Clúid Housing’s
Design Guide
2016 – 2020
Contents

3  FOREWORD
4  ABOUT THE DESIGN GUIDE
6  WHAT DOES A GOOD SCHEME LOOK LIKE?
9  CONTEXT
11  CONNECTIONS
14  INCLUSIVITY
17  VARIETY
18  DISTINCTIVENESS
21  PEOPLE FRIENDLY
23  SECURE
25  QUALITY AND DESIGN
50  ADAPTABILITY
54  EFFICIENCY
56  VALUE FOR MONEY
59  OLDER PERSONS HOUSING
69  REFERENCE WEBSITES
70  APPENDIX A
“Clúid’s vision is a society where everyone has a great place to live.”

Successful Regeneration Development at St Michael’s Road, in Longford Town, Co Longford, completed 2013
Welcome to Clúid Housing’s design guide. Clúid Housing is a non-profit housing association. At the core of our operations is our belief that good housing, well located and let on affordable terms provides a key element which facilitates access to many of society’s goods and enables households to thrive. We contend that a healthy social housing sector is an indispensable ingredient for a properly ordered and highly functioning housing market.

We take seriously our obligations to our residents to provide well-built and affordable housing. We have additional responsibilities to our funders, both public and private, to ensure that their investment is safeguarded. As a social housing provider, huge public trust is placed upon us to develop sustainable housing which enhances the life chances of our residents. The housing we develop must be far removed from the ‘welfare housing’ of former times and be capable of being fully integrated into the wider community and built environment.

Developers who work with Clúid Housing will have the benefit of working with an organisation that has successfully developed social housing for over 20 years. Clúid Housing is a practised and successful company, association with which will benefit your company. Developers will recognise an organisation which is easy to work with and which appreciates those considerations which contribute to a good working relationship.

The main principles of the guide emerge directly from our business concerns of providing long-term secure rental housing. Our management and maintenance obligations continue long after the property has been constructed. Therefore our properties must have the virtue of ease of maintenance to ensure they remain affordable long into the future.

Our funding models rely on our properties continuing to be in high demand and without vacancies. Our core objectives are to develop housing that is:

- Sustainable into the long term, enhancing the built environment as it ages;
- Affordable for residents to live in so they continue to invest in their home;
- Capable of being maintained easily and cost effectively;
- Responsible spending of public funds and value for money;
- Flexible to cater for changing tastes and different household formation;
- Attractive and desirable as a long-term home.

We want to offer residents attractive places to live in which enhance existing settlements. A successful development for us is one where residents wish to put down roots and invest in their homes and communities.

BRIAN O’GORMAN
Chief Executive
Clúid Housing Association
This guide aims to establish a framework that will increase awareness and understanding of excellent design within residential developments. It is not intended to be overly prescriptive but to demonstrate what factors make a good residential scheme for Clúid and what creates vibrant thriving communities.

The publication is informed by national policies developed by the Department of Housing, Planning, Community and Local Government (DHPCLG) http://www.housing.gov.ie/, such as the Housing Policy Statement 2011, Sustainable Residential Development Guidelines for Planning Authorities 2009, Quality Housing for Sustainable Communities 2007 and the National Housing Strategy for People with Disability 2011-2016.


In addition the guide takes account of recent research carried out by Clúid into housing and support needs for Clúid’s older tenants, A Home For Life http://www.cluid.ie, and an in-depth consultation process with Clúid’s tenants.

The development of social housing is a major investment for the public purse and the voluntary housing sector. Design of new housing schemes can enhance the local environment, create and reinforce a sense of place by producing attractive communities for people to live and invest in.

This guide will establish a set of agreed standards to be achieved by those involved in housing provision for Clúid. Design compliance with the agreed standards should ensure the delivery of quality housing developments and the creation of homes rather than houses. It is envisaged that Clúid will be widely recognised as an organisation that creates residential environments that are visually attractive, safe, convenient, secure, economical to build, occupy and maintain.
“Since about the age of 15 I’d been in and out of hospital. I’d come to the conclusion that I’d spend the end of my days in institutions or high support hostels because that was all I’d known for years... Luckily my nurse suggested going for an interview to see if I could get into Clúid. I was made to feel welcome from the very first moment that I came in for an interview. They’re so dedicated to their job and what they’re doing. They want everyone to be comfortable and happy where they are. For the first time in my life I have my own place to call my own home, somewhere I can be very proud of. And it’s very reassuring to know that I’m being looked after as well.

My self-esteem has improved as well because I’m not ashamed to bring people into my home. I was even talking to a friend of mine recently and she made a point that she thinks my health has improved so much. I’ve been written off so many times and I feel like things have really turned around for me. I’m in a very good place now in my life and in my home.”

Daniel Meehan, Clúid Tenant
What Does a Good Scheme Look Like?

The quality of the housing environment is central to creating a sustainable community. Sustainable neighbourhoods are areas where efficient use of land, high quality design and effective integration in the provision of physical and social infrastructure combine to create places where people want to live.

Clúid scheme at Ard Na Solais is a very successful mixed tenure scheme in Dundalk, Co Louth.
How do you know if your scheme is a good one? Let’s start by asking some key questions.

**Will the development:**

- Promote social integration and provide for a diverse range of household types, age groups and mix of housing tenures?
- Provide well-designed, adaptable accommodation which will provide Clúid’s tenants with a home for life?
- Be sustainable, improve comfort and energy efficiency and limit fuel poverty?
- Ensure accessibility for everyone, including people with disabilities?
- Include the right quality and quantity of public open space?
- Include measures to ensure satisfactory standards of personal safety and traffic safety within the scheme?
- Present an attractive and well-maintained appearance which is cost effective?
- Protect, and where possible enhance, the built natural heritage and environment?

The objective is to produce high quality sustainable homes and neighbourhoods, places where people actually want to live, work and raise families and places that work and will continue to work for generations to come.

**A good scheme must:**

- Respect its location and site context;
- Be well-connected to amenities, services and surround communities;
- Be inclusive in every aspect of its design;
- Offer variety of housing accommodation and promote mixed tenure communities;
- Be distinctive in its design approach to both the buildings and external environment, creating a sense of place;
- Create people-friendly streets and spaces which are easy to move through.
- Provide parking which is secure and attractive;
- Provide well-designed and adaptable accommodation for our tenants which will grow with their changing needs;
- Be of good quality with a focus on value for money, and a lower cost in use;
- Be energy efficient with a particular focus on fuel poverty;
- Provide well-designed refuse disposal for all homes, easy to access and use, which avoids causing a nuisance.
Under a series of headings we look more closely at what Clúid considers a good residential scheme to be and offer guidance on how this can be achieved with a set of simple questions and responses.
How does the development respond to its surroundings?

Designers should make full use of any of the site’s natural features that can help to create a more sustainable development and integrate the development with the surrounding built environment, using the correct materials, forms and landscape elements, for example by respecting existing street lines and urban structures.

A good example of this is Fr Scully House which complements the existing urban fabric of Dublin’s Georgian terrace on Mountjoy Square in Dublin. Designers are encouraged to seek design solutions appropriate to each site, taking into account the location, type, size and density of development proposed.

A Clúid scheme should not be identifiable as social housing. It should blend with its surroundings and as a minimum, be of equal quality and finish to private housing in the same development.

Architectural context is as important for houses in rural locations as it is for those in urban settings. It is essential that new houses be properly integrated into their surroundings.
St Saint Vincent de Paul, Gorey, Co Wexford, is a successfully integrated scheme in a rural context.

Checklist

☐ Reinforce the local community – Avoid creating something that is too different or that ‘turns its back’ on the neighbourhood.

☐ Creating Places of Distinction – drawing from local context strengthens the identity of the scheme and the whole neighbourhood.

☐ Work with the contours of the land.

☐ Using existing site assets – views, slopes, trees, etc are all local assets to be exploited.

☐ Integration with surroundings – using the right materials, forms and landscape elements for the locality.

☐ Consider connectivity to existing access roads and footpaths.
Connections

How well is the site connected?

Generally people like to feel involved in their community and no new residential development should ignore its neighbours. The more physical connections they have with their neighbours the stronger the community will become. The best models of housing development look beyond the ‘red line’ of the site.

Successful communities require a full range of local services and facilities, including commercial, educational, health, religious and civic uses. These need to be conveniently sited and connected to residential areas by safe and comfortable access routes. It must be accessible via public transport networks and also meet the needs of the pedestrian and cyclist. Footpaths should be designed so as to follow natural pedestrian routes for example to shops and public transport links. A Clúid scheme should be permeable, accessible and usable for all.

In more rural locations where there is an over-reliance on car usage, access roads should be suitably designed and constructed to allow for good connectivity to amenities and services. Footpaths to local towns and villages should be provided with appropriate public lighting. The development should enhance the existing community and create a desirable place to live.

“Place making is like home making. Home making turns a house into a home. Place making turns a space into a place.”

David Engwicht, Writer

Adamstown, Dublin, creates good connections within the strategic development zone and with neighbouring communities.
Ladyswell, Mulhuddart, Co Dublin – Proposed Clúid Development. Example of scheme which connects well to its neighbourhood and amenities

The design of cul-de-sacs should generally be avoided since they work against permeability, reduce connectivity and increase reliance on car usage. If they are to be included within a design, they should serve no more than 25 dwellings off a shared public access.

**Checklist**

- Existing routes across a site for example should be respected and enhanced, not closed off.
- New routes should be designed to encourage as much use as possible and safely cater for pedestrians, cyclists and cars.
- Respecting local footpaths, historical routes and maintaining links to the existing community is critical and should not be ignored.
- Where routes need to be redesigned relocated or even closed ensure good community connections are retained.
- Create connections that are attractive, well lit, overlooked and safe.
- Ensure routes pass in front of houses not behind.
Clúid development site at Rathnew, Co Wicklow

Key Features

A  Houses address main road.
B  Rear gardens back on to each other. No. gardens backing on to public areas.
C  Natural surveillance of open spaces.
D  Mix of housing types.
E  Play areas for children.
F  Attractive public amenity spaces.
G  Trees & planting to break up streetscapes & boundaries.
H  Roads that meander through the site.
I  Ample parking for residents and visitors.
J  Attractive communal spaces within apartment complexes.
Inclusivity

How easily can people use and access the development?

Design the scheme so it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability. By considering people’s diverse needs and abilities throughout the design process, reflecting the lifecycle approach, schemes that meet the needs of all can be achieved.

Roads, streets and footpaths should be designed in accordance with the Design Manual for Urban Roads and Streets (DMURS) 2013, http://www.housing.gov.ie/sites/default/files/migrated-files/en/Publications/DevelopmentandHousing/Planning/FileDownload,32669,en.pdf which sets out an integrated design approach. The design of residential streets should strike the right balance between the different functions of the street, including a ‘sense of place’.

Your development should:

- Prioritise public transport, cycling, walking and dissuade car use;
- Ensure accessibility for everyone, including people with disabilities;
- Include measures to ensure satisfactory standards of personal safety and traffic safety within the scheme;
- Ensure a compact and easily walkable form of development that will make walking and cycling, especially for local trips, more attractive than using the car;
• Where possible, create child and pedestrian-friendly car-free areas, especially in higher density schemes, through the careful location of access streets and parking areas;

• Consider site features that could provide a challenge to some people in the community. Steeply sloping sites are difficult for walking, cycling, pulling luggage, pushing a buggy, a wheelchair, or for toddlers and older people.

