating typical furniture layout and showing door swings, as appropriate.

5.3 Sustainability and Energy Efficiency

General

Factors relevant to the sustainability of the overall scheme are dealt with in Section 4.3. In the context of the individual dwelling, design for sustainability involves:

- optimisation of the energy performance of the building and the reduction of CO² emissions;
- the optimum use of renewable materials and reduction in the use of non- renewable materials in construction and during the lifetime of the building;
- promotion of the lower consumption of resources during the lifetime of the building through the use of efficient low-maintenance systems, components and fittings;
- contributing to the maintenance of a high quality indoor environment, e.g. through the avoidance of the use of synthetic materials which adversely affect indoor air quality or comfort;
- the minimisation of waste production during the construction process and the provision for recycling of both construction waste and domestic waste generated during the lifetime of the building;
- a focus on flexibility so as to facilitate adaptation to the changing needs of the Traveller tenants and maximisation of the building's lifespan.

During the design process, regard should be had to the implications for sustainability of all aspects of dwelling design. Appropriate design decisions in relation to dwelling layout, levels of insulation, amount and orientation of glazing, utilisation of solar energy, heating system and fuel type, construction materials, and measures to limit the use of potable water can contribute greatly to ensuring sustainability.

Insulation

The insulation levels indicated in the Technical Guidance Document to Part L of the Building Regulations⁸ are the minimum acceptable. Consideration should be given to incorporating higher levels of insulation where this is technically feasible and does not involve excessive additional cost.

Fuels and Heating

Efficiency, affordability and environmental impact, e.g. emissions of CO² and other harmful gasses, are particularly important in the context of sustainability.

Construction Materials

The factors outlined in Section 4.3 in relation to the choice of materials for site works are also generally relevant to materials used for dwelling construction. In particular, the design should ensure that standard sizes of materials and components can be used with minimum need for on-site modification and associated waste. In addition, designers should have regard to the desirability of limiting emissions of pollutants such as formaldehyde, solvent vapours and other volatile organic compounds which can adversely affect indoor air quality, and should take account of available knowledge in this regard when choosing materials for internal finishes and fittings.

Waste

Where the possibility of recycling particular types of waste exists provision should be made for appropriate separation of demolition and construction waste.

Storage provision for refuse containers should be adequate to allow for the storage of separate containers for different types of domestic waste, in order to facilitate recycling of such waste.

5.4 Access and circulation

General

Every dwelling should be provided with a safe and convenient means of access. Circulation within dwellings should also be safe for all users and provide a convenient route from the main access point to each of the main areas within the dwelling. The circulation areas should allow movement between the various areas without causing undue interference with the use of those areas

and should be adequate in size to allow for the movement of larger items of furniture.

Access and circulation arrangements should have regard to the varying needs of Traveller tenants over their lifetimes, including needs associated with moderate mobility difficulties and the normal frailty associated with old age. It should generally be possible for elderly and moderately disabled persons to gain access to and circulate within the dwelling without undue difficulty.

Designers should take account of relevant guidance contained in Building Regulations Technical Guidance Document K and M⁹. They should also have regard to guidance to the publication “Buildings for Everyone” published by NRB in 1998 now known as “National Disabilities Authority”¹⁰.

Main Access

The pedestrian approach to the main entrance, e.g. from public footpath, car parking area, should be at least 900mm wide and be level or gently sloping with firm, even surface. Raised kerbing, handrails and guarding should also be provided, where necessary. The main entrance should be illuminated, provided with adequate shelter, e.g., a canopy or recessed porch and have a level standing area (slope less than 1:50) clear of any door swing.

Where stepped access is unavoidable, e.g. steeply sloping sites, the steps should be designed as suitable for ambulant disabled persons.

External entrance doors should have a clear opening width of not less than 775 mm.

Security aspects of access to dwellings are dealt with in Section 5.5.

Access and Circulation Internally

Access to each of the principal rooms, including the main bathroom/WC, should be directly from the internal circulation area and not from another room. However, the dining room may open off the main living room and/or the kitchen without direct access from the circulation area. Where not integrated with the kitchen, the dining area should be adjacent to the kitchen and movement between those areas should not involve negotiation of steps or stairways. In smaller dwellings, the kitchen may be an annexe to the living room and open directly off it. The kitchen should be located so that there is a convenient direct route to the front access door and the door leading to the rear garden, where provided.

