clydebank housing association

**Draft**

*"Offering our community more than a home"*

# New Build Development
# Design Guide and Technical Brief

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**Relevant CHA Objectives: -**

1. To provide quality, affordable housing that meets the changing needs of our customers and to ensure fair access to housing within our area.
2. To provide a first class maintenance service which offers value for money and ensures the comfort and safety of our residents while achieving high levels of satisfaction?
3. To work in partnership with others, supporting our tenants and other customers, to maximise opportunities for physical and socio-economic regeneration in Clydebank.
4. To ensure that our resources are adequate to deliver our objectives by investing in our people, demonstrating value for money and through robust procurement practices.
5. To promote social inclusion by applying principles of equality and diversity to everything we do.

**Relevant Scottish Housing Regulator Regulatory Standards:-**

Standard 2- The RSL is open about and accountable for what it does. It understands and takes account of the needs and priorities of its tenants, service users and stakeholders. And its primary focus is the sustainable achievement of these priorities.

Standard 3 - The RSL manages its resources to ensure its financial well-being, while maintaining rents at a level that tenants can afford to pay.

Standard 4 - The governing body bases its decisions on good quality information and advice and identifies and mitigates risks to the organisation's purpose.

***This policy can be made available on request in a variety of different formats, such as on CD, in large print and translated into other languages.***

**CLYDEBANK HOUSING ASSOCIATION LIMITED**

**DESIGN GUIDE**

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# Part 1 - Narrative

## Introduction

Purpose of the Brief - to complement the Planning Legislation, Building Regulations, Road Design Guidelines, Housing for Varying Needs and Secure by Design Guidelines, which are not replicated in this Brief.

Any developments undertaken within the West Dunbartonshire Council area must also take account of the West Dunbartonshire Design Standard for Housing Supported by the Affordable Housing Supply Programme.

The Association requires consultants to confirm to the Association that these guidelines are complied with and, if there are any proposed variations from these guidelines, these must be reported to Clydebank Housing Association's (CHA) staff and, where deemed necessary, reported to the Development Sub-Committee for consideration.

The Part 1 narrative to this brief is to explain the basis behind the design criteria set out in the checklist that forms Part 2 of this brief.

## Part A

## External Technical Brief (Environment)

### 1.0 Estate Layout

#### 1.1 Definition of Public and Private Spaces

All external spaces must be well defined and their function clearly determined at the outset and designed accordingly. This should be illustrated on the plans for Association approval.

Avoid areas where the public space overlaps, the boundary is unclear, or where the private space is exposed or unprotected. Pedestrian routes through dwelling clusters should be avoided to reinforce their separate identity and private nature.

Open plan frontages to dwellings facing a semi-private cul-de-sac are acceptable. However in urban environments or where shortcutting or other invasions of privacy might be a future problem, 1m high boundary treatment (fence or wall) is recommended. Dwellings fronting a main road or footpath must have a firm division or boundary.

Front gardens are valuable in any development, they not only add to the streetscape but also fulfil a number of practical functions for residents. The design needs to be consistent and provide a robust edge to the street or adjoining public space whilst allowing for a degree of individual choice and expression.

Private rear gardens to have high boundaries to public areas with secure access gate where required. Shared boundaries within estates to be a maximum of 1m. Garden size should be suitable for necessary activities though not too large to be an inconvenience in maintenance for either the tenants or the Association.

Where possible, without reducing the amenity of the area, communal space that has no specific function should be incorporated into private garden space. All garden areas should comply with Secure by Design criteria.

The boundary wall or fence, if any, should blend with the main structures and the setting and where necessary should also be fitted with gates suitable for their purpose. It should be sufficiently high as to form a barrier between the pavement and the scheme, but not obscure the outlook.

- All external areas to be well defined and their function clearly determined
- Every dwelling to have a zone of private space around it
- Dwellings to have a firm boundary division with 1 metre high fence to frontage
- Open plan frontage of dwelling in cul-de-sac or semi-private areas
- Private rear gardens to have minimum 1.8 metre high fencing with secure access gate
- Division fences between gardens to have 1 metre high fencing
- Front boundary fencing to have gates where suitable for purpose
- Front boundary fencing must not obscure outlook from dwelling
- Minimise areas of communal space out with curtilage of dwellings
- Maximise garden areas to larger house types
- Landscaping to be used to reinforce security and privacy of dwellings
- Landscaping design should prevent short-cutting and erosion of edges

1.2 Form of Development and Layout

Development Sites should be close to local amenities and transport links. Cul-de-sac or no through roads preferred to minimise traffic and maximise security. Any family housing is to be of terraced or semi-detached design

- Flatted dwellings to be of cottage style design
- Larger family dwellings must be dispersed throughout the development
- Generally, all dwelling types to be dispersed throughout development avoiding 'clusters'
- Density to be sympathetic to neighbourhood but maximised for viability reasons
- Undefended and blank walls to be designed out to eliminate the possibility of graffiti
- Allow sufficient space for the provision of separate refuse or recycling bins

1.3 Orientation and Outlook

- Living rooms and rear gardens should have aspects within 30º of due south.
- Dwellings to be designed to maximise solar gain
- Frontage views should protect privacy to the occupants of the dwelling
- Design to minimise hidden or obscured areas
- Provide buffer space at ground floor windows

1.4 General Car Access and Accommodation

The maximum amount of footpaths, road and services and public lighting should be adoptable by West Dunbartonshire Council.
The West Dunbartonshire Council requirements for car parking are open for negotiation depending upon car ownership levels in client groups. The Association requires a minimum car parking level of 80%, preferably within the curtilage of the dwelling.