Layout design must take into account the need for access to all dwellings for refuse collection, emergency appliances, delivery and removal vehicles. On estate roads flush dropped kerbs should be incorporated along main footpaths and the road enabling level access to dwellings, wherever possible. Where appropriate, shared surfaces should be used to enforce a sense of character and reduce vehicular speed. The design of shared surface areas must convey a sense of pedestrian and vehicular movements and through signage and use of different materials it must be made clear that the car no longer has priority over the pedestrian.

Adamstown, South County Dublin – A good example of Home Zone Design
Checklist

☐ The layout should ensure that the site is legible, is easily to navigate.

☐ Provide visual clues or markers within the development to allow people to orientate themselves around the site.

☐ Create streets defined by buildings.

☐ Design buildings that turn corners well.

☐ Use a pattern of road types to create a hierarchy.

☐ Ensure that there are no dead ends or large cul-de-sacs within the development.

☐ Think how easy it is to make a mental map of the area.

☐ Ensure open spaces between buildings have a function.

☐ Streets should connect to other streets providing a series of direct routes between places. Design streets as social places.

☐ Always ensure that houses front on to the street.

☐ Never have back gardens fronting on to a road.

☐ Use best quality hard landscape materials when possible.

☐ Provide good natural surveillance.

☐ Avoid excessive street signage or furniture.
Variety

How does the development promote a good mix of housing?

The scheme should provide a good mix of housing types with an appropriate balance between social and private, regardless of the scheme’s size. The preferred mix for a development will largely be dictated by Clúid and the individual local authority’s demand in the scheme area. In addition, the mix should provide a variety of accommodation sizes to house families of varying sizes and needs.

A good scheme should make provision for older persons and housing for special needs groups. Where special needs housing is provided, it should ideally be dispersed throughout the site to avoid a concentration in one area. On occasion it may make sense to look to small clusters of special needs accommodation. This will be particularly true in terms of urban design where it may be necessary to group single storey units in the same part of the site.

In the past, Clúid developed successful schemes involving use of terraced, semi-detached, detached, duplex and apartment type dwellings. It considers all these dwelling types as potentially suitable design solutions depending on the appropriateness of how they are being used. For example, duplex use has proved more successful. This is where the unit has been ‘turned upside down’ to provide ground floor access (and frequently garden space) to the larger family unit.

Urban area schemes are likely to require designs with higher densities and involve duplex use and apartment-type house forms. High density does not mean inferior design. To achieve sustainable residential densities, the Department of Housing, Planning, Community and Local Government publication, *Residential Density Guidelines for Local Authorities*, should prove useful.
How will the scheme create a sense of place?

The most lasting impression of any housing development is likely to be created by the external spaces between buildings and not just the buildings themselves. These spaces are defined by the buildings, landscaping, gardens, boundary treatments, roads, footpaths, street lighting, furniture and signage. All these elements are instrumental in creating a distinct sense of place.

Where there are many houses or apartments of consistent design it is important to make it easy for everyone to identify their own home, for example by using distinctive design features such as door colours, boundary treatments, planting and porch canopies.

In the same way a neighbourhood should have character, so the buildings should also have a positive distinctive character. Traditionally the architectural style in a region was dictated by local materials and building skills, local climate conditions, topography etc. This created a link between architecture and the people who lived in the buildings.
Distinctive architectural features
– St Vincent de Paul scheme, Malahide, Co Dublin

PKA Architects
“All buildings, large or small, public or private, have a public face, a facade; they therefore, without exception, have a positive or negative effect on the quality of the public realm, enriching or impoverishing it in a lasting and radical manner. The architecture of the city and public space is a matter of common concern to the same degree as laws and language—they are the foundation of civility and civilisation.”

Leon Krier, Architect

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**Checklist**

- Use the scale and shape of the buildings to create form rather than relying on bolting on pointless materials elements such as gables over windows or ‘feature’ brickwork.

- Limit the range of materials to a simple palette, i.e., brickwork and stone or robust cladding.

- Consider any local materials and regional details such as rooflines, scale and window proportions.

- Use significant corners and gateways as places to add interest through height, materials or detailing.

- Locate meter boxes, bin stores and external soil vent pipes in less visible areas of the development.

- Always consider how an individual dwelling sits with its neighbours rather than as a separate entity. Detailing and proportions should sit well with adjoining buildings. We are trying to create great places not just a good looking house.
How does the scheme layout create safe, enjoyable streets and public areas?

The desire for safe, attractive and vibrant streets is reflected in a range of existing environmental policies and objectives. Refer to the guidance set out in Quality Housing for Sustainable Communities 2007 published by the Department of the Environment Heritage and Local Government.

The scheme should be a safe and healthy place to live in. It should be possible for pedestrians and cyclists to move within and through the area with reasonable ease and in safety. Provision for vehicular circulation, including access for service vehicles, should not compromise these objectives.

The provision of public amenity space and other facilities as part of the public realm will vary from site to site but the following principles should be considered for the careful integration of public open space:

- The nature and scale of amenity space should be appropriate to the development’s location and the area’s character;
- Meet a wide range of needs from passive to active recreation by providing places to meet, talk, exercise, join events, play or simply sit and do nothing;
- Provide good natural surveillance with buildings and spaces located to maximise...
opportunities for natural observation from adjacent buildings, pedestrians and passing motorists;

- Clear definition of public and private spaces achieved by changes of surface texture, boundary and landscape treatments. Encourage a sense of ownership;
- Avoidance of leftover spaces at sides and ends of buildings;
- Privacy within the curtilage of dwelling without affecting opportunities for natural surveillance to and from footpaths and points of entry;
- Careful design of landscaping at doors, windows, footpaths and parking areas to avoid the creation of potential hiding places;
- Appropriate levels of lighting to all public areas to avoid pools of darkness while not creating undue light pollution;
- Direct access for vehicles, cyclists and pedestrians along clearly defined routes with recognisable points of entry.

- Footpaths should not have dead ends, even during construction;
- Avoid the creation of alley ways to access the rear of mid terrace units and consider alternative design solutions for refuse storage to the front of the house or apartment building;
- Be sustainable and capable of change with time;
- Consider long-term maintenance issues at an early stage when developing a landscaping strategy for the whole development or estate.

Castlegate Hall, Lucan, Co Dublin – a good example of how to create good quality amenity spaces
How will the scheme provide secure and attractive parking?

Car parking must be adequately distributed throughout the scheme and be close to dwellings to enable easy access and visual supervision by the tenants. Landscaping and screening should be incorporated to ‘break up’ these areas but should not create hiding places. Where possible, within curtilage car parking should be provided with the hard standing area capable of enlargement to a width of 3.3m to facilitate wheelchair use.

Clúid’s preferred provision for car parking is one space for each dwelling and an additional space for every two dwellings to accommodate visitor parking. But the conditions set out in each local planning authority’s development plan will determine overall provision for individual schemes. In higher density areas adjacent to transport hubs a reduced provision is acceptable.

Individual car parking spaces (other than those within the property curtilage) should be clearly marked with at least 10 per cent of the additional visitor spaces made wider for use by the disabled. Such spaces should be clearly marked with the disabled persons’ symbol. Note that this is in addition to any provision for wheelchair dwellings themselves.

Communal parking areas should be designed to be naturally supervised from dwellings and consideration should be given to the need for additional public lighting for such areas. The maximum travel distance from parking area to any individual dwelling should be 30m. For further information and design considerations refer to the 2014 edition of Security By Design New Homes http://www.securedbydesign.com

Leighlinbridge Housing Association, Co Carlow – Footpath to front door located adjacent to parking space, creating a flexible space for everyone to use

PKA Architects
Parking provided close to front doors with landscaped defensible zone for privacy

Example of secure on-curtilage parking where space is limited

Example of good on-street parking design

Checklist

☐ Don’t rely on a single parking treatment and use a range of parking solutions.

☐ Design streets to accommodate street parking and allow for trees and street lighting outside the pedestrian movement zone.

☐ Design out antisocial parking areas.

☐ Enable people to see their cars from their houses.

☐ Avoid large rear parking courts or parking which isn’t overlooked.

☐ Don’t rely on having to introduce yellow lines and parking permits.

☐ Soften front parking in front of homes with planting and good boundary treatment.
How well thought through is the design?

Excellent quality housing will be appreciated and treated well by the people who live there. Dwellings should be designed to suit our tenants’ needs and have reasonable levels of cost-in-use over their full lifetime.

A well-designed home should provide:

- Adequate level of amenities, such as kitchen facilities, storage areas, sanitary and bathroom facilities;
- Accommodate diverse activities likely to be met in normal day-to-day living;
- Ease of access to, circulation within and use of the dwelling itself;
- Tenant safety and security;
- Space and water heating, electrical and other services;
- Economic, social and environmental sustainability, taking account of tenant needs;

Now we look closely at our design requirements for particular elements of the dwelling. Irrespective of the type of housing unit, apartment or house, many of the same principles will apply.

Space Standards Within the Home

The Department of the Environment, Heritage and Local Government has defined the minimum space requirements and room widths for particular categories of accommodation [http://www.housing.gov.ie//search/archived/current/category/housing/subtype/guidelinesstandards/sub-type/policy statement?query=Quality+Housing+for+sustainable+communities](http://www.housing.gov.ie//search/archived/current/category/housing/subtype/guidelinesstandards/sub-type/policy statement?query=Quality+Housing+for+sustainable+communities).

It is important to note these figures are minimum space standards, however, and should not be viewed simply as a target to be achieved.

We refer you to Appendix A which outlines the minimum standards, now statutory for any new apartment developments [http://www.housing.gov.ie/sites/default/files/publications/files/apartment_guidelines_21122015.pdf](http://www.housing.gov.ie/sites/default/files/publications/files/apartment_guidelines_21122015.pdf). We note that minimum space requirements for individual houses and housing estates is set out in the development plan under each local authority area and these should be adhered to when providing housing for Clúid’s tenants.

Clúid would rather see designers come up with good solutions for dwelling designs that exceed minimum standards than be asked to examine poorly considered layouts that precisely mirror minimum standards.
A Home’s Entrance

- The front door marks the home’s threshold and therefore needs to be easily identified from the street with a welcoming look. It needs to be wide enough for a range of activities, like pushing a double buggy or walking frame, carrying suitcases or shopping, without damaging door or frame. A clear space on both sides of the door will make its opening easier and level access is essential. Where a glazed panel within the door itself or adjacent has not been provided a spyhole must be provided in all entrance doors.

- The front door to an apartment building marks a communal entrance, one used by many people throughout each day. It is helpful if there is some glazing at the entrance, either in the door itself or in panels beside the door. This enables people to see whether another person is approaching the door on the other side and also to gauge the size and type of space they are about to enter.

- The lock, letterbox, doorbell and any intercom system should be installed at an accessible height so all our tenants can use them.

- The door canopy should be a minimum of 1,200mm wide x 1,500mm long and extend beyond the door on the lock side by at least 400mm. It should be positioned at 2,300mm high.

Access Control for Apartment Type Buildings

It should be clear to anyone approaching an apartment building for the first time how they can easily gain entry. The entrance lighting should ensure visitors can see...
where the entry system is located. The system itself should be accessible, clear and simple to use.

An intercom facility is preferred for visitors, and a fob entry or card swipe system for occupants as these are easiest for most people to manage. An intercom system with video link will be the most appropriate for our older persons, sheltered or special needs accommodation as it provides safety and security for residents with hearing difficulties.