In general the sitting room (or family room) should be at entrance level.

Hallways and corridors within the dwelling should have a minimum nominal width of 900mm and should be free of intermediate steps. Radiators and other fixtures may be located within the nominal width of hallways and corridors but care should be taken to ensure that they are not positioned where they might impede the passage of wheelchairs. Internal doors should have a clear opening width of not less than 750mm.

There should be adequate circulation space for wheelchair users at entry level generally, affording them access to the main room within the living area, e.g. kitchen, dining and sitting room, and the ability to turn a wheelchair within this area.

In houses of two or more storeys with no bedroom at entry level, there should be space within the living area at this level that could be conveniently and safely used as a bedspace. The stairs design should be such as to allow future provision of a stairlift. The possibility of a future need for a through-the-floor lift from the ground to the

first floor e.g. to a bedroom next to the bathroom, should also be considered at design stage.

5.5 Safety and Security in the Home

General

Many design decisions can have safety and/or security implications. Many aspects of safety in the home are covered by the Building Regulations, e.g. structural stability, fire safety, hygiene, ventilation, (Part B and Part J of the Regulations,)¹¹ which deal with:

- (a) fire safety, including means of escape in the case of fire, limitation of fire spread, smoke alarms and access and facilities for fire services, and
- (b) the installation and location of heat producing appliances and associated flues and oil storage tanks,

are especially relevant.

Designers should have particular regard to the guidance on these matters given in the relevant Technical Guidance Documents.

In addition to complying with the Building Regulations, designers should have regard to the risks of accidental falls and other forms of accidents in the home and, in the design of dwellings, should aim to reduce these risks, insofar as practicable. In this context the abilities and limitations of children, the elderly and those suffering from a range of disabilities should be borne in mind.

Careful attention to security can significantly reduce the risk of break-ins and burglaries. The extent to which the designer should focus on security issues depends on the nature and location of the building and the degree of vulnerability of the prospective Traveller tenants. Where appropriate, the Gardai should be consulted regarding the

security aspects of the dwelling design. Designers should ensure that decisions on security measures do not adversely affect the safety of the Traveller tenants, e.g. through limiting the means of escape in the case of fire or other emergency.

Prevention of Unauthorised Entry

External features which facilitate access to upper floor entry points should be avoided, e.g. the location of drainpipes or high walls adjacent to upper floor windows.

All external door and window frames should be securely fixed to the structure. All external doors should be securely fixed to their frames using one and a half pairs of steel hinges and should be fitted with adequate locks and bolts. The doors should be of robust construction and designed to minimise the risk of break-in, e.g. any glass panels fitted to the door or adjacent to the door should be of a size, position and type which cannot be easily broken to allow direct entry or manipulation of locks or bolts. Front doors should be fitted with a door chain or opening limiter and, in the case of solid doors, a door viewer.

Recommendations regarding the location of letterplates are contained in I.S. 195 (1976) (Letter Plates, National Standards Authority of Ireland, 1976)¹² and in Department of the Environment and Local Government Circular N 10/96 (Low level letter plates in Local Authority houses, Department of the Environment, 1996)¹³. The letterplate should generally be fixed to the door with no part of the letterplate outside the region 760mm to 1450mm above the level of standing outside. It should be located where locks cannot be reached by hand or wire. The distance between the cutting for the letterplate and lock should be at least 400mm.

Safe Movement and Circulation

Floor finishes in kitchens, bathrooms and other areas

likely to get wet should be slip-resistant. Single step changes of level in circulation areas and other locations, e.g. between the working and dining areas of combined kitchen/dining room should be avoided. Doors to rooms and storage areas should be located so as not to obstruct circulation. Externally, routes to clothesline, outbuildings and the location for waste containers should be direct and free from unnecessary changes of level and should have provision for illumination.

Stairs should comply with the guidance given in Technical Guidance Document K to the Building Regulations¹⁴. Tapered steps should generally not be used. However, where their use is unavoidable, they should be located at the bottom of the stairs. Stairs should be well lit. In general, adequate natural lighting should be available for daytime use. Where it is not practicable to provide a window opening directly onto the stairwell, borrowed light from adjacent rooms or spaces may be used. Artificial light should be located where it does not cast excessive shadow particularly for a person descending the stairs. Light fittings should be located where they can be accessed easily for bulb replacement. Two-way switches should be provided at top and bottom of the stairs.