1.5 Footpaths

No through routes are to be provided other than where remote parking is unavoidable. Where a right of way or unofficial shortcut is identified this should be altered to suit the development and the Brief. Public footpaths should not abut houses but should have a buffer space.

Rear footpath access to private gardens is desirable where there is no access from front to rear without passing through living areas. For security this should not be a continuous path behind terraced or grouped housing.

- Rights of Way and unofficial shortcut routes to be altered to suit the development layout
- No through routes to be designed unless remote parking is unavoidable
- Public footpaths are not to abut houses and a buffer zone to be provided
- Footpath access to private rear gardens of dwellings must not pass through the dwelling
- Rear footpath access is not to be continuous for terraced or grouped housing

1.6 External Lighting & Security

Design should attempt to reduce the visual impact of street lighting columns. It is acceptable to fix them to gable ends, where appropriate and where they don't compromise security or near window openings.

Due to restrictions on adoption, security and safety may require footpaths and access routes to be lit by a landlord's supply, arranged with the appropriate utility or provide individual automatic lights.

All developments to achieve Secured by Design status from Police Scotland

- Visual impact of street lighting is to be minimised and wall fittings are acceptable
- Communal lighting to have appropriate utility supply and metered separately
- Road and footpath lighting to be designed for adoption at completion West Dunbartonshire Council
- Unbuildable areas to be clearly defined and densely planted with low maintenance shrubs
- Hard landscaping of unbuildable or common areas will be considered as an alternative
- Where necessary, lighting of unbuildable areas to be controlled by movement sensor

1.7 Signage & Street Furniture

- Standard CHA development sign to be incorporated into development entrance
- Street furniture to be kept to a minimum and located to reduce danger to visually impaired
- Seating should not provide the opportunity for groups to gather or anti-social behaviour
- Seating to be adjacent to footpaths, amenity areas or elderly persons dwellings
- Street naming and numbering signage should be clearly displayed for vehicular access.

2.0 <u>General Landscaping and Environmental Works</u>

2.1 Site Preparation

- Landscaping areas to be well prepared and adequate drainage to be provided
- Best quality top soil and planting species (esp. grass / turf) to be used for landscaping

2.2 Landscaping and Planting

Landscaping is an integral part of each scheme and should be considered at an early stage and discussed with staff and committee.

Design of footpath links is important to prevent shortcutting and erosion of edges.
Adequate measures should be taken to protect them during the construction period.

The following factors should be considered in designing the planting layout:

(i) The function of each planting area, eg. Screening, shelter, definition of boundaries or footpaths, simplification of grassed areas or focal point.

(ii) The choice of plants to give a colourful display through the seasons.

(iii) Tolerance of plants to local climate and soil and the ease and economy of maintenance.

(iv) Coordination with services over items such as lighting, hydrants, garden standpipes, manholes, drainage and power supplies.

Well used public areas should be adequately lit and dense planting of trees and high growing shrubs/trees avoided.

Where possible landscape and planting schemes should be undertaken once development is complete and tenants can be consulted in the proposals.

- An allowance of 2% of project cost to be allocated for soft landscaping works
- An allowance of 30% of landscaping cost to be made for maintenance within defect period
- Landscaping to be used to reinforce security and privacy to dwellings or footpath links
- Planting designs to achieve maximum colour and variation for visual effect
- Small areas of communal grass to be avoided
- Sunken planting beds adjacent to ramps and steps to be avoided
- Designs to incorporate any suitable existing mature trees and shrubs
- Any trees planted should be of a type that is not a surface rooter and will not exceed grow ~~to no more than~~ 15 feet in height once fully grown.
- Consider provision of outside water tap where appropriate to assist landscape maintenance

## 3.0 Provision for Children's Play

A play area is required for family housing and this should reflect likely demand. Refer to the West Dunbartonshire Council for specified area per child bed-space. Play provision should be made specific to particular needs and detailed accordingly and ideally should be to adoptable standard. If this is the case, a sum should be built into the contract to meet the Council's requirements for adoption. The Association does not have a Play Area Brief so all proposals require approval by the staff and Committee. In all cases location of play areas should be nearer family housing units.

- Housing for elderly persons to be sited away from children's play areas. Play areas near family housing.
- Play areas to be sited adjacent to family dwellings to allow natural surveillance
- Play area designs and costs to be approved by the Association prior to implementation

## 4.0 External Curtilage

### 4.1 Privacy and Security

The need for privacy is the most important factor in layout design. Private areas adjacent to public areas which are in heavy use should be protected.

For flatted blocks, common entrances, corridors and hallways should be well lit and have no hidden recesses. Lights are to be controlled by photocells and the use of renewable energy sources is encouraged where practicable. Common entry systems should be directly accessible from the location of the parking provision.

- Designs should eliminate overlooking of private gardens and bedrooms in dwellings
- Shared entrances should be controlled by means of a door entry system

### 4.2 Gardens

Each dwelling or block should have a private external space related to house size, containing drying facilities, amenity space and a refuse collection point for wheelie bins.

- Private gardens to be enclosed by a fence with gates to Secured by Design guidelines
- Every dwelling or block to have a private external space related to house size and type
- External area to include drying facilities, refuse collection and amenity spaces
- Garden areas should be a minimum of 50 square metres per dwelling
- Smaller garden areas will be considered for elderly, amenity or flatted dwellings
- Gardens for ground floor flats should be immediately adjacent to the flat for privacy

4.3 Curtilage Fences, Walls and Hedges

Rear gardens should have boundaries marked by substantial fencing and gates while allowing easy access. Front gardens should have a strong definition of routes and spaces but can be open plan if in a cul-de-sac.