The intercom should be clearly located on the handle side of the door, in a contrasting tone or colour to the background, and at a height appropriate for all users whether seated or standing. The intercom buttons should be large enough for various levels of dexterity for ease of use. The intercom buttons need to be lit, either from within or externally.

Great Northern Haven, Dundalk, Co Louth. MCO Architects

Key features: Clear legible signage adjacent to door and intercom system. A canopy should be considered to provide some protection from inclement weather

Moving About the Home

This section relates to all homes, whether apartments or houses. Homes designed logically and simply create an instantly legible environment with a clear, easy and convenient circulation route for all our tenants to use.

Lobbies, Lifts and Communal Stairs for Apartment Buildings

The entrance area should be large enough to allow everyone likely to be using it at peak times to do so easily and comfortably. A lobby should be provided only where absolutely essential. All doors and routes need to be accessible, logical, understandable and usable by everyone.

A matwell is essential to prevent mud and dirt being spread throughout the building. The mat should be flush with the adjacent floor surface. Choice of flooring should
be robust, hard wearing and easy to clean. The entrance area should contain secure, accessible and easily located letter boxes.

Design of the communal stair needs to facilitate comfortable and unimpeded movement between floors, regardless of whether lifts are installed. This means the stair should be designed with a shallow pitch, a straight step nosing, rather than profiled, to avoid accidents and make the stair easy to use for all our tenants.

A common concern of many tenants, in particular our older tenants, is the procedure when the lift is out of action due to breakdown or routine maintenance. It is essential in our sheltered housing schemes to provide for more than one lift so that convenient access can be maintained at all times.

Easy access to the lift is important, with enough space to allow people to pass as they enter and exit. A clear landing space is required in front of the lift and this will also facilitate someone turning round in a wheelchair or turning a buggy. The lift’s interior must be carefully specified to ensure it is easy to use and understand.

Common storage areas should generally not be accessed from corridors although provision should be made for a lockable cleaner’s store within the scheme. A suitable number of electrical sockets should be provided on each floor of the apartment block to facilitate cleaning and day-to-day maintenance. Corridors and communal stairs should be heated with energy efficient solutions to avoid excessive cost of heating the space.

Corridors and Doors in the Home

Wide corridors and doors facilitate comfortable and unimpeded movement between spaces. Corridors within dwellings should preferably be 1,200mm and 1,500mm within common areas. When wide enough, corridors can be used as multi-purpose spaces in the home, such as a library or storage.
Corridors should be naturally lit and ventilated where possible for good orientation, wellbeing and reduction in energy use. Wider corridors make it easier to move between rooms and to move furniture around as required. In the home the width of internal door opening needs to be directly related to the width of the internal corridor it leads from. Internal corridors should be kept as short as possible, with good visibility along their length. Deep recesses and 90 degree turns should be avoided wherever possible.

How the door opens into a room can also affect how the room can be accessed and used. Ideally the door opens with the hinge side against the return wall so there is no need to negotiate furniture and the door itself when entering. Positioning of doors, windows, radiators, light and power points should be such as to maximise usable wall space in rooms.

Raised timber thresholds or saddleboards at doorways, in the past used to separate floor coverings and reduce draughts, should be avoided as they are not easy for many people to navigate. All doors should be flush at the threshold and floor materials continuous between rooms where possible.

Residents should be able to access and open the door independently. Aim to achieve a minimum clearance of 300mm between the leading edge of the door and any other obstruction on doors that open towards the user.

**Dimensions for Lobbies in Communal Circulation Areas in Apartment Blocks**

- **A** A lobby should have at least a 1600mm clear zone between door swings.
- **B** If the door does not open more than 90° then the clear width should be achieved with a wider door.
- **C** Maintain a leading edge of 600mm to lobby doors to allow space for people to pass at the door.
Internal Layout, Design Requirements and Space Provision for the Home

Floor plans should provide for the comfort, convenience and safety of the occupants in their use of the dwelling. Each room design should facilitate the main activities likely to be carried out there.

The layout should also address the separation of incompatible activities as far as possible, for example noisy group activity areas should be remote from study or relaxation areas. The home should provide for reasonable privacy for living rooms and bedrooms, taking account of likely internal and external sources of noise. To cater for the possibility that an occupant may have reduced mobility in the future, the potential for providing bed space at the main entrance level should be considered. Such an arrangement may also facilitate ‘working from home’ possibilities.

Dwelling layout should be designed to make effective use of natural daylight and sunlight as far as practicable. Dwellings should be oriented so that all main rooms get direct sunlight at some time during the day. Windows should be adequately sized and room shapes should be designed to allow good daylight penetration.

The size, shape and location of windows should be designed to obtain optimal benefit from available views, with due regard for privacy needs. A street view from a habitable area is desirable. Window locations should also facilitate supervision of small children at play in private external space and allow surveillance of the dwelling’s immediate surroundings.

Specific Requirements for Living Rooms

- Living room layout should allow for seating areas for at least the specified number of bed spaces, coffee table, TV and a small bookcase.
- Living rooms should not be used as main access to other rooms, for example a kitchen, except in smaller dwellings where this is unavoidable.
- Provision of a dining room within the living room should be avoided if possible.
- Wherever possible living room windows should have a southerly aspect.
- Living room window sills should normally be below the eye-level of seated persons. It should be noted that safety glazing and/or guarding of glazed areas is required in certain circumstances. The statutory requirements are set out in the Building Regulations http://www.housing.gov.ie/housing/building-standards/tgd-part-d-materials-and-workmanship/technical-guidance-documents and guidance as to how the requirements can be met is given in Technical Guidance Document K – Stairways, Ladders, Ramps and Guards 2014.
- TV point should avoid daylight glare on the screen.
Family/General Needs
Three-Bedroom/5-Person House Type

- Clear lobby space within hall 1500mm diameter turning circle.
- Turning circle of diameter 1500mm.
- 750mm wide clear space between items and in front of windows & doors.
- Location for a bed space at entrance level.
- Workspace 1800 x 1500mm.
- Fully Part M Compliant WC.
- Possible location of future shower.
- Possible location of future lift.
- 1200mm clear space on at least two consecutive sides of dining table.
- Accessible kitchen.
- Clear space of 800mm to one side of single bed and on both sides and end of double bed.
- Soft spot for future link between bathroom and main bedroom.
- Canopy to give shelter at front door.

Key Features

- Total area 114 sq m, ground floor plan, 60 sq m.
- Separate living area with adaptable layout.
- Spacious kitchen and dining space overlooking garden with direct access.
- Enclosed storage space for general storage, accessible from a circulation area.
- Adequate light and ventilation to habitable rooms.
- A linen cupboard with two slatted shelves should be provided and, where possible, within the same cupboard as the hot water cylinder.
- Naturally ventilated bathroom.
- Adequate light and ventilation to habitable rooms.
**Specific Requirements for Kitchens**

The space must be adequate to meet household needs and the following minimum storage requirements must be met:

<table>
<thead>
<tr>
<th>Dwelling Type</th>
<th>Kitchen Storage Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-bedroom, 7-person</td>
<td>3.00m³</td>
</tr>
<tr>
<td>3-bedroom, 6-person</td>
<td>2.75m³</td>
</tr>
<tr>
<td>3-bedroom, 5-person</td>
<td>2.60m³</td>
</tr>
<tr>
<td>3-bedroom, 4-person</td>
<td>2.45m³</td>
</tr>
<tr>
<td>2-bedroom, 4-person</td>
<td>2.15m³</td>
</tr>
<tr>
<td>2-bedroom, 3-person</td>
<td>2.0m³</td>
</tr>
<tr>
<td>1-bedroom, 2-person</td>
<td>1.7m³</td>
</tr>
</tbody>
</table>

*Note: Refer to Appendix A for a detailed kitchen specification.*
Storage should be provided by way of a combination of wall and base units with base units including at least one 500mm three-drawer unit as a minimum. A broom cupboard should be provided if there is none elsewhere.

Wall units should generally be positioned 450mm above the working top on the base units and a tiled backsplash provided to the underside of the wall unit. Wall units to be together in a run without gaps.

A clear space of at least 1.0m should be provided in front of all kitchen units.

The run of kitchen work tops and service connections must allow for the inclusion of 650mm-wide free-standing cooker space (with worktop over cut out), 600mm-wide refrigerator space, 650mm-wide under-worktop washing machine space and if possible 600mm-wide underworktop dishwasher space.

Where utilities are provided within the design washing machines and dryers should be located in the utility with adequate ventilation.

Fridge space should be positioned at the end of a run of units and fitted with a demountable worktop to facilitate the fitting of a fridge/freezer if required. Washing machine space should be next to the sink.

Wash-up facilities to be provided by a single bowl and drainer for two- and three-person units; 1.5 bowl and drainer for four- and five-person units and a double bowl and drainer for larger units.

Electric cooker points must be provided in all dwellings and a gas cooker point should also be provided where the service is available.

Minimum length of worktop provided should be 1,000mm for two- and three-person households, 1,500mm for three- and four-person households and 1,800mm for households with five or more persons. The minimum length of any one section of worktop should be 300mm. Note: the sink drainer should not be counted as part of the worktop run.

Internal kitchens should be avoided wherever possible. Where an internal kitchen is unavoidable, borrowed natural light should be provided.

Where a combined kitchen/dining room is provided, ventilation to the room must be to the kitchen part in order to minimise the spread of cooking smells and steam.
• Whenever possible, the sink drainer should be positioned in front of a window.
• The end of a run of worktop should align with the end of a base unit (or a wall) and avoid the need for the use of end panels.
• No white goods are to be supplied. However, an electrically operated extractor hood in a suitable housing should be provided over the position designated for the hob.
• All kitchens (whether they are internal or not) should be fitted with an electrically operated extractor fan, humidistat controlled with manual override.

**Specific Requirements for Dining Rooms**

• Clúid’s preference is for combined kitchen/dining rooms. If separate, the dining area should be located as close to the kitchen as possible. Combined living/dining rooms should be avoided.
• It is essential that adequate space is provided for all members of the household to sit comfortably around a table for meals whilst maintaining adequate circulation throughout the room.

**Bedrooms**

• Bedrooms should be designed to accept beds in more than one position;
• Single bedrooms: single bed, bedside table, chest of drawers, free standing or built-in single wardrobe 900mm long by 600mm deep;
• Children’s bedrooms should be designed to cater for play and study;
• Double bedroom: two single beds, two bedside lockers, tables, chest of drawers and a double wardrobe 1,800mm long by 600mm deep. Two 900mm length sections can provide this also.
Sample Apartment Design for Smaller Families/General Needs
Two-Bedroom/3-Person Apartment

A. Clear lobby space within hall 1500mm diameter turning circle
B. Turning circle of diameter 1500mm.
C. 750mm wide clear space between items and in front of windows and doors.
D. Own door access at ground floor level.
E. Workspace 1800 x 1500mm.
F. Fully Part M compliant WC.
G. Possible location of future shower.
H. 1200mm clear space on at least two consecutive sides of dining table.
I. Accessible kitchen.
J. Clear space of 800mm to one side of single bed and on both sides and end of double bed.
K. Soft spot for future link between bathroom and main bedroom.
L. 1800mm clear manoeuvring space in front of all lift doors.
M. 1600mm clear zone between door swings at entrance lobby.
N. Canopy to provide shelter at front door.
Key Features

- Generous entrance hall to apartments.
- Spacious kitchen and dining and living area with adaptable layout.
- Direct access from living room to private open space.
- Enclosed storage space for general storage, accessible from a circulation area.