Windows and Glazing

Windows should be easily accessible for opening and cleaning. Particular attention should be paid to staircase and bathroom windows in this regard. The outside of windows at second floor and above, should be capable of being cleaned safely from inside the building.

Windows should be designed to minimise the risk of accidental falls. Opening sections of windows above ground floor level should generally be at least 800mm above internal floor level. Opening sections other than small ventilation lights should be provided with safety catches, friction hinges or other mechanisms, so that positive action or significant pressure is required to open

a section to its full extent. This is to deter opening by small children and to minimise the risk of the window inadvertently swinging open. However, where a section provides an alternative means of escape in case of fire, as described in the Technical Guidance Document to Part B of the Building Regulations¹⁵, the mechanism should allow the window to be readily opened in such an emergency.

Safety glazing should be used:

- (a) in doors and in door side panels within 300mm of door openings, where the glazing is less than 1500mm from the floor or ground and
- (b) in all locations where the glazing is within 800mm of the floor or ground,

unless the glazing is fitted with an appropriate permanent guard. However, where the smaller pane dimension is not more than 250mm and the pane area is less than 0.5 m², safety glazing need not be used provided glass of nominal thickness of 6mm or greater is used.

Kitchen

Kitchen layouts should be designed so as to provide safe working conditions, e.g. the location of doors should ensure through traffic does not interfere with the working area; the cooker position should be located away from doors, windows and circulation routes and with no cupboard directly over; storage space should be within easy reach with sufficient room for door opening.

Electricity, Heating and Gas Sources

Guidelines regarding the provision of electricity, gas and heating services are given in Sections 5.8 and 5.9. The following are important from the point of view of safety in the home. All electrical work should be carried out in accordance with the safety requirements specified in the National Rules for Electrical Installation published by the Electro-Technical Council of Ireland¹⁶. Light switches

should be easily accessible and artificial lighting arrangements should provide adequate lighting without excessive shading for the main circulation routes and work areas. Gas installations should comply with the requirements of I.S. 813: 1996 Domestic Gas Installations¹⁷. Regard should also be had to the requirements of I.S. 265, Installation of Gas Service Pipes¹⁸ and I.S. 3216, Code of Practice for the bulk storage of liquefied petroleum gas¹⁹, where relevant.

Gas and solid fuel cookers and fires should be located so as to minimise the risk of accidental fires. Open fires should be provided with fixings to enable a guard to be fixed in place.

5.6 Kitchen Facilities and Equipment

General

The size and type of kitchen provided depends on the expected occupancy and use pattern of the dwelling.

For smaller dwellings, the kitchen may be an annexe off the main living/dining room. However for larger dwellings it is desirable that there be one main living room separate from the kitchen. For these dwellings, a combined kitchen/dining area can become the focal point for shared household activities, e.g. children's play, pursuit of hobbies, casual meals and informal entertaining. The kitchen is also frequently the location of other household activities such as clothes washing and ironing. It is important that the kitchen design takes account of the space requirements to accommodate these activities.

Kitchen Facilities and Equipment

Every kitchen should be provided with a sink unit/draining board, adequate storage space for food, cutlery, crockery, small appliances and other kitchen equipment and adequate worktop space for the preparation and handling of food.

A suitable location together with the necessary gas or electrical service and/or flue connection should be provided for an electric, gas or solid fuel cooker, as appropriate. This should not be under or immediately adjacent to a window. The layout should also provide suitable locations for the later installation of a washing machine and refrigerator (or fridge/freezer). Provision should also be made for the necessary electrical and plumbing services for the washing machine and an appropriately located electric socket for the refrigerator (or fridge/freezer).

Work Surfaces

The worktop area should be 600mm deep and, exclusive of the draining board, the minimum length of worktop provided should be as follows:

- 1/2 person household 900mm,
- 3/4 person household 1200mm,
- 5+ person household 1500mm.

The sink, cooker and other fittings should be arranged so that the sequence "worktop, cooker, worktop, sink, worktop" can be continuous and unbroken by a doorway or circulation route. The sequence may be linear, L-shaped or U-shaped. The minimum length of individual worktop elements should be 300mm. The relative positions of the sink and cooker should be chosen to facilitate this sequence. For example, where provision is made for a solid-fuel cooker, the general kitchen layout should be considered when selecting the flue location.