Paving slabs should be provided adjacent to buildings to facilitate cleaning and maintenance.

Boundary wall or fence should blend in with or complement the main structure. All fences and walls should be identified on the plan and approval sought from staff and committee.

Where privacy screens are required at the end of terraces, along the sides of end gardens or where private gardens adjoin well used paths or spaces, or other potentially antisocial land uses, a 1.8m high close boarded fence or wall should be provided.

All timber fences and gates should be pre-finished with wood preservative wood stain. Metal fences and gates including welding shall have a galvanised finish and not be painted. All fencing should be designed and specified for maximum longevity of components.

- Fences and to be of height and substance appropriate to their function
- Masonry walls to have a robust coping and damp-proof course, using low porosity items
- Timber materials to be pre-finished with stain or preservative, to limit future maintenance
- Metal components including weld to be of galvanised finish
- All fencing should be designed and specified for maximum longevity of components

4.4 Provision for Clothes Drying

Clothes drying are preferred should be provided adjacent to flats and should be easily supervised and accessed by only one entrance leading directly to the dwellings they serve. Ideally no more than two households should share a specific drying green and the number of poles should be 5 per floor/house. Whirly gigs when used should be allocated 1 per house.

Drying area to be served by minimum 4 no poles per unit.

- Path to be provided to drying area, the width of which to comply with Technical Standards
- Drying areas for flats to be adjacent to flats and easily supervised with direct access
- Provision of 4 no. poles per storey and 1.7m of drying line per apartment
- Drying areas for flats to have tall perimeter fencing for privacy
- Drying areas to be accessed by paved pathways with planting at suitable distance
- Planting around any drying areas to be appropriate to avoid clothes catching on it

4.5 In Curtilage Parking

Where curtilage parking is impractical it should be provided in small groups within view and easily supervised.

4.6 Bin Storage & Collection, Meters & Pends

For maintenance and amenity purposes e.g. bin collection or meter monitoring the Association requires access to the rear of houses without passing through the interior. Location of bin store should be considered with regard to noise impact and distance from properties. Bins should

not be located under overhanging trees.

- Refuse areas to be situated at the rear of dwellings and away from windows
- A minimum space allocated dictated by West Dunbartonshire Council recycling levels, slabbed area to be provided for each and every dwelling
- Refuse collection points to be accessible without need to pass through the dwelling
- Unobstructed pathway access to external facilities including meters to be provided
- Pends to have a lockable gate or door and be at least 1200mm wide with external lighting

## 5.0 Secured by Design

Addressing the need for housing designed to be secure in urban areas especially is a core requirement of this Brief. For more detailed or site-specific advice please contact Strathclyde Police Architecture Liaison Officer.

### 5.1 Layout

Signage at the entrance to developments to aid those visiting or delivering to homes must be provided with the direction of travel to the postal numbers shown. House numbering of properties must be completed before handover.

**Part B**

**External Built Form - Envelope and Common Parts**

1.0 General Construction Brief

Where a future change to Building Regulations is known every effort should be made to comply with the new standards. In all cases, the Regulations and standards should be viewed as a minimum and, if costs and site conditions allow, enhanced design is encouraged.

Greater use of Scottish Government planning publications such as 'Designing Places' and 'Designing Streets' is recommended to enable the structured briefing, specification, negotiation and assessment of variable elements of design. This should include aspects such as roads layouts, open space and local factors of design.

1.1 Future Consideration of Disability

The envelope, common parts and the external finishes should all be considered in light of the needs of those with impaired sight or balance.

The structure should be as adaptable as possible to allow ease of future adaptation, eg. a ceiling strong enough for a hoist, joists able to be trimmed for a future lift, stairs strong enough for a stair lift, removable walls between bedroom and bathroom entrance level WC positioned to allow further adaptation and space for a shower, etc.

All designs to comply with minimum standards of "Housing For Varying Needs" and Building Regulations

1.2 Foundations

Engineer to be fully aware of soil types and site conditions prior to undertaking foundation design. Where options exist, foundations to be chosen for suitability reasons, then cost parameters.

1.3 Drainage

- All drainage to comply with current technical Standards and Scottish Water regulations
- Designs should encourage SUDS drainage systems or SEPA recommendations
- Contributions towards the drainage solutions by the Utility should be promoted
- Project Engineer to liaise with Utility over any possible incorporation of elements in designs

1.4 Floor Construction

Upper Floor Construction

Where timber frame, the living spaces will be timber suspended and communal stairs concrete pre-cast.

All access hatches in floors should be screwed, not nailed, to be made of plywood and clearly identified. Where services cross joists they should be protected where necessary by metal plates and marked on the floor as required.

Noise

Minimum noise transmission between and within dwellings horizontally and vertically is of prime importance. The architect must ensure that maximum levels of sound insulation above building regulation standards are achieved, with careful detailing to contain noise levels within allowable limits.

Floor Coverings

In a common stair a granolithic finish is desirable. Where finance allows a noise reducing rubber, linoleum or other durable floor covering should be used. Approval must be sought from the Association.

- In a common stair a granolithic finish should be used where possible with a view of replacement and future maintenance needs considered.
- Where finance allows a noise reducing rubber, linoleum or other durable floor covering should be used
- Approval to be sought from Association

1.5 External Walls

The proposed external wall construction (traditional brick and block or timber frame) and external finish should be discussed with the Association in advance of any detailed design work and approval obtained from Technical Services Sub-Committee. Materials should be durable and sustainable supported by low maintenance requirements.

Well thought out material selection and an appreciation of colour are intrinsic to good quality design. Colour can inject vibrancy into the streetscape as well as providing identification.