- Adequate light and ventilation to habitable rooms.
- Generous bedroom sizes.
- A linen cupboard with two slatted shelves should be provided and, where possible, within the same cupboard as the hot water cylinder.
Bathrooms, En-suites and WCs

- All bathroom layouts shall provide a bath, basin and WC in that order. In small or special needs units it may be appropriate to omit the bath in lieu of a shower cubicle or wet room. The layout of the bathroom must comply with Building Regulations Part M. Clear guidance is given in Technical Guidance Document M – Access and Use 2010. http://www.housing.gov.ie/sites/default/files/migrated-files/en/Publications/DevelopmentandHousing/BuildingStandards/FileDownload%2C24773%2Cen.pdf
- Baths should not be positioned directly in front of windows.
- Within bathrooms, a wall-mounted showerhead shall be included over the main bath in all dwellings. Full ceiling height tiling to the adjacent walls surrounding the bath shall be provided. Tiling to shower areas to be fixed to plastered masonry or marine grade plywood. In larger houses (four bedrooms and above) consideration should be given to providing a separate shower cubicle.
- In areas of low water pressure, a thermostatically controlled power shower facility may be provided above the bath rather than a mixer tap arrangement but this should be agreed on a scheme-by-scheme basis.
- All bathrooms are to be provided with a 600x400mm mirror above the wash hand basin with a shaver socket and light above the mirror. In addition, a conveniently located shelf, toilet roll holder and towel rail should be provided.
- Wherever possible bathrooms and WCs are to be provided with natural light and ventilation. All bathrooms (whether

Bathroom Layout Example

A Door open outwards.
B Soft spot for future door link to main bedroom.
they are internal or not) should be fitted with an electrically operated extractor fan, humidistat controlled with manual override. Compliance with Building Regulations in relation to ventilation is mandatory and clear guidance is set out in Technical Guidance Document F – Ventilation 2009 http://www.housing.gov.ie/housing/building-standards/tgd-part-f-ventilation/technical-guidance-document-f-ventilation

• Further tiling should be provided as a splash back to the bath (at least 600mm high on all sides) and wash hand basins (100mm high). Consider ease of replacement when sourcing tile selection.

Safety in the Home


• A lockable wall cupboard is to be provided to the kitchen for secure storage of harmful substances, medicines etc.

• Attention should always be given to the height and design of sills and balustrades to minimise the risk of children falling from windows. Additional safety precautions will be necessary as height above ground increases.

• Special attention should also be given to the natural and artificial lighting of circulation areas. Two-way switches should be provided and lighting points positioned for easy replacement of bulbs.

• Material choice can affect adaptability, usability and health. For example very shiny reflective surfaces can cause discomfort and disorientation.

• A key safety issue when providing housing for Clúid is the slip resistance of the floor finish and this is particularly important in wet areas such as bathrooms, kitchens, laundry rooms and bin stores. Slip resistance characteristics should be maintained when the surface is both wet and dry and when spillages occur.

• Visually contrasting materials can aid legibility.
Space and Water Heating in the Home

The following is a hierarchical list confirming Clúid’s preference for the proposed heating system, dependent on energy source availability:

- Natural gas;
- LPG;
- Oil;
- Electric.

Where natural gas is unavailable at time of development, provision for future gas connection should be considered. On specific individual schemes, Clúid may wish to utilise renewable sources of energy such as biomass heating systems. Whole house central heating should be provided in most units by way of a single boiler and hot water radiators, although it should be considered whether it would be more cost effective to install individual room heaters in some smaller dwellings.

Clúid prefers use of non-pressurised central heating boilers for the supply of space heating. Designs requiring pressurised boilers will require Clúid’s prior approval. Boilers must have a seasonal efficiency of at least 90 per cent which may mean that the only compliant system involves use of condensing boilers. Condensing boilers are highly efficient. They use less fuel and have lower running costs than other boilers.

The SEAI HARP (Home-heating Appliance Register of Performance) database maintains a list of all oil and gas boilers, and their efficiency, that are available on the Irish market. This list is available on its website at www.seai.ie/harp

Hot water cylinders are to be pre-insulated. Cold water storage tanks are to be properly insulated with pre-formed sectional insulation sets or jackets, with close fitting lid. Ceiling insulation quilt must be omitted immediately below cold water storage tanks to assist with the avoidance of freezing during periods of cold weather.

All pipework run above ground and visible within the dwelling should be run in copper pipe. All pipe runs below ground and in screeds should be jointless. Dual zone heating controls for the bedrooms and main living areas are preferred. Thermostatic radiator valves are not to be used unless permission is received from Clúid as these may cause unnecessary cycling of the boiler.

Separate zoned heating controls for the bedrooms, main living areas and hot water is...
essential. Thermostatic radiator valves are not to be used unless permission is received from Clúid as these may cause unnecessary cycling of the boiler. Heating controls must be easy to use for all our tenants regardless of their abilities, consider Climate or a similar controls systems which is user friendly and offers remote access to the heating system.


Apartments should be designed to provide good quality, permanent and sustainable living accommodation. Design should not be predicated on the assumption that apartment living is a transient phase in the life of people who will eventually move to a house.

**Roof spaces**

- Roof spaces shall be provided with proprietary draught sealed access doors/hatches. These should not be positioned directly over stairs or in other hazardous locations. Sufficient gangway boarding should be provided to enable any water tanks, etc to be serviced safely.
- Where no tanks, pipework or other equipment requiring periodic maintenance is installed in roof spaces then there is no requirement for boarding or lighting.

**Noise and Sound Insulation**

Signage Design Considerations and Awareness

• In the communal areas of housing developments signage is required for wayfinding and communication of information. Signage should be easy to use for everyone and therefore positioning, accessibility, consistency and visibility should be considered.
• Information should be concise and use familiar language and symbols.
• Use of abbreviations should be avoided as these may not be understood by everyone. Arabic numbers (1, 2, 3) rather than Roman numerals only.
• Signage used in domestic buildings will include information signs, directional signs, identification signs and mandatory safety signs. In large residential developments it may be necessary to provide a floor plan or map to help people orientate themselves. Signage should not obstruct the movement of any users.

Service Requirements for the Home

All dwellings are to be provided with the following services:

• Electricity;
• Natural gas (where available);
• Telephone;
• Cable TV (where available);
• Individual water supply.

Foul water drainage, wherever possible, should be via connection to a public sewer. The use of pumping chambers, septic tanks and foul water treatment on site should be avoided. If this is not possible, proposals should be presented to Clúid for approval on a scheme by scheme basis, detailing likely maintenance and service costs.
Recommended Heights of Electrical Fittings and Controls

A. Thermostatic radiator valves 450-1200mm.
B. Electricity and gas meters 1200-1400mm.
C. Light switches and permanently wired switches 750-1200mm.
D. Assisted living technologies outlet points for power and data @ 2300mm.
E. Switches and controls for intercom, ventilation, heating 750-1000mm.
F. Electrical sockets, TV and telephone outlets 400-1000mm.

Pumping stations and water treatment plants if proposed should be to local taking-in-charge standards.

Where a provision for gas is to be made, the supply should be provided to the boiler, the cooker and a capped of supply adjacent to the fireplace if present.

Electrical Service Provision

The following minimum switch socket outlets should be provided in all dwellings:

- Living rooms: four doubles (one adjacent to telephone point);
- Dining rooms: two doubles;
- Bedrooms: two doubles;
- Circulation areas: one double at each level;
- Kitchens: three doubles;
  - One single for fridge;
  - One single for washing machine;
  - One single (if dishwasher space included);
  - One single for extractor hood;
  - Cooker point;
- All sockets for under counter appliances should be fitted with a fused spur above the worktop;

Sockets should not be fitted to party walls and generally fitted at 600mm above floor level;

All rooms to be fitted with suitable light fittings, double switched where appropriate. Light fittings generally to be pendant type complete with low energy bulbs. Bathrooms to be fitted with appropriate sealed globes.

We refer you to the guidance set out in the Universal Design Guide for appropriate positioning of electrical controls.
Examples of communal and open spaces
Landscaping and Boundary Treatments to the Home

Boundaries within a development area add an important element of spatial definition and integration. They act as strong links between buildings and landscape; help define space; provide an interface between the public and private domain and provide security. Design criteria for boundary treatments should include:

• Walls to be of scale, colour and siting that reflects and enriches the built form. Some locations may require copings to resist the use as a seating/congregation area.
• Balance of trellis and wall to give visual interest and aid permeability.
• Avoid use of solid timber panels in areas exposed to the wind.
• Retain and extend existing stone walls.
• Railings to be used to increase safety and security without the creation of ‘cages’.
• Maintain and extend hedgerows to aid landscape integration.
• Consider appropriate use of quick growing members of the hawthorn/ivy families to plant against a solid boundary where there is likely to be a risk of climbing or scaling of the boundary wall.
• Consider use of planting areas on top of boundary walls that will enable plants to trail down to provide an aesthetically pleasing appearance as the planting establishes over time.
• All boundary walls to dwellings viewed from public spaces should be visually pleasing and should generally be rendered blockwork, faced brickwork or natural stone.
• Front gardens spaces are to be divided by walls of 900mm in height. Materials to be used will vary from scheme to scheme and must be in keeping with the local area and requirements of the Planning Authority. Acceptable solutions would include: blockwork rendered with suitable capping stone; stone wall, faced brickwork, block or brick with railings; galvanised steel railings etc. Timber fencing should be avoided.
• Party walls to the rear boundary of dwellings should be constructed of plain faced blockwork and should be a minimum of 1.8m above the highest adjoining ground level. Party boundaries walls to the side of dwellings and rear gardens should be 1.5m high. Suitable materials for this dividing wall would include brick, block, post and panel or post and rail. Any posts should be made of concrete and use of timber panels should be avoided unless placed on concrete ‘gravel’ boards to avoid direct contact between the panel and the ground.
• Side gates should be provided where necessary to facilitate securing rear access to dwellings. There is no requirement to fit vehicle or pedestrian gates to the front boundary walls.
Examples of robust and attractive boundary treatment
Provision of well-designed landscaped open areas where ownership is clear is an important amenity in residential schemes and will assist in the achievement of Clúid’s aim to create successful neighbourhoods and sustainable good quality design.

Planting provides an opportunity for personalisation of a home, visual interest, some control of privacy and views, and definition of boundaries. For houses consideration should be given to planting trees in front gardens rather than in the public verges in front of the dwellings. Care should be taken to select species that will not adversely affect the integrity of dwelling foundations. In apartment developments planting may also soften hard, reverberating surfaces.

Key factors in design of hard landscaped areas are:

- Design produced will be robust and sustainable;
- Materials selected are safe, hard-wearing and sympathetic to the environment;
- A variety of design devices such as low walls, raised planters, street furniture is introduced along with clearly defined off street parking, paths and fencing;
- Areas of hard landscaping should be robust and conveniently located enclosures for communal bin store with firm, level, non-slip ground surface.
appropriate to the scale of the site development and consideration given to permeability in relation to Sustainable Urban Drainage Systems SUDS;

• Ownership is clearly identifiable and responsibility for maintenance clearly established at the outset;
• Ease of maintenance is addressed in the design and an indication of future maintenance liabilities indicated to Clúid;
• Street furniture – seats, litter bins etc – are appropriately designed and carefully located.