The spaces provided for a refrigerator or fridge-freezer and a washing machine should be chosen to ensure that these appliances can be integrated with the fixed storage and equipment provided.

Layout - General Considerations

In deciding the dimensions, shape and layout of the kitchen, the following factors are important:

- there should be direct routes, other than through another room, from the kitchen to the front and rear doors;
- if the kitchen is entered directly from the rear garden, the entrance door should be adequately draught-proofed and the provision of a draught lobby should be considered;
- the cooker should be located away from internal and external doors, should not be under or immediately adjacent to a window and should be clear of circulation routes within the kitchen;
- the sink should, in general, be located under a window;
- the distance between opposite floor units, or between floor units and the opposite wall should be at least 1200mm;
- if the dining area is not adjacent and integrated with the kitchen, the layout should facilitate the location of a small table or equivalent to allow for meals to be taken in the kitchen;
- adequate natural ventilation should be provided as far as possible. Where this is not possible effective extract ventilation sufficient to prevent cooking smells and steam permeating to the rest of the dwelling should be installed; and
- adequate natural lighting and a direct view to the outside should be provided. Where this is not possible, every effort should be made to provide a view to the outside from the kitchen area, albeit through an adjoining room. Where the design allows, the kitchen window should overlook a private secure area suitable for children playing e.g. the rear garden.

5.7 Sanitary Facilities and Bathroom Provision

Sanitary Appliances

Part G of the Building Regulations 1997²⁰ specifies requirements in relation to the provision of bathrooms, bathroom appliances, hot and cold water supplies, sanitary conveniences and washing facilities, and the Technical Guidance Document to Part G gives guidance on appropriate levels of provision to meet these requirements. Designers should take account of requirements of Part M of the Building Regulations in this regard.

Where only one WC is provided it should generally be located within the bathroom containing the fixed bath and washbasin. However, dwellings designed to accommodate seven or more persons should be provided with a separate WC and washbasin.

Where a fixed bath is provided, it should have a slip-resisting surface and be fitted with a shower attachment. The bath location should be such that suitable fixing positions are available for the shower attachment, shower curtain rail and any associated fittings.

Bathroom and WC Compartment

The bathroom should be of adequate size to allow for:

- (a) suitable location of sanitary appliances;
- (b) space for normal activities associated with bathing, use of WC, etc.;
- (c) space for fitting suitable shelving and storage presses and
- (d) door opening without obstruction.

Areas of walls adjacent to the bath, shower and washbasin should be provided with a tiled or other appropriate finish so as to prevent water damage. The bathroom window

should be placed where it does not interfere with the shower area and can be opened conveniently and safely, e.g. not directly over the bath.

The location, size and layout of the bathroom and WC compartment should take account of relevant guidance contained in Building Regulations Technical Guidance Document M. Designers should also have regard to relevant guidance in the publication “Buildings for Everyone”.

The bathroom layout should be designed so that adaptation for use by wheelchair users, e.g. allowing a side approach to the bath and WC while maintaining accessibility of the washbasin, can be achieved with minimum difficulty. Walls adjacent to baths and WCs should be capable of taking adaptations such as grab rails, should these be required at a later date.

Sanitary Pipework

Sanitary pipework providing for the discharge of soil and waste water to foul water drains should generally be of the single stack type, i.e. with a single stack serving as a combined soil and vent stack. The dwelling layout should facilitate the location of relevant appliances so that unvented branch pipes can be used for each appliance.

Within any individual scheme, consideration should be given to the standardisation of the plumbing and ductwork arrangements in dwellings whose design varies otherwise. This facilitates precutting of pipework and prefabrication generally and can lead to significant economies. Adequate precautions should be taken to minimise noise nuisance and to accommodate thermal movement, particularly where the stack is located in an internal duct. Provision should be made for access for testing and maintenance purposes.

5.8 Space Heating and Hot Water

Space Heating Design Approach

In general, provision should be made for whole house heating capable of achieving and maintaining the temperatures when the external temperature is -1°C .

Heating System and Fuel Choice

The choice of heating system and fuel type should be determined primarily by expected capital and running costs, including possible servicing and maintenance costs, and the preferences of the prospective Traveller tenants. Regard should also be had to efficiency in use, ease of operation and expected emissions of smoke, CO_2 and other harmful gasses.

Where natural gas is available on site, it should generally be the preferred fuel for space and water heating, unless there are particular reasons for the use of an alternative fuel.