- External Walls constructions must meet Building Standards as an absolute minimum & where practicable should surpass the minimum by 30% or higher
- Association's initial preference – traditional – cavity wall of brick & block finished externally with facing brick or suitable commons & render & internally with wet or dry lining
- Timber fame construction will be considered where site conditions allow
- Generally only for one or two storey houses but cottage flats are acceptable. No external stair access to cottage flats.
- If there is no disadvantage to using timber construction it should be considered as an option - constitutes a renewable resource & allows easy achievement of low U-Values
- Smooth render is to be avoided.
- Also applies to other non-traditional types of construction where sustainability & energy efficiency objectives are better met

1.6 Internal Wall Structure and Finishes

Finishes should always minimise maintenance and be durable and, where possible, be environmentally friendly.

- Walls will normally be finished with silk or matt finish emulsion paint
- It is essential that plasterboard walls are sealed and screeded so that wallpaper can be removed without causing damage to plasterboard
- Wood surfaces within the dwelling to be coated with stain & varnish. Painted acceptable.

1.7 Roofs

Any variation to traditional dual pitched roofs will require Association approval.

Planners may require a reduction of the height effect of a building in relation to the surrounding property. In such cases the Association will give sympathetic consideration to the use of a dormer or mansard form of roof. Implications of alternative roof structures must be discussed with the Association at an early stage.

- Preference for traditional dual pitched roofs
- Mono-pitched and flat roofs should be avoided unless there is a strong justification
- Overhanging eaves are preferred to prevent rain wash on the building
- Structure should be designed with the potential to convert to future accommodation with minimal alteration
- Use of timber for soffit fascia not permitted in buildings over two storey. Buildings over two storey should have UPVC fascia soffit or equivalent
- Access to the roof should be provided for maintenance purposes where cherry picker access or other cost effective solution is not available

1.8 Rainwater Goods

- Standard u-PVC fittings should be used in most cases, unless sustainable alternative available
- The only exception being planning restrictions in which case cast iron should be used
- Water goods should be in the private curtilage

2. 0 Security

- No ground floor gable windows are to be adjacent to a public footpath
- No wall should be without some form of window where practical

3.0 Entrances

All entrances must comply with Housing for Varying Needs criteria.

All flatted buildings should have controlled entrances. This may also be a consideration for 4 in a block upper flats depending upon the disability of the tenant.

- To avoid indication of vulnerability & disability, consideration should be given to having ramped access to rear
- There should be no threshold step
- Threshold bars are to be as flat as possible & only at flat entrances
- Ideally entrances should be well covered & illuminated
- All flatted buildings should have controlled entrances that reflect the orientation of access front and rear
- Also a consideration for 4 in a block upper flats depending upon the disability of the tenant

4.0 Sound Insulation

- To ensure privacy between houses, the Association requires sound insulation tests to be carried out, after construction & prior to acceptance, between adjacent flats & houses
- The results must be achieve a greater standard that current Building Regulations & copies must be forwarded to the Association, even if 'Deemed to Satisfy' construction has been approved & employed

5.0 Windows

External windows to be of good quality and clad with UPVC. External doors to be UPVC or Steel with three point locking system. Specification for all windows to have Association approval to ensure high quality of product in relation to life cycle.

## Part C

### Internal Design Criteria

1.0 Introduction

All dwellings are to be built to meet current Building Standards (Scotland) Regulations as well as Scottish Government and other good practice guidance on Barrier Free Housing - Housing for Varying Needs. All proposed building materials are to be of a durable nature and carefully considered in relation to future maintenance requirements and should be sympathetic to the environment.

Dwellings to be designed with energy conservation in mind and, in particular, current insulation standards to be a minimum with regard to roofs, external walls and floors.

Designers should appreciate the need for future-proofing with all properties having the facility to receive digital television.

2.0 Barrier Free Specification for Lifetime Homes

Any exceptions to achieving barrier free standards must be discussed and agreed by the Association.
All internal specification for houses including first floors or ground & first floors flats (or all flats where there is a lift) should be designed to Barrier Free Visitable Standard & ideally adaptable standard

3.0 Space Standards

Minimum space standards are those laid down in appropriate Scottish Housing Handbooks – in terms of disability, space is crucial to allow future adaptability, so the guidance should be treated as an absolute minimum

4.0 General Planning of Buildings

4.01 Layout

Consideration to be given to movement around the dwelling in a wheelchair & have access to bathroom, kitchen, living areas & at least one bedroom on ground
This consideration also applies to the use of Zimmer frames, prams & double buggies

4.2 Entrances

Where cost & design allow, the main entrance should always be into an enclosed lobby or hall, not directly into a living space

- Weather & draught stripping is essential to external doors
- Where possible first floor flats in a 4 in a block dwelling should have their own separate enclosed private entrance at ground floor level rather than a common staircase

4.3 Circulation Areas and Stairs

- In family dwellings a space should be provided to park a folded pram or wheelchair without obstruction
- A suitable area should be provided for hat & coat hooks
- Passages need to be more than 900mm if doors open off them or a right turn has to be made
- It is desirable for all internal doors to be solid core in all properties if costs allow
- Radiators & other obstructions should be positioned to avoid hampering etc movement
- Internal doors should not have thresholds or should be chamfered if they are necessary
- There should be minimal or no internal barriers to mobility or to full use of the accommodation, so no steps between areas on the ground floor
- Thought given to opening, closing & locking windows over sink
- With a straight flight that continues beyond at both top & bottom
- Single steps & winders should be avoided & staircase widths should be sufficient for the movement of furniture & headroom must comply with Building Regulations
- Ceilings over staircases should be at a level easily accessible for decoration

4.4 Kitchens

Location of kitchens to take account of possible heat recovery system; location of kitchens and bathrooms and WC's to minimise pipe runs and maximise possibility of warm air recovery system.