Key factors in the design of soft landscaped areas are:

• Ensure all plant species to be used grow well locally;
• Provide for a low maintenance regime;
• Maximise use of existing landscaping within the final landscape design;
• Aim to provide a planting design that will provide a vibrant and colourful environment throughout the seasons;
• Specify a variety of plants that grow at different rates to establish the site;
• Landscaping should be carried out by a specialist;
• Avoid installing plants which produce high levels of pollen dispersal at approaches to apartment buildings or houses, as these can cause distress to tenants who suffer from allergies;
• Avoid plants with poisonous fruit or flowers that might be within reach of children;
• Planting design should avoid creating a hiding place for a potential intruder, for example within or behind a large shrub. Generally planting should achieve a clear zone of 1m to 2m in height to ensure all areas are visible and therefore improve safety and security.

External Storage in the Home

Design and layout of refuse disposal for all homes should be easy to access and use and avoid causing a nuisance in terms of unsightly appearance, noise or smells. Refuse arrangements will depend on storage capacity, collection methods and frequency of collections.

For individual houses, a storage location for bins should be provided in an accessible location that is convenient to the house and collection point. Specific attention should be given to the design of mid terrace units so the required bin storage can be provided appropriately to the front of the dwelling avoiding the need for rear alleyways.

For apartment blocks and housing complexes, the collection point for communal waste should be conveniently located. A refuse storage location close, but not adjacent, to shared entrances is usually best for bagged waste carried down and deposited by residents.
Adaptability

Great Northern Haven, Dundalk, Co Louth – a good example of flexible accommodation that suits all abilities and needs

“How will the buildings cope with change?”

In exploring what makes residential building become valued not just over years but over generations, it has been suggested that the common criteria are space and adaptability. Internal space adaptability encourages continued use and investment.

All new housing for Clúid should be reasonably accessible for older people, the very young and people with disabilities and accommodate their changing needs over the life of the dwelling. Therefore all dwellings must be designed to comply with the Universal Design Guidelines for Homes in Ireland published by Centre for Excellence in Universal Design by the National Disability Authority. http://universaldesign.ie

“The rigidity of a bottle’s form does not affect the fluidity of the liquid it contains.”
Leon Krier, Architect

In so far as is practicable, the design should provide for flexibility in use, accessibility and adaptability. The aim should be to ensure that dwellings can meet the changing needs of our tenants over their lifetimes, including needs associated with moderate mobility difficulties and normal frailty associated with old age. Older people or persons with moderate disabilities 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.

Design flexibility can be achieved by providing:

- ‘Soft spots’ within timber or metal stud walls where a section of wall is framed to allow easy alteration to link rooms. Therefore non-load bearing partitions should be stud walls and not masonry.
Where soft spots are required for load bearing walls blockwork with lintels can be used for ease of removal. This applies particularly between key rooms that at some point may provide a benefit from being linked, such as living/dining/kitchen areas, a downstairs toilet and utility room (to create a larger downstairs bathroom), or between a main bedroom and bathroom. ‘Soft spots’ should be indicated on plans at handover stage to ensure co-ordination and future use.

- The location of services such as electrical sockets and switches, plumbing and drainage, should be carefully considered to ensure they create no barrier to simple future adaptation.
- If stud walls, particularly in bathrooms, are constructed with ‘hard-spots’ strong enough to take fittings and rails, the household will have optimal flexibility to customise layouts to suit their specific requirements over time.
- The design and structure should provide for a potential hoist from the bedroom to the bathroom.
- The design of the stair should incorporate provision for a future stairlift.
- The width of doors and hallways should allow for wheelchair access.
- Allow for future extension to the home within the design to avoid extensive internal alterations. Ensure garden sizes can accommodate future extensions.

We refer designers to The Building for Everyone series which is available at www.nda.ie. for further information on how to future proof the home.

Adaptability should also be thought about on a larger scale. For example by;
- increasing choice and creating a better balance of dwelling types within a development;
- raising the general level of accessibility throughout the public realm;
- making it easier for people to move to a more accessible home within the same scheme or neighbourhood if they wanted, or needed, to.
Quality and Design Audit Checklist

☐ Does the plan cater for changing needs (over week days and weekends)?

☐ Is there room for the family to gather together comfortably?

☐ Is there room to entertain a few family friends?

☐ Is there space for young children to play near a parent working in the kitchen?

☐ Is there space for a spare bed for a visitor staying overnight?

☐ Can some meals be taken in the kitchen?

☐ Does the plan cater for activities needing privacy and quiet?

☐ Are the bedrooms suitably located relative to more noisy areas, eg living rooms?

☐ Can the dining space or bedrooms be used for study purposes?

☐ Are the living spaces appropriately located relatives to each other?

☐ Is the dining space as close as possible to the kitchen?

☐ Does the kitchen window overlook the place where small children can play?

☐ Can the garden/balcony be used as an extension to the living space

☐ Can you get from one part of the dwelling to another without inconvenience?

☐ Can you get from each bedroom to the bathroom and WC without going through another room?

☐ Are refuse and fuel stores conveniently located for the household while not requiring deliveries or collections to be made through the dwelling?

☐ Is there adequate and safe space for ladders for painting and window cleaning and are all roof-lights accessible for cleaning?

☐ Can utility meters be read from outside the dwelling?

☐ Is there some protection from the elements for callers in cold or wet weather?

☐ Is there sufficient room at the entrance to receive visitors?

☐ Is there adequate space for hats and coats?

☐ Is there provision for safe and convenient circulation outside the dwelling?

☐ Can you get from the garden to the dwelling without passing through the living room?

☐ Can large garden tools be moved from storage to place of use without going through the dwelling?

☐ Is there ease of access from the kitchen to the clothes drying area?

☐ Is the private garden space located so as to minimise overlooking by neighbours or passers-by?

☐ Does the layout prevent people from passing too close to windows?

☐ Does the layout minimise the risk of nuisance and hazards from passing traffic?

☐ Is the car parking space located close to/overlooked by the dwelling?
☐ Is each room/space satisfactory for its intended use in terms of location, floor area and shape?

☐ Can each room/space accommodate the required furniture, leaving sufficient space to circulate, open doors and windows and generally use the space for its intended purpose?

☐ If rooms are to have alternative uses from time to time, can these uses be reasonably well accommodated?

☐ Does the design ensure that each room/space is appropriately orientated and has adequate provision for lighting, heating, ventilation, sound insulation.
How does the development make appropriate use of resources including land?

Sustainability measures should encourage energy efficiency at the construction, occupancy and maintenance stages in a scheme’s life and designers should ensure that all practical measures have been taken to include elements of energy efficiency in design, particularly in maximising use of daylight, treatment of waste water, building thermal envelope and resources used in construction.

Key design principles to be considered include:

- Orientate the development to ensure dwellings have wide south-facing facades wherever possible. Private rear gardens, living rooms and principal bedrooms should, where possible, have a sunny aspect;
- Ensure that most windows face south or lie within a 30° angle of the south;
- Ensure that south-facing elevations are not obstructed by other structures (balconies, porches etc) or planting which would result in overshadowing;
- Lower dwellings should be placed to the south and higher dwellings to the north of a development;
- Dwellings aligned east-west should be spaced to allow solar access in winter when the sun is lower and casts a longer shadow;
- Dwellings on north facing slopes should be spaced to allow solar gain through the roof or at upper levels of the home;
- Housing plans with front to back dimensions of 9m to 13m provide good sun and daylight penetration. Plan depths exceeding 13m should be avoided as they result in poor light penetration to the centre of the building;
- Where buildings are closely spaced, the amount of daylight can be supplemented by keeping rooms shallow in plan and raising window head heights.
The treatment of surface water should aim to maximise use of existing natural drainage patterns such as streams, ponds, rivers etc. Sustainable urban drainage systems (SUDS) should be considered as they have been shown to:

- Reduce the potential for localised flooding;
- Protect and enhance river and groundwater quality;
- Encourage wildlife habitation;
- Enhance landscape quality.

SUDS aim to control surface water runoff at source through design elements of the scheme, such as:

- Porous surfaces;
- Permeable paving systems;
- Infiltration/attenuation trenches;
- Retention ponds;
- Reed beds.

Several sustainability and resource issues will affect the detailed construction of buildings. Sustainable, or ‘green building’ design and construction, is the opportunity to use our resources more efficiently while creating healthier and more energy efficient homes. Issues to consider include:

- Use of materials with a long lifespan (target life of 60 years);
- Design well-insulated dwellings with efficient, cheap-to-run heating systems that tenants can afford;
- Use of natural materials which can be recycled;
- Use of grey water and low water units;
- Incorporating photovoltaic modules to convert solar radiation directly to electricity and use of solar panels for space and water heating;
- Provision of renewable energy heating systems such as district bio mass, or wind power generators or even small wind turbines incorporated into the roof design of individual dwellings.

The Building Regulations lays down mandatory standards for thermal insulation in new dwellings. Technical Guidance Document L – Conservation of Fuel and Energy – Dwellings 2011 – advises on how these requirements may be met. It also provides guidance for efficiency of heating systems, heating controls and requirements for renewable energy resources. All new units are to be designed to achieve a minimum building energy rating of A3. We note that any amendments to the minimum requirements in the Building Regulations standards must be achieved for overall compliance.

For apartment buildings over 1000 sq m the Recast Energy Performance of Buildings Directive requires designers to carry out a feasibility assessment of alternative energy systems before construction. Guidance and assistance on this are available from the Sustainable Energy Authority of Ireland (SEAI) – http://www.seai.ie

Wherever possible, Clúid schemes should be designed to be ‘future-proofed’ and draw on best practice. Concepts such as ‘carbon neutral’ and ‘passive-house’ should be investigated to establish their practicality on a project by project basis. Consideration could also be given to use of local energy networks with the ability to increase renewable energy content over time from, for example, use of gas fired or biomass Combined Heat and Power (CHP) systems.

All schemes should incorporate specific water saving measures, including:

- All WCs to utilise low volume flush cisterns;
- Rain water butt(s) could be included and linked to a rainwater down pipe in gardens. Where included, they must be fitted with an overflow/shut off facility;
- Flow regulators to be fitted to deliver maximum 6 litres per minute (lpm) to kitchen and bath taps, 4 lpm to all wash hand basins and 8 lpm to showers.
Value for Money

Is the scheme good value for Clúid? Is the scheme affordable for our Tenants to live there?

Value for money is the optimum balance between the benefits gained from a scheme and the investment made to acquire it. Long-term costs over the functional life of the scheme are more reliable indicators of value for money than the initial construction costs alone because

- Well considered, good design decisions taken early can yield significant savings in construction and maintenance costs and

- Investment in a well-built project can, in turn, achieve significant savings in running costs.

A balance should be struck between the affordable capital costs, maintenance and operating costs over the functional life of the scheme to yield the best result.

The cost of long-term maintenance should be taken into consideration very early on in the design stage as most of the cost of running, maintaining and repairing the scheme is established through design decisions made at the early part of the design process.

Higher up front capital costs that are affordable may be required at design and construction stage in the interest of
achieving significant savings over the life of the scheme. Promoting excellence in design does not necessarily mean a more costly project when whole life cycle costs are taken into account. In general, a poorly designed scheme will be more costly when whole life cycle costs are considered.