The most usual choice of heating system will be standard central heating system based on a single boiler per dwelling and heat distribution by hot water to radiators. However, consideration should also be given to the merits of other types of system. For smaller dwellings, in particular, the use of individual room heaters may be more efficient and economical.

Where radiators are used, they should be sized to ensure that, in normal operating conditions, heat output is adequate to meet the calculated heat losses for each room, increased by 10 W/m^2 floor area to allow for intermittent use. The need for care in choosing the location of radiators and other heating appliances is noted in Section 5.2, (Layout and Space Provision) and Section 5.4, (Access and Circulation).

Assuming a control system which does not assign priority to either space or water heating, the boiler should be sized so that its output, in normal operating conditions, is sufficient to meet the sum of the design outputs of the chosen room heaters, together with an allowance of 2kW for domestic hot water (where provided by the central heating system) and an appropriate allowance for heat losses from heating pipes located outside the heated area. The extent of such pipework should be minimised. The extent of boiler oversizing should be limited as far as practicable.

Irrespective of the main space heating system and fuel used, consideration should be given to providing a secondary means of heating in the main living room. The choice should take account of prospective Traveller tenant preferences, capital costs, running costs and the types of fuel available locally. In many cases the secondary means of heating may be an open fire or closed appliance using solid fuel, together with appropriate flue and chimney. Open fire or closed appliance using solid fuel appliances should be capable of burning smokeless fuels. Open fires should not be the source of heating for domestic hot water, nor should they provide space heating other than for the room in which the fire is located.

Hot Water

Provision should be made for an adequate supply of hot water to bath, sink and washbasins. Generally hot water will be supplied from a central store, i.e. a hot water cylinder. The minimum capacity of a hot water cylinder should be 117 litres for dwellings of design occupancy levels of up to 3 persons and 136 litres for larger dwellings. The cylinder insulation should preferably be in the form of a permanent factory-applied coating.

Where hot water provision is integral with the central heating system, and the system would not be appropriate

for the provision of hot water only, e.g. a solid-fuel based heating system, alternative provision should be made for summer hot water. This will generally be a time-controlled electric dual immersion heater. The temperature setting on the immersion heater thermostat should be no higher than 66° C.

5.9 ELECTRICAL AND OTHER SERVICES

General

Appropriate provision should be made for the following services to each dwelling:

- electricity;
- natural gas (where available);
- telephone;
- cable TV (where available).

The location of any necessary meters, fuseboards etc. should be in accordance with the requirements of the relevant utility.

Electricity

The electricity installation should comply with the requirements of the latest edition of the National Rules for Electrical Installations published by the Electro-Technical Council of Ireland (ETCI) ²¹.

- Adequate levels of artificial lighting should be provided for all rooms and circulation areas, generally by means of ceiling pendants. Consideration should be given to the use of a standard ceiling-mounting fluorescent fitting in the kitchens. Traveller tenants should be advised to use energy-saving compact fluorescent fittings in other areas of the dwelling. Consideration should also be given to the need for supplementary lighting in specific areas, e.g. adjacent to kitchen worktops, in the main living room and in the main bedroom.

- Light switches should be rockertype and should be conveniently located, generally adjacent to doorways and at a height of between 900mm and 1200mm above the floor and at least 300mm from internal corners. No more than two switches should be grouped together at any one location. Two-way switches should be provided where appropriate, e.g. for landing lights.
- Sufficient socket outlets should be provided in each habitable room. The following Table indicates the level of provision which should generally be provided. Sockets should be located for the maximum convenience of users, with at least one socket in each of two opposite walls. They should generally be between 400mm and 1200mm above floor level and at least 300mm from internal corners. However, in the kitchen at least two sockets should be located adjacent to the worktop and at a level at least 150mm above the worktop level.

Single sockets should be appropriately located for refrigerator, washing machine and dishwasher.

The single sockets may be combined depending on location.

Where an electric immersion water heater is being installed, provision should be made for the necessary switch control with timer.

All dwellings should be provided with a suitable doorbell.

Gas

Where a natural gas supply is available locally, a gas supply should be provided in each dwelling. In general, provision should be made for space heating and water heating by gas and a gas outlet provided at an appropriate location for the later installation of a gas cooker.

The installation should comply with the requirements of I.S. 813: 1996 Domestic Gas Installations²².