- Kitchen should be located as a separate room within the dwelling with an external wall space & window(s) Consideration should be given to household recycling needs in design
- Where kitchen dining areas require to be open plan, consideration should be given to utility rooms to allow use of appliances without noise transfer to the living space.
- Kitchen units should be 18mm solid carcasses, 18mm MDF doors and drawer fronts and 40mm worktops.
- Minimum $1m^3$ food storage is required to be provided to meet minimum SHQS standard. Larder units where possible should be considered in design layout
- Hot & cold water supply & waste connection should be left for the washing machine connection with a cut out through kitchen unit to allow connection
- There should be a choice of gas or electric connection for the cooker
- As a minimum, space in the kitchen layout should allow for location of a fridge (625mm), washing machine (650mm) and cooker (625mm) with an additional space for a further appliance, eg. Dishwasher or tumble dryer (625mm), preferred
- The uninterrupted sequence of worktop, cooker, worktop, sink, worktop is required
- An adequate free worktop for preparation should be provided with the sink top to be 1 bowl stainless steel inset type
- An adequate amount of base units & wall units should be specified for approval by the Association
- The worktop above the fridge space should be removable for fridge-freezer use
- No wall unit should be positioned above that space and there should be adequate ventilation around the appliance
- Units will have 180 hinge, full backs & metal drawer runners
- Handles to be D profile for easy grip, doors, fronts, fasciae, trim & worktops will be from the same range for the whole development
- A choice of colours will be selected by the Association or its tenants during the contract
- Ideally there should be a separate eating area included in the design for all dwellings & this is essential for family housing
- The Association favours kitchen-and-dining areas where not separate
- 9mm solid wall boarding to be used above worktops

4.5 Utility Room

In larger family housing or disabled accommodation a utility room should be provided for washing or other uses

4.6 Bathrooms and W.C.

- Bathrooms should have an external wall, natural light & mechanical ventilation fitted with a built-in humidistat
- Bathroom design should facilitate use by the elderly or disabled
- A platform at the head of the bath is desirable
- Bathroom dimensions should be 2100mm x 2100mm as a minimum
- All mainstream accommodation should have the plumbing & wiring for a shower over the bath available for connection under tenant's choice. Tiling to shower walls to be undertaken by Association.
- When designing disabled accommodation flexibility should be built in as the final internal design will be dictated by the tenant's individual needs
- Ideally the Architect should provide a menu of disabled details for future specification by an Occupational Therapist
- Partitions forming bathrooms & separate W.C.s should be sound insulated & capable of supporting grab rails & poles adjacent to the bath & WC
- 9mm solid wall boarding with preference should be used around baths.

4.7 Bedrooms

- Wheelchair access to bedrooms should permit the wheelchair to be taken alongside the bed allowing the usual bedroom furniture
- Other mainstream double bedrooms need to be $12m^2$ & single bedrooms $9m^2$ minimum excluding storage
- Double bedrooms should allow provision of a double or twin beds
- Single bedroom shapes should allow siting of the bed in several positions
- Built in wardrobes should be provided to all bedrooms
- These to include shelf & hanging rail with adequate support

4.8 Living room

- The living room is the focus of family activity so the space should be adequate for a range of furniture to suit a typical family's needs & for the use of consumer durables
- Shape should allow maximum flexibility of use
- The NFHA has information on adequate space provision for particular combinations of furniture, etc

4.9 Storage

Overall storage space should exceed Scottish Housing Handbook or building regulation standards, especially for disabled accommodation and should be well distributed throughout the house or flat. Storage space in the form of built-in cupboards is desirable and should be sited in circulation areas. Outward opening doors and lighting to be provided.
Space should be made outside habitable rooms for items such as waste recycling, washing/drying clothes and properties with six or more occupants should be designed with dedicated utility space in mind.

Built-in general storage should be free of hot water cylinders and other obstructions. When designing housing for families, the designers should look at the possibility of a store near the front door to take a buggy. As a minimum, space should be provided to park a folded pram without obstructing circulation areas.

All walk-in storage should have artificial lighting provided. Long narrow stores should be avoided. Designers should also consider the option of home working when planning layouts.

Storage facilities for bikes and buggies should be considered.

- Overall storage should exceed Scottish Housing Handbook or building regulation standards, especially for disabled accommodation & should be well distributed throughout the house or flat
- Storage space in the form of built-in cupboards is desirable & should be sited in circulation areas
- Outward opening doors & lighting to be provided

4.10 Heating

Any well tried and tested proposal which can minimise costs to residents and maximise energy efficiency and sustainability will be considered favourably by the Association. – see section on energy efficiency and sustainability (Part E).

- The Association installs gas fired wall mounted fan flued boilers. Preferred option is to use condensing combination boiler A rated.
- Where mains gas is not available, the heating system should be the cheapest & most efficient to run.
- Radiators should be located in circulation or waste areas at pass doors must not impede door opening, access or mask controls & or electrical outlets. All radiators should be fitted with TRVs.
- Design temperatures should be 22ºC throughout with external design temperatures taken as - 4ºC
- Radiator & programmer controls should be located to suit seated users
- Location of the central heating boiler must allow access to the control panel at the base & be fixed at a height of 1200mm maximum to the underside
- The Association will require radiator & pipe work layouts, prior to installation, for their comment

4.11 Space

Dwelling design should clearly articulate the space for furnishings, access and activity.