The scheme should be capable of being built, managed and maintained at reasonable cost to Clúid, having regard to the nature of the development. Several factors will strongly affect a scheme’s out-turn cost. Considerations will include:

- Site topography and amount of cut and fill required. Always try to ensure dwellings follow contour lines rather than building across a gradient.
- Avoid constructing excessive lengths of road that serve dwellings to one side only and maximise the number of dwellings per linear meter of road, service run, footpath etc.
- Number of different house types within the scheme.
- Geotechnical aspects and load bearing capacity of the site.
- Use of forms of construction, materials and components that may or may not be familiar to the contractor.
- In areas of the country where hard water is present, water softening systems/devices are to be installed.
- Life span, durability and maintenance requirements of materials specified and the balance between initial costs and costs in use. The building’s key elements should have a service life of about 60 years, during which period no excessive expenditure should be required on operation, maintenance or repair. Further guidance on the durability of buildings, building elements, products and components is given in British Standard BS 754324 [https://identity.bsigroup.com](https://identity.bsigroup.com)
- In addition, it may be difficult to achieve a 60-year life expectancy for some external elements, for example a proprietary flat roof system.

- Component replacement is a key concern for Clúid. Components must have an easily accessible supply chain and end of line models should not be used in a Clúid development. Key areas to be considered are:
  - Kitchens
  - Boilers
  - Glazing systems, windows and doors
  - Tiling
  - Pumps
  - Water softening systems/devices
  - Solar hot water and other renewable energy installations

  Easy access to components should be provided to avoid unnecessary cost for making good for example tiled boxed bath panels, wash hand basins and hidden toilet cisterns, prevent easy maintenance. Our New Business and Technical Teams can advise further on a scheme by scheme basis. Information on sought for any of Clúid’s preferred components.

- External elevations should be designed to facilitate ease of maintenance, particularly for items at a significant height above the ground. Poor access to the roof increases the cost of maintaining the roof unnecessarily. If roofs cannot be satisfactorily accessed by ladder and to avoid the need to hire mechanical access platforms, a man safe/lanyard system to access the roofs will be required.
- Timber cladding should be avoided.
- Windows should be openable so that they can be cleaned from the inside etc.
- External elevations should be designed to facilitate ease of maintenance, particularly for items at a significant height above the ground.
- Timber cladding should be avoided.
- Windows should be openable so that they can be cleaned from the inside etc.
- If roofs cannot be satisfactorily accessed by ladder and to avoid the need to hire mechanical access platforms, a man safe/lanyard system to access the roofs will be required.
There are clear links between whole-life costs and sustainability aspects of a scheme, such as the direct cost of energy usage within the home itself and the common areas within apartment buildings. Homes must be affordable to run, to heat and to live in.

The emergence of energy/fuel poverty in recent years as a significant issue on the government’s agenda was most apparent in the government’s National Energy Efficiency Action Plan 2009 to 2020 and the National Action Plan for Social Inclusion 2007 to 2016. Furthermore Clúid highlighted, in its report, A Warm Welcome, a strategy for addressing fuel poverty in its existing housing stock. It is a strategy that is evidence-based and cost-efficient and offers insight into what works for Clúid’s tenants http://www.cluid.ie/wp-content/uploads/2015/05/A-Warm-Welcome.pdf.

Where design proposals may have a higher initial capital cost but will reduce future maintenance costs for Clúid, or the cost in use for our tenants, the designer should provide analysis of the potential cost benefit so that Clúid can determine which options should be pursued further. This issue becomes increasingly important in apartment design as the cumulative cost effect of design solutions is magnified by repetitive use of apartment layouts.
Older Persons Housing

Clúid’s overall strategic aim is enable older people in mainstream and specialist housing to live independently in their own homes and in their own communities in comfort and security for as long as they are able and wish to do so. Clúid will work with its partners to deliver homes that enable older people to ‘age in place’. It will also work to improve the quality of life and well-being of older tenant households in its provision of new homes.

Clúid will provide homes specifically for older persons in areas of demand. New homes may be single units on mainstream housing estates which are integrated with family type housing. They may also be specialists schemes designated for older people. Specialist schemes will provide self-contained housing in a group of single storey units or as a multi occupancy apartment housing complex.

Dwelling Design

All mainstream and specialist older persons housing should be level access, self-contained units with no internal steps or stairs. Ground floor apartments with own door access or communal access are also acceptable.

A mix of one- and two-bedroom units should be provided. It is desirable that dwellings
have three habitable rooms. Most older people will need a second bedroom for friends, families or carers staying over. Older couples may need to sleep in separate bedrooms if one partner is ill.

The quality of the home environment becomes more important with age. Older people spend more time at home. Space, light, views, ventilation matter more.

Open plan homes may feel more generous and spacious. They may offer some older people more flexibility and choice. Separate living and kitchen areas may be less important to older single people and couples than families. Activities in these areas are less likely to interfere with each other for a single person or a couple than a family.

Semi enclosed balconies and patio areas provide a practical, easily maintained substitute for a garden. They provide outdoor space which is fully accessible from the home which is very valuable for people who leave the home less frequently. Balconies and patios should be sufficiently large for a table and chairs as well as plants.

Universal Design/Lifetime Homes

All new Clúid homes for older people will be designed to Universal Design standards. New homes will be adaptable to the changing needs of older people. Home design will not be a key factor in tenants having to make a decision to move to institutional settings if their care and support needs change.

Older people will need good internal storage for treasured possessions acquired over a lifetime. Storage should be designed to minimise reaching up and to avoid the use of a step ladder.
Broome Lodge Sheltered Housing Scheme, Cabra, Dublin

- Hall to be minimum 1500mm wide.
- Turning circle of diameter 1500mm.
- Door link from bathroom to main bedroom.
- Easily accessible storage.
- Accessible kitchen.
A Hall to be minimum 1500mm wide.
B Turning circle of diameter 1500mm.
C Door link from bathroom to main bedroom.
D Easily accessible storage.
E Accessible kitchen.
Wetroom Layout Example

A Door open outwards.
B Soft spot for future door link to main bedroom.
C Shower location

Clúid managed Sheltered Housing Scheme, Colivert Court, Limerick City. Designed by ABK Architects
Shower Room/Wet Room

Level access shower rooms will be provided to all mainstream and specialist older persons’ housing. At least one door into the room should open outward. A flush floor shower area should be provided to allow wheelchair access. Mixer taps with lever or cross handles should be provided to the basin. Floor finishes should be slip resistant.

Warden Call System

Social monitored alarms will be provided in all homes and common areas in specialist older persons housing schemes. The system should allow for two-way speech between the resident and a remote 24-hour contact centre and also between the resident and scheme manager’s office. The system will be linked by a single phone line to the remote monitoring service provider. A base alarm hub is usually located in the hall. A resident can activate an alarm call by pulling a cord at the hub or in the bathroom or by pressing a radio trigger pendant which the resident wears. Residents can make quick and easy contact with the 24-hour emergency response centre. The resident speaks to the operator while the operator organises assistance.

This system can be used as a telecare hub for a range of telecare devices in the home environment. Telecare safety sensors can continually, automatically and remotely monitor residents over time to manage the risks associated with living alone. Sensors around the home can be connected to the telecare hub. Additional telecare devices can be added onto the hub as and when residents need them.

Access and Circulation

Circulation areas should avoid long internal corridors. They are often artificially lit with front doors on either side and they are used only for access. They are expensive to provide and to maintain. Corridors should be short, varied and light. Placement, size and detail of windows should allow plenty of natural light into circulation areas.

Consideration should be given to wide semi enclosed access decks which can function as communal space as well as providing access.

In specialist schemes free swinging door closers should be fitted to the front door of dwellings and other doors regularly used by residents linked to the fire system where closures are required. Fire compartment doors should be held open by magnetic pads or hold-open type door closures linked to the fire system. This will avoid the hazard and difficulty for frail older people associated with heavy overhead door closures. Specific handrails or dado rail shelves are required to one side of circulation areas. Dado shelves should be wide enough for older people to lean on if they need support.

Design features should be incorporated that will assist orientation, recognition and familiarity. Circulation areas require a residential rather than institutional feel with careful attention to floor and wall finishes.

Lift access should be provided to all units above ground floor level. Lifts should be able to accommodate a stretcher. Lift buttons need to be operable from a wheelchair. It is preferable that both a lift and stairs to all floors are easily reached from the main entrance.

Circulation areas should be heated on specialist schemes.

Security

Security is a major concern for older persons both in specialist schemes and in mainstream housing. The scheme design should recognise the need for security against unwanted intruders, creation of the sense of safety through visual supervision of open spaces, the avoidance of alleyways, recesses and other areas of security risk and the need for ready access in the event of an emergency.

In specialist schemes the main entrance should be visible from the public realm.
Marewood Court, Ballymun, Dublin 11. Designed by Fionnula Rogerson Architects. Completed by Clúid in 2008
All entrances will have audio control link to the manager’s offices and link to each residential dwelling. A video link is desirable. Consideration should be given to incorporating the audio link into the warden call system. Residents can use the system to allow to emergency call centre staff to listen in to callers or speak to them if required.

The manager’s office will be located next to the main entrance to enable passive surveillance. Public, semi-private and private space will be clearly defined. Secure landscaped or courtyard areas which cannot be accessed from the public realm will be provided. The provision of CCTV will be decided on a scheme by scheme basis. Access to the building in specialist apartment schemes will be by fob.

Spyholes and door chains should be fitted to all residential unit entrance doors.

**External and Common Area Lighting**

Internal and external areas will all be well lit. Lighting will provide a safe environment at night to all common spaces. High levels of light, appropriate fitting and good controls are key factors to consider when designing the lighting. Lighting design should be domestic and offer alternative settings. Directional and task lighting will be required in any activity spaces.

**Parking**

In specialist older persons’ housing parking should be adequate to meet the needs of residents, visitors and any staff. A recommended minimum car parking provision should be one space for two units.

Shared external surfaces which can be used flexibly should be considered on specialist schemes. Parking requirements on schemes vary. Some older people may give up their cars. Shared areas can be used for other activities if they are not required for parking.

Consideration needs to be given to the operational needs of specialist housing including drop-off areas and parking for minibuses.
**Gardens/Shared External Space**

In specialist schemes, raised planting areas provide the opportunity for people in wheelchairs and people with difficulty bending to participate in gardening and should be included in common landscape proposals.

In specialist schemes the location of terraces and patios alongside a lounge or conservatory enables the extension of the common activity space into the garden area.

**Seating**

Seating should be provided in communal garden and patio areas.

**External Storage**

Adequate secure storage should be provided outside the home in mainstream and specialist older persons’ housing. Provision is required for mobility scooters, electric wheelchairs, cycles and mobility aids. Charging points are needed for mobility scooters and electric wheelchairs.
Communal Facilities

One or more multipurpose activity spaces for residents to meet should be provided in all specialist older persons’ housing with the exception of schemes with this facility next to the site or very nearby. The facility should be designed to support an appropriate range of activities perhaps serving the locality as a wider community hub if there is an opportunity to do so. One communal room should have a small adjoining kitchen area. Common rooms should be located at the centre of the scheme near the main entrance. Floor and wall finishes should be domestic. An institutional feel should be avoided.

Consideration should be given to the provision of informal common spaces on all specialist schemes.

Laundry

A resident laundry incorporating two washers, two driers and ironing facilities will be provided in specialist accommodation. A small seating area for residents should be provided. The laundry should have a double sink and worktop. Access to the garden with a drying area is desirable. Floor surfaces should be slip resistant. A floor gully is required in case of leaks.

Scheme Manager’s Office

On specialist schemes a manager’s office will be provided. It should have a view of the main entrance area. The office requires space for one work station, chair, two visitor chairs and a storage cabinet.