Table 5 Guidelines on Provision of Electric Socket Outlets

Room	No. of socket Outlets
Kitchen	3 twin sockets (4 if combined kitchen/dining), cooker outlet (if required), 3 single sockets*
Dining (if separate)	2 twin sockets
Living	3 twin sockets
Main bedroom	2 twin sockets
Other bedrooms	2 twin sockets
Hall	1 twin socket
Landing	1 twin socket

* 2 twin sockets should be located adjacent to the worktop.

Telephone

All dwellings should be provided with a single telephone outlet point located in the hallway or other appropriate location. A drawwire in conduit should be provided from this point to the chosen telephone cable entry point to facilitate the installation of the cable by the utility.

TV outlet

All dwellings should be provided with a suitably located TV outlet point with drawwire in conduit to the roof-space or other appropriate TV cable entry point in order to facilitate the installation of necessary cabling and connection to aerial or local TV cable network.

5.10 Storage

Designers should have regard to the storage needs of the prospective Traveller tenants when deciding on the

overall layout of dwellings and the sizes of individual rooms and spaces. Storage needs can be considered under the following headings:

1. Internal Arrangements

- General household storage e.g.
 - storage for larger items of household equipment and possessions, e.g. garden tools, brooms and brushes, a vacuum cleaner, an ironing board;
 - storage for smaller items of equipment and personal possessions, e.g. books, toys, sports equipment;
 - storage for equipment such as prams and pushchairs and for outdoor clothing – generally adjacent to the dwelling entrance;
- storage for clothing and household linen, e.g.
 - storage associated with clothes washing, e.g. soiled clothing, washed clothing;
 - storage for bedding and household linen;
 - storage for personal clothing.

Dwellings should be provided with a basic level of storage facilities at construction stage and the size and shape of individual rooms and spaces should be such as to be adequate to allow reasonable choice to the Traveller tenants with regard to the location of presses, wardrobes and other storage facilities. In general, provision should be made, at design stage, for general storage, kitchen storage fittings, space for pram or pushchair, fuel storage and location for refuse containers.

General storage provision

All dwellings should be provided with a basic level of general storage. Designers should aim to provide some

general storage space on each floor of the dwelling. General storage space should preferably be accessible from the circulation area but should not be such as to encroach on required circulation space or impede free movement.

A space for hanging outdoor clothes should be provided adjacent to the main entry. In family dwellings a space for a pram or pushchair should be provided in the same area.

A storage press for washed clothing and general household linen should be provided in all dwellings. The minimum capacity should be 0.5 m³ for dwellings for four or more persons and 0.3 m³ for smaller dwellings. This press should be accessible from the circulation area and where practicable, be adjacent to the domestic hot water cylinder, e.g. in the form of a hotpress or airing cupboard.

The dimensions of bedrooms and livingrooms should be such as to allow reasonable choice for the Traveller tenants in relation to the locations of additional storage facilities, e.g. additional presses for blankets, household linen etc, wardrobes and presses for personal clothing and effects. In family dwellings, provision should be made for a child resistant lockable medicine cabinet or store. This will usually be located at high level in the kitchen or bathroom.

2. External Arrangements

- Refuse storage;
- Solid fuel storage.

Individual houses and other dwellings provided with direct external access and adjacent private open space, should allow for the location of part of the general storage provision externally. This may be provided separate from the main building, e.g. in a garden shed or out-house, or attached to the building. The location of stores, sheds or

outhouses should be chosen so as to minimise obstruction of views, limit possible interference with future extensions and contribute to screening and shelter, where appropriate.

All dwellings should be provided with an appropriate location for the storage of refuse containers. This will generally be an external location, which is convenient for the Traveller tenants and facilitates the refuse collection service. Where local authorities operate a wheelie-bin service for the collection of refuse, such bins should be supplied to group housing schemes.

Dwellings with provision for the use of an open fire or other solid fuel appliances should be provided with an appropriate storage space for solid fuel. This may be in the form of a fuel bunker. The minimum capacity should be 0.35 m³ except where solid fuel is the main fuel for space heating when the minimum store size should be

1.35 m³. The location of refuse bins and fuel storage should be such as to avoid the need for excessive carry distances. Designers should also make provision for any storage needs which may be associated with other fuels, e.g. oil.

The use of large areas of concrete, cobble-lock or tarmac should be avoided in the design of group schemes and provision should be made for a garden area at the rear of the house.



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