Open plan living will only be considered whereby the open space can easily be configured into habitable rooms meeting their respective room space standards to ensure future adaptability. Disabled users can find linked kitchen and living room areas that can be made open plan easier to negotiate with options such as sliding doors.

The minimum clear circulation width should be 1200mm to all dwellings. Doors from circulation areas should open to 'expose' rooms, usually opening against a wall to maximise usable floor and wall area. Staircases should not pitch directly down to the entrance door as this reduces accessibility and adaptability.

4.12 Ironmongery

All ironmongery to doors and windows to be easily manipulated and at a level suitable for all users. Ironmongery samples to be approved by Association.

Door handles should have screw on back plates, not roses.

4.13 Electrical

- Communal TV systems should be considered within flatted developments, with individual aerials provided on smaller developments where communal is impractical.
- Smoke & heat detectors are to be mains powered and interlinked with a 10yr lithium battery backup. At least 1 smoke alarm installed in the principal habitable room, 1 in every circulation space on each storey such as hallways and landings, 1 in every access room serving an inner room and at least 1 heat alarm installed in every kitchen.
- Carbon monoxide alarms are to be located in rooms containing a gas boiler and within any subsequent spaces in which the flue passes through. The alarms will be interlinked with the overall smoke alarm system in the property.
- Switches and sockets should comply with HfVN standards.
- Door entry systems must be installed to all communal stairs powered from shared supply. Top buttons must not be higher than 1200mm for wheelchair bound users.
- Communal lighting systems should be installed with PIR motion sensors and should be no more than 2.8m in height for safe maintenance access.
- Lighting fittings are to be of a low energy type. Natural light should be maximised to minimise the need for artificial light during daylight hours and reduce the effect of otherwise dark corners. Provide weatherproof fittings for external lights on front and rear doors with PIR operation and manual override. LED lighting should be used for external lighting in developments.
- Smart meters should be installed in all new build properties. The meters should have the capacity to allow the tenants to change their supplier without losing any functionality of the meter itself.
- Additional circuits in Wheelchair houses should be provided for (i) remote controlled door opener (ii) door entry system, (iii) filtered supply for Alert System, (iv) wheelchair charging, (v) external wheelchair charging, (vi) installation of an electric hoist, (vii) installation of clos-o-mat & (viii) optical smoke detector system

**Part D**

**Special Needs Design Variations**

1.0 Introduction

Special needs design may encompass housing for a wide range of disabilities including physical, sensory, learning difficulties, mental distress and hidden disabilities like epilepsy. Innovative design solutions will be required to support accommodation flexibly, should the circumstance of the resident change.

It is usual for the Association to allocate its disabled accommodation first, but this will be some time into the contract, usually after the structure is complete and certainly after designs are finalised. In addition, the house will have to serve a number of households over time with different needs which again might change radically. Therefore, a standard range of dwellings should be drawn up with the flexibility and the space to be fine-tuned after allocation, interviews and the Occupational Therapist's report on the tenant's needs. Depending upon the nature of the work, a range of approved adaptations should be included in the Bill of Quantities for pricing or provisional sums allowed.

Careful consideration should be given to the placing of windows and doors and services which are more difficult to alter retrospectively. A downstairs WC should be provided in each house and should be capable of being adapted into a wet floor shower room. In dwellings of six people and above the downstairs WC should also be a shower room.

Full account must be taken of housing for varying needs and the enhanced standards to accommodate current and future needs of all clients regardless of age and disability.

Developments aimed at elderly residents should take into consideration the requirements for those with dementia. Designers should consider the University of Stirling and CIH Scotland's publication titled 'Design of Housing to Assist those with Dementia' July 2013.

An initial design for a particular house type may be provided for modification following Stage 2 visits and feedback. Stage 2 adaptations, specified by the O.T. may include:

- Adjustment in height of kitchen units, worktops & fittings
- Confirmation of appliances
- Electric or Gas hob & oven
- Position of electrical sockets & switches
- Front controls to hob or sink

1.1 Bathroom & W.C Compartments

Stage 2 adaptations may require a range of tenant specific design features but a basic model for bathrooms & W.C should be provided along with a theoretical Stage 2 adapted design

1.2 Living Room

Stage 2 adaptations, specified by the O.T may include:

- Door entry handset with roving lead & handset
- Location of community care call system, Alert
- Audio visual doorbell signal

1.3 Other Areas

General Stage 2 adaptations to any room, specified by the O.T may include:

- Low temperature radiators required throughout
- Remote/manual window opening gear
- Remote controlled door opening gear
- Fire resistant sliding doors
- Community care call system, Alert
- Door entry system
- Audio visual smoke alarm
- Audio visual doorbell signal

1.4 Ambulant Disabled

Ambulant disability is a difficult area to design for as the range of tenant disability is so great.

The Association would initially require a basic design that conformed to the basic Scottish Government criteria & the more general disabled design notes above. The final design to rely upon the Occupational Therapist & tenant input

1.5 Internal Design & Adaptation

- Space standards should aim for the Wheelchair housing levels & should certainly exceed the mainstream standards

1.6 Elderly Amenity Housing

External Layout & Design

- Current Social Work thinking concentrates on independent living in adapted mainstream accommodation with domiciliary care & support
- To meet the need, CHA is committed to providing a reasonable proportion of Elderly Amenity accommodation in each scheme with appropriate design

1.7 Design for Sensory Impairment

In terms of sensory impairment, the Association terminology is primarily referring to the Blind & Partially Sighted. The intention is to build mainstream or disabled accommodation with consideration for the needs of those with impaired sight. There may also be Stage 2 adaptations following the same brief

Internal Design

- Occupational Therapy & the Social Worker for the Blind will provide guidance on appropriate internal adaptations
- Further information & design guidance for the external & internal environment can be obtained from the RNIB & it is recommended that designers consult “Building Sight”, their design guide, or similar

**Part E**

**Energy Efficiency and Sustainability**

1.0 Affordable Heat

The Association believes that energy efficiency in design is the most important general component of housing design. CHA's future housing must be cheap for tenants to run in terms of heating, hot water and electricity. Affordable heat is also one key part of a strategy to eliminate condensation dampness.