Clúid Bandon scheme, Co Cork
Reference Websites

Department of Housing, Planning and Local Government (DHPLG)

http://www.housing.gov.ie/housing/housing-policy

http://www.housing.gov.ie/housing/housing


http://www.housing.gov.ie/search/archived/current/category/housing/sub-type/guidelinenstandards/sub-type/policy-statement?query=Quality+Housing+for+sustainable+communities


Department of Transport, Tourism and Sport (DTTAS)

Design manual for Urban Roads and Streets (DMURS)

www.dttas.ie


The Centre for Excellence in Universal Design and the National Disability Authority (CEUD & NDA)

http://universaldesign.ie/Built-Environment/Housing

http://www.nda.ie/

The Sustainable Energy Authority of Ireland’s (SEAI)

http://www.seai.ie/

Housing Learning & Improvement Network

http://www.housinglin.org.uk/


http://www.housinglin.org.uk/Topics/browse/Design_building/HAPPI/?parent=8649&child=9930

Other

Appendix A

Minimum Floor Areas and Standards

Statutory Minimum Floor Areas and Standards for Apartments

Minimum overall apartment floor areas

<table>
<thead>
<tr>
<th>Apartment type</th>
<th>Minimum floor area</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-bedroom</td>
<td>45 sq m</td>
</tr>
<tr>
<td>Two-bedroom – three persons</td>
<td>63 sq m</td>
</tr>
<tr>
<td>Two-bedroom – four persons</td>
<td>73 sq m</td>
</tr>
<tr>
<td>Three-bedroom – five persons</td>
<td>86 sq m</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Apartment type</th>
<th>Width of living/dining room</th>
<th>Aggregate floor area of living/dining/kitchen area*</th>
</tr>
</thead>
<tbody>
<tr>
<td>One bedroom</td>
<td>3.3 m</td>
<td>23 sq m</td>
</tr>
<tr>
<td>Two-bed – three persons</td>
<td>3.6 m</td>
<td>28 sq m</td>
</tr>
<tr>
<td>Two-bed – four persons</td>
<td>3.6 m</td>
<td>30 sq m</td>
</tr>
<tr>
<td>Three bedrooms</td>
<td>3.8 m</td>
<td>34 sq m</td>
</tr>
</tbody>
</table>

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

Minimum bedroom floor areas/widths

<table>
<thead>
<tr>
<th>Type</th>
<th>Minimum width</th>
<th>Minimum floor area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single bedroom</td>
<td>2.1 m</td>
<td>7.1 sq m</td>
</tr>
<tr>
<td>Double bedroom</td>
<td>2.8 m</td>
<td>11.4 sq m</td>
</tr>
<tr>
<td>Twin bedroom</td>
<td>2.8 m</td>
<td>13 sq m</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Room Configuration</th>
<th>Minimum Area (sq m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One bedroom</td>
<td>11.4</td>
</tr>
<tr>
<td>Two-bed – three persons</td>
<td>11.4 + 7.1 = 18.5</td>
</tr>
<tr>
<td>Two-bed – four persons</td>
<td>11.4 + 13 = 24.4</td>
</tr>
<tr>
<td>Three bedrooms – five persons</td>
<td>11.4 + 13 + 7.1 = 31.5</td>
</tr>
</tbody>
</table>

Minimum storage space requirements

<table>
<thead>
<tr>
<th>Room Configuration</th>
<th>Minimum Area (sq m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One bedroom</td>
<td>3</td>
</tr>
<tr>
<td>Two-bed – three persons</td>
<td>5</td>
</tr>
<tr>
<td>Two-bed – four persons</td>
<td>7</td>
</tr>
<tr>
<td>Three or more bedrooms</td>
<td>9</td>
</tr>
</tbody>
</table>

Minimum floor areas for main apartment balconies

<table>
<thead>
<tr>
<th>Room Configuration</th>
<th>Minimum Area (sq m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One bedroom</td>
<td>5</td>
</tr>
<tr>
<td>Two bedrooms</td>
<td>7</td>
</tr>
<tr>
<td>Three bedrooms</td>
<td>9</td>
</tr>
</tbody>
</table>
### Recommended Minimum Floor Areas and Standards for Typical Houses

<table>
<thead>
<tr>
<th>Dwelling Type</th>
<th>Target Gross Floor Area (m²)</th>
<th>Minimum – Main Living Area (m²)</th>
<th>Aggregate Living Area (m²)</th>
<th>Aggregate Bedroom Area (m²)</th>
<th>Storage (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Dwellings – 3 or more persons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4BED/7P House (3 storey)</td>
<td>120</td>
<td>15</td>
<td>40</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>4BED/7P House (2 storey)</td>
<td>110</td>
<td>15</td>
<td>40</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>4BED/7P House (1 storey)</td>
<td>100</td>
<td>15</td>
<td>40</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>4BED/7P Apartment</td>
<td>105</td>
<td>15</td>
<td>40</td>
<td>43</td>
<td>11</td>
</tr>
<tr>
<td>3BED/6P House (3 storey)</td>
<td>110</td>
<td>15</td>
<td>37</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>3BED/6P House (2 storey)</td>
<td>100</td>
<td>15</td>
<td>37</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>3BED/6P House (1 storey)</td>
<td>90</td>
<td>15</td>
<td>37</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>3BED/6P Apartment</td>
<td>94</td>
<td>15</td>
<td>37</td>
<td>36</td>
<td>10</td>
</tr>
<tr>
<td>3BED/5P House (3 storey)</td>
<td>102</td>
<td>13</td>
<td>34</td>
<td>32</td>
<td>5</td>
</tr>
<tr>
<td>3BED/5P House (2 storey)</td>
<td>92</td>
<td>13</td>
<td>34</td>
<td>32</td>
<td>5</td>
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<tr>
<td>3BED/5P House (1 storey)</td>
<td>82</td>
<td>13</td>
<td>34</td>
<td>32</td>
<td>5</td>
</tr>
<tr>
<td>3BED/5P Apartment</td>
<td>86</td>
<td>13</td>
<td>34</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td>3BED/4P House (2 storey)</td>
<td>83</td>
<td>13</td>
<td>30</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>3BED/4P House (1 storey)</td>
<td>73</td>
<td>13</td>
<td>30</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>3BED/4P Apartment</td>
<td>76</td>
<td>13</td>
<td>30</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>2BED/4P House (2 storey)</td>
<td>80</td>
<td>13</td>
<td>30</td>
<td>25</td>
<td>4</td>
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<tr>
<td>2BED/4P House (1 storey)</td>
<td>70</td>
<td>13</td>
<td>30</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>2BED/4P Apartment</td>
<td>73</td>
<td>13</td>
<td>30</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td>2BED/3P House (2 storey)</td>
<td>70</td>
<td>13</td>
<td>28</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>2BED/3P House (1 storey)</td>
<td>60</td>
<td>13</td>
<td>28</td>
<td>20</td>
<td>3</td>
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<tr>
<td>2BED/3P Apartment</td>
<td>63</td>
<td>13</td>
<td>28</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>1BED/2P House (1 storey)</td>
<td>44</td>
<td>11</td>
<td>23</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>1BED/2P Apartment</td>
<td>45</td>
<td>11</td>
<td>23</td>
<td>11</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Refer to Local Authority Development Standards. In all cases for houses the development standards set out by individual local authorities supersede the recommended minimum floor areas outlined above.
Typical Kitchen Specification Required:

Kitchen Options for Clúid Tenants
Each household is to be offered a choice of three sample grade:
- Worktops
- Cabinet doors (flush and panelled)
- Handles (2no.) – Same hole alignments.

1. Five-Piece (see appendix 1) Ivory shaker doors and light walnut countertop
2. Five-Piece Lissa Oak doors and black quartz countertop
3. Five-Piece Medium Walnut and Travertine countertop

Any combination of the three will be permissible and sample boards are to be available.

Survey and installation
Dimensions of manufactured kitchen to be BS EN 1116.

Product Lifetime
The products should have a certified expected 15-year life assessment with a guarantee that suitable stock will be held for the following time periods from installation:
- Kitchen frontage: 15 years
- Worktops: 10 years
- Sinks and accessories: 10 years

Overall Generic Specification
- 18mm solid wood effect/cream superpan cabinets with soft closing hinges – the advanced substrate from Finsa.
- Jupal hexagon adjustable legs
- Kickers/plinth in matching superpan and matching cornice and pelmets.
- Brushed stainless steel D – handles
- Pull out extractor fan (with minimum extraction of 220m3/hr).
- Colour matched PVC edging.
- 40mm high pressure laminate countertops with aluminium/black worktop joiners and ends where applicable. Or 40mm Axiom by Formica, chipboard core, moisture and heat resistant laminate surface with aluminium/black worktop joiners and ends where applicable.
- Single over mount stainless steel sink with drainer and a lever mixer tap in polished chrome.
- Metabox drawer with cutlery tray.

Services and Access to Services
All units to have a 50-70 mm service voids to accommodate services and considerations are to be made for wall pipework during site checks. All defunct pipes, service and waste pipes to be capped off and/or removed in a neat and tidy manner. Services must be securely fixed to the back wall using timber noggins. The contractor will be responsible for all services connections.

White Goods
White goods such as washing machines, dishwasher, fridge and/or freezer and cooker are not provided by Clúid.

Environmental
All timber is to be sourced from environmentally managed sources. Chain of Custody certification to be provided to Clúid.

Boiler Housing Requirements
If there is a boiler present in the kitchen area; the boiler housing unit must not hinder access to the boiler or ancillary items of the boiler; the door is to have 3 hinges and 870mm x 570mm x 370mm minimum sized housing to allow for upgrade and boiler replacement at a later date. Service valves such as flow and return valve, mains top up valve and gas valve are to be accessible.

Backboard
To be provided with 18mm MFC backing.
**Kitchen Carcasses Requirements**
- All carcasses and panel sheet material to be manufactured from high density, fine surface 18mm MFC core board to BS 312 Type P3 moisture resisting chipboard.
- Finished MFC to comply with BS 7331.
- Structural performance to be to BS 6222 2009 Part 2 Grade H- for heavy use.
- Surface performance to be to BS 6222 Part 3. Carcass to comply with BS 14749 European Safety Standard for kitchen storage units and worktops.

To have a hard wearing 80g/m2 melamine finish as standard, with all exposed edges 0.8mm ABS lipped.
- All carcasses to be 19mm MFC except for sink base unit with matching wall and base units.
- Base units to be 720mm high, 570mm deep generally, box on legs construction.
- Timber cross rail required to rear of base units to allow for fixing.
- Corrosion resisting predrilled corner gussets to give added rigidity to be drilled for use as fixing points.
- Wall units should generally be positioned 450mm above the working top of the base units.
- Wall units to be run together without gaps.
- All units (apart from drawer unit) to have intermediate adjustable shelf.
- Carcass to be designed to ensure that no on-site of modifications are required when installing the sink top or hob.
- The carcass to be 18mm white melamine faced particle board lipped on all four sides with 0.8mm ABS edging. Shelves to be adjustable for height and not less than ¾ the inside depth of the unit. To be supported on nylon shelf self-retaining bearers to four locations, or to six locations to double base and wall units if applicable (centrally front and back as well as both ends) to prevent deflection. No unsupported length more than 600mm.

**Cooker Extract Requirements**
- An integrated wall mounted cooker hood extractor unit to be supplied and installed above cooker space, the door will activate the unit. 220m³/hr (30l/sec) low decibel three speed controllable fan with switchable light.
- Should a 100mm pipe be in place to cavity wall to allow 100mm flexible round ducting to be connected to the pipe and to the unit, the charcoal filter within the extractor fan is to be removed and the 100mm flexible round ducting to be connected to both the extractor unit and 100mm pipe with metal clips, secured tightly. 100mm flexible runs to be kept to a minimum.