When aspects of design are "competing" for resources, energy efficiency, affordable heat and solar gain should be the first priority. The Association will work with the design team to ensure that the housing design makes the best use of the aspects of the site that lend themselves to building energy efficient housing.

In particular the design should try to orientate buildings to the south, maximise passive solar gain through appropriate massing and glazing, select the most efficient and cheapest forms of heating that is suitable, install insulation levels greater than Building Regulations and consider simple heat exchanging ventilation systems.

Time limits to the development process mean that Combined Heat & Power & Group Heating approaches, although desirable are generally not incorporated

Window sizing and positioning is critical according to the function of the space being naturally lit or heated and should be screened for high summer sun while admitting heat from lower winter sun. Likewise, north facing penetrations should be minimised.

Where practicable, renewable energy sources should be considered and communal systems for bigger developments.

The Scottish Government has issued its Zero Waste Plan for Scotland. This publication sets the standard for change required to achieve its targets. It proposes long term targets for recycling 70% of all Scotland's waste by 2025. As an environmentally conscious organization, CHA seeks to minimise the environmental impact of its new developments during both the construction phase and throughout the building's lifetime.

The design should allow for recycling of materials during the construction phase and for household waste during occupancy. In particular, Local Government policies should be allowed for, to encourage recycling by tenants and users.

The Association supports sustainable housing development based on sound ecological principles:

- Reduce consumption of & dependence on finite natural resources
- Avoid over-exploitation of renewable resources
- Reduce generation of waste & pollution
- Consideration should be given to the energy & $CO_2$ emissions associated with building & materials with a view to reducing both
- Where high energy materials are used can it be justified in terms of prolonging the life of the building or is there an alternative?
- Aspects of the design must encourage recycling where possible & minimise the use of non-renewable energy or resources

- A particular area of concern is the use of materials that pollute or create serious pollution in their production
- Concern also applies to hazardous materials
- The Association would ask for information on alternative materials from its designers
- There is also an absolute ban on materials that contain asbestos or mineral fibres that are known to cause diseases
- Designers should consider health issues when drawing up any aspect of the design or specification

More information can be obtained from Edinburgh Sustainable Architecture Unit, the SFHA Working Party on sustainable development or other sources

## 2.0 SAP Rating

To focus the design on energy efficiency, the Association is setting a target to comply with current guidelines to exceed all minimum standards. All properties should reach a "B" rating as a minimum requirement with environmental impact ratings maximised where possible.

**Part F**

**Building Standards and Maintenance**

1.0 Building Defect Warranties

- All mixed tenure, traditional architect designed schemes will have a recognised third-party warranty cover & consultants will be expected to cooperate fully with their needs for information & design details
- In the case of Partnership projects, the contractor will be required to use Third Party Warranty company
- However, it would be advantageous to consider the design & choice of materials in light of the warranty provider's guidance
- It is the consultant's responsibility to assess the level of work required to comply with any warranty provider's more onerous information & consultation needs
- For Design & Build projects & those that are 100% rented by tenure, the Management Committee will decide on the basis of service & cost which of the building warranties should be obtained
- Again consultants & contractors will be required to co-operate with the needs of the Warranty organisation

2.0 Whole Life Cycle Costing

- The Association requires details & costed information on all the components of its housing & other buildings to feed into the cyclical & planned maintenance system
- Consultants will be expected to provide a fully costed 30 year programme of inspections & cyclical & major repair works by Practical Completion, based on the priced Bill of Quantities, costed A.I.s & the final account

# Contents

# Introduction

The following Technical Brief sets out standards and requirements to complement the Design Guide. The Technical Brief should be used by the Design Team to form the basis of the design and specification to be approved by Clydebank Housing Association (CHA) for each project. It will not form part of the contract documentation.

# 1. Barrier Free Standards

a) All accommodation should be designed to comply with Scottish Homes – Housing for Varying Needs (HfVN) – a design guide with a view to satisfying at minimum "general needs" and those of "older people" as given in Sections 1.1 and 1.2 of the document. In addition, features and designs should be such that "ambulant disabled people" can be accommodated in their home with a minimum of adaptation work at a later date.

b) Barrier Free Design is about providing homes and environments that are accessible to and usable by as many people as possible both now and in future.

This includes:

- People with temporary or permanently impaired mobility due to accident, illness or old age and who may use a wheelchair for some of the time
- People who have difficulty with steps, bending down or reaching or who lack dexterity
- People with impaired sight or hearing
- People with impaired memory, learning or reasoning
- People pushing and manoeuvring prams etc

c) The key features of barrier free housing include enabling such people to reach the entrance from a road or parking area and enter the dwelling, move around the dwelling, and access essential rooms including the bathroom, operating all fittings, services and controls. Good practice in all housing design should give equal emphasis to the needs of less able members of society as it does to the comfort, convenience, safety and security of occupants in general.