**Cut or Drilled Edges**
Cut or drilled edges to be kept to a minimum. Where such exposed edges occur such as at hob cut-out, sink cut-out or at pipework or waste services cuts, exposed edges to be fully sealed with two coats of quick drying PVA glue. Ensure that there is a minimum 10mm radius cut at each corner. Allow first coat to dry thoroughly before application of second coat.

**Doors**
- Five piece PVC Doors Are constructed of five individually PVC wrapped pieces of MDF and assembled like a solid wood door to provide better rigidity and also less exposed seals to reduce the possibility of the PVC foil separating from the door.
- Structural performance to be to BS 6222 2009 Part 2 Grade H- for heavy use.
- Surface performance to be to BS 6222 Part 3. No joint wrapping is permitted. To be Formica bonded onto MDF, finished thickness 19-20mm, edged with 2.0mm ABS securely fixed, factory finished.
- Doors and drawers to be accurately aligned, and not binding. Allow for matching panel beside door if variation in unit width. Integrated doors are not required.
Drawers
• Drawer unit to have three Blum metal box drawers, epoxy coated, with P3 15mm moisture resistant bottoms. Metal box drawers to have metal to three sides.
• 450 mm deep drawer to be incorporated at base. Top drawer to be fitted out with cutlery tray.
• Adjustable mounting brackets with metal runners and double nylon rollers with integrated stop to be incorporated.

Edges
All units delivered to site to be finished on all edges with 0.8mm ABS lipping. This extends to all edges of carcass, side panels and internal shelves and all non-visible components.

Handles
Handles to be brushed stainless steel. Two samples/choices to be provided.

Hinges
Self-closing, quality with three way adjustable cruciform plates. Hinges to be 170° concealed with metal spring hinge system so they may fold back against adjoining units. All cornered units to be fitted with a 180° hinges. 180° hinges are permissible for upper units. Two hinges minimum on 715mm high doors, three hinges minimum on 900mm doors. Hinges and plates to be installed through a 5mm dowelled system for strength. Hinges to be lubricated upon completion.

Plinth
Allow for 150 x 19mm plinths and return plinths. Plinths to be fully removable using clips system, clipped onto cabinet legs. To be lipped along two long edges. To be BS EN 312 Type P3. To be Formica bonded MDF both sides. A deflection support should be provided in the centre to prevent kicking if applicable.

Sealant
To BS 11600 class F20 HM. One part silicone or clear mastic. Clear mastic or a silicone pointing will be run around the junction of the lowest tile and the kitchen worktop. Sink to be bedded to worktop. Fill joints completely and neatly, ensuring firm adhesion to substrates.

Side panels
All carcasses to have matching/complementary side panels. To be 90mm Formica or equal approved bonded onto MDF. All side panels to be sized during site survey; no cutting of side panels to be carried out on site. Base of side panels to be protected with U shaped uPVC sleeve fixed to the bottom. Side panels to be MDF. To be finished on all edges with 0.8mm ABS lipping.

Sinks
Sinks to comply with BS EN 13310 kitchen sinks- functional requirements and test methods. 0.7mm stainless steel satin finish with reversible 2 punched tap holes (one for tap hole stopper) 90mm waste outlet for a basket strainer waste suitable for a waste disposer. Waste and overflow included.

Sink dimensions:
• Overall W 860mm D 500mm Bowl depth 180mm Min. base unit 500mm Cut out W 838mm D 480mm
• A purpose made gasket is required to the perimeter to accommodate a full bed of silicone sealant.

Sink base units to have
• ¾ high solid back, easily removed for access to pipework. To be 450mm deep allowing for 120mm space back for services.
• To have one intermediate shelf uPVC sleeve to be placed to bottom edge of whole unit. To be provided with drip tray to base of sink base unit with up-stand at rear; any leaks from sink U trap to be diverted towards cabinet door.
**Taps**
Single lever design, polished chrome, minimum 0.3 bar pressure required lever action single flow. Height 145mm, reach 205mm.

**Traps**
Bedding to be carried out with waterproof jointing compound. To be fixed with resilient washer between appliance and back nut. Depth of minimum seal to be 75 mm.

**Supports**
Individual carcass units to be fitted with 4 plastic supports to raise the bottom of the unit 150mm from the floor to accept the kicker board. The maximum height of the supports is 170mm and a minimum height is 135mm.

**Worktop**
Worktop Formica required to be ‘Topplus range’ or similar approved. Surface performance to be to BS 6222 Part 3 and surface finishes to BS 438 2005 (decorative high pressure laminates). Worktop to be minimum 40mm thick. Worktop to have bull nose moulded front edge. Worktops to be suitably balanced on the reverse surface with a compensating veneer such as a wax injected hot melt. To have rebated underside PUR hot melt polyurethane resin moisture barrier underside finish. Patent drip barrier to be in place to bottom front underside edge.

Joints to be machine tooled, biscuited and to be sealed with BS 204 grade D3 or D4 moisture resistant gap filling adhesive. Mitred or butt joints to be used; aluminium or plastics joint strips are not permitted. Ends to be capped with 38mm chrome end piece.
Finishes Specification Requirements

Common Areas
1. Tiled entrance lobbies with recessed mat well at all entrance doors.
2. Vinyl flooring eg Marmoleum, to common area staircases and corridors. Hard wearing carpet may be fitted at Clúid’s discretion.
3. Common area doors to be accessed with a key rather than code or fob access.
4. A sufficient number of electrical socket per floor for cleaning purposes, these should be security sockets if located in a common landing.
5. Paint finish to walls in common area halls, stairs and corridor to be vinyl silk emulsion or similar easy clean emulsion paint. Lift areas to the ground floor lobby and stairs to the first floor should be treated with a smooth finish anti-graffiti paint.
6. Lighting to stairwells and hallways to be controlled via day/night sensors (preferably movement sensors).
7. Lift access is required to buildings with three storeys or more. (Two storeys’ or more if the building includes underground car parking). The lift installed should be capable of being maintained by other suitably qualified lift engineers without restriction by the installing manufacturer or with special conditions with regard to the supply of parts.
8. Letter boxes to be robust and easy accessible.

3. Without prejudice to the two points above, the open space should be designed to recognise the fact that children will live within the scheme and will have specific requirements for safe play.
4. Play areas within the communal open space should be located and designed to avoid, as far as is possible, inconvenience and disturbance to other residents.

Underground Basements
1. Refuse storage areas to be provided with adequate ventilation, and drainage gulley to facilitate cleaning.
2. Adequate access to refuse bins for refuse removal.
3. Adequate lighting to be provided in basement area especially at stair cores and refuse areas.
4. Access and egress to parking areas to be adequately controlled by gates and access control systems where required.

External Areas
1. Naturally supervised external children’s play area to be included in open space if possible.
2. Play area to be a proprietary play surface with a number of play items eg rocking chairs with an impact absorbent ground surface treatment to comply with current safety standards and best practice and approved by Clúid.
Internal Apartment and House Finish

**General**
1. Units to be fully painted internally with minimum of 3 coats, 1 primer, and two finishing coats.
2. All timber skirting, architraves, window boards, door frames, or other timber elements to be painted in white gloss.
3. All walls and ceilings are to be painted in matt emulsion. Ceilings to be white. Clúid’s preference is for walls to be painted in paler neutral colours.
4. All internal doors to be box ply, solid wood or veneer. Box ply or solid wood doors to be painted, stained or varnished at Clúid’s discretion. Hardboard doors are not acceptable.
5. Windows, wherever possible, to comply with Clúid’s Design Guide. Provide restrictors on upper floor windows.
6. Light fittings to be standard pendant fittings.
7. Preferred method of space and water heating is a Gas Fired Central Heating with atmospheric boilers; pressurised systems are to be avoided wherever possible.
8. Provide telephone point.
9. Ironmongery throughout to be robust brushed stainless steel, easily maintained with component replacement readily available.

**Kitchen**
1. Provide slip resistant vinyl or tile flooring to wet areas.
2. Provide space for a built in electric oven in the counter worktop
3. A gas supply pipe to be provided to the hob position where gas is available.
4. Provide tiled splash back over the counter worktop to the underside of the wall units.
5. Provide space for a mini dishwasher or where space allows a standard dishwasher.
6. Provide space for a tall fridge freezer, free standing at the end of the counter top. Under counter fridges are not sufficient.
7. Provide extractor cooker hood with ducting to the outside.
8. Refer to the Kitchen Specification in Appendix A for further information on design elements and other requirements.
9. White goods are not provided by Clúid.
Living Room & Dining
1. Cable TV link to be available in living room
2. Provide sufficient number of electrical sockets to accommodate the size and flexible use of the living and dining space. Refer to the Design Guide for more information on layout and design requirements.

Bathroom and En Suite
1. Preferably provide tiling to all walls, however as a minimum provision provide splash back to full bath and shower wet areas.
2. Provide minimum 150mm tiled splash back above the wash hand basin.
3. Provide slip resistant vinyl or tile flooring throughout.
4. Provide mixer tap to bath/shower. Steel bath or as per agreed specification.
5. Mechanical extract fan to be fitted in all bathrooms in addition to natural ventilation.
6. Provide glass shower and bath screens. Curtain and rail is not acceptable.
7. Provide pump in areas of low water pressure.
8. Sanitary ware provided should be standard white, easily maintained with component replacements readily available in the Irish market. Materials as follows;
   - Close couple WC set
   - Standard wall fixed sink with pedestal
   - Standard size pressed steel enamelled bath with flat top for sealing.
   - Chrome plated taps
   - Chrome plated steel WC handle
   - Chrome plated steel waste outlets

Bedroom
1. Provide sufficient number of electrical sockets to accommodate the size and flexible use of the bedroom. Refer to the Design Guide for more information on layout and design requirements for single and double rooms.
Clúid’s Handover Requirements

List of Items

• Notice of closing. Clúid require one month advance notice

• Clúid attribute spreadsheet to be completed.

• Tenant Handbook
  » Easy guide to using the home. Provide a single document user guide covering the full workings of the home in plain English. Do not use product manuals as these are generally not user friendly.
  » Supplier details for all components
  » Door entry alarm code
  » Managing agent contact details if applicable
  » Provide Guarantees/Warranties/Makes/Models and Installer details for all electrical equipment
  » Demonstration to Clúid staff

• Keys
  » Two sets of internal door keys, one set to be left in doors
  » All other necessary keys to be labelled and three sets handed to Clúid
  » All fobs required by tenants to be labelled three sets to be handed to Clúid on handover

• Safety File
  » Full set of drawings ‘as built’
  » Fire certificate if applicable
  » DAC certificate if applicable
  » Final grant of planning permission
  » BCAR documentation if applicable
  » Building Health & Safety Statement if applicable

• Utility Information
  » Meter numbers and readings
  » Supplier contact details
  » Account name and number

• Lift Manufacturer’s commissioning certificate and phone line details if applicable

• Fire alarm system commissioning certificate and system details if applicable

• Appropriate commissioning certificates for both electrical and gas installations;
  » GAS- RGI Certificate
  » Electrical – ETCI or RECI Certificate

• Where oil central heating is provided oil is to be provided in the tank to allow for testing the heating system for a minimum of eight hours under pressure

• Arrangements for defects (eg timeframes for completion of defects)
Clúid’s vision is a society where everyone has a great place to live.