## 2. Environmental Considerations

a) The Designer/ Architect should respect environmental concerns regarding the sustainable use of materials. Homes should be designed and constructed to provide low maintenance and running costs. The incorporation of new energy efficient systems, materials and modern methods of construction shall be encouraged where the quality and durability of the property is not compromised.

b) CHA seeks to maximise energy efficiency to ensure minimal running costs for residents. The optimum use of energy is to get a balanced system which uses as much controlled free heat gain as possible to offset minimised heat losses and energy consumption.

c) In all developments the design and specification of materials must be energy conscious. Orientation, daylighting, layout, insulation, heating and ventilation should all be considered to maximise energy efficiency and minimise energy in use costs.

d) CHA aims to exceed the minimum standards required by current legislation. Designers should consider renewable energy options.

e) The Designer/Architect should consider the biodiversity potential of the entire project. Consideration should be given to green space, existing trees and wildlife.

# 3. Housing Design - General

## 3.1 HOUSING FORMS

a) Housing forms will be discussed with the Project Development Officer and consultation process with CHA.

## 3.2 SPACE STANDARDS

a) The following space standards (including storage space as 3.3) are recommended as a minimum to be provided to accommodate the number of persons designated:

| Single Storey | Two Storey | Flats |
|---|---|---|
| 1 person-39m² | | 1 person-39m² |
| 2 person-51m² | | 2 person-50m² |
| 3 person-64m² | | 3 person-63m² |
| 4 person-74m² | 4 person-82m² | 4 person-76.5m² |
| 5 person-83m² | 5 person-92m² | 5 person-86m² |
| 6 person-92m² | 6 person-102m² | 6 person-94m² |
| | 7 person-119m² | |

b) Double bedrooms to be minimum 12m² in area (excluding storage) and have an uninterrupted floor area of 2.70m x 2.55m to allow for a double bed with accessible space around 3 sides.

c) Single bedrooms to be minimum $9m^2$ in area (excluding storage).

d) Space standards for rehab projects will be considered on an individual basis.

## 3.3 STORAGE STANDARDS

a) Design should comply with current Scottish Building Standards Technical Handbook requirements, other than where such standards are exceeded by other standards given within this brief.

| Single Storey | Two Storey | Flats |
|---|---|---|
| 1 person-3m² | | 1 person-2.5m² |
| 2 person-4m² | | 2 person-3m² |
| 3 person-4m² | | 3 person-3m² |
| 4 person-5m² | 4 person-5m² | 4 person-4m² |
| 5 person-6m² | 5 person-6m² | 5 person-5m² |
| | | 6 person-6.5m² |
| | | 7 person-6.5m² |

## 3.4 GENERAL STANDARDS

a) All houses are to meet “Barrier Free”/HfVN standards unless by agreement with CHA.

b) Consideration must be given to achieving the Section 7, Silver Level of the 2011 Building Regulations in respect of both Carbon Dioxide Emissions and Energy for Space Heating subject to available funding.

c) All materials used should meet the performance criteria stipulated in the relevant British Standard specification and Codes of Practice and preference should be given to materials carrying BSI kite mark and/or possess Agrément Board Certification.

d) All buildings should be designed and constructed with materials which will provide low maintenance running costs and which encourage the promotion of low embodied energy and zero carbon objectives.

e) It would be desirable to exceed current building regulation standards for insulation in respect of thermal resistance and sound transmission.

f) The preference is for gas central heating systems. District heating systems, passive solar and other innovative forms of heating shall be encouraged where appropriate and economically viable.

g) Consideration should be given to incorporating “positive input ventilation/heat recovery”, intelligent systems and solar hot water systems.

h) Kitchens, bathrooms and water tank cupboards should be adjacent where possible to make efficient and economical use of water distribution and drainage services. Wherever possible, water services pipelines should be concentrated on one elevation.

i) Where possible flats of the same type should be stacked on top of each other.

j) Living and circulation areas should not be above or next to the bedrooms of another house.

k) Rooms on either side of a party wall should have the same use, i.e. living room to living room or bedroom to bedroom.

l) Consideration should be given to increasing the level of insulation between floors in blocks of flats – to be agreed on an individual project basis.

m) One room should not be accessed from another except in the case of kitchens from a living room in small flats or dining room in family houses.

n) Direct access to kitchen off hall preferred.

o) Where there is an 'open plan' kitchen/ dining/ living room the kitchen may be divided from the dining/living space by a breakfast bar with units above and below.

p) Staircases should be separate from the living room.

q) Ground floor bathrooms/WCs should be usable by wheelchair users. This room should be of sufficient size and incorporate drainage facilities to allow adaptation for either level access or wet floor shower in the future.

r) All heat and electricity meters should be capable of being read without requiring access to the individual properties, (including landlord supplies), unless local utility companies enforce alternative arrangements. Unmetered "shared service" supplies should be installed to service all common areas wherever possible and verification will be required with service provider and CHA as to requirements prior to installation.

s) Consideration should be given to use of smart meters-to be discussed on an individual project basis.

t) All service runs should be properly planned and grouped. Schematic drawings should be prepared prior to 'Working Drawing' stage. Where possible, service runs should be at the perimeter of rooms and should have continuous access along their length.

u) All pipework in rooms to be contained in ducts with access to comply with water bylaws and be segregated therein by baffles or similar. All water and heating supply pipes under floors to be insulated against heat loss and freezing.

v) Where facing bricks are used, they must be fireclay bricks and not concrete bricks.

## 3.5 COMMON SERVICE RISERS/DUCTS

a) Service ducts to be fully designed with segregation baffles and fire stops between floors.

b) All access panels to meters, timeclocks and distribution panels requiring regular access to be hinged and secured with budget locks. All other panels to be screw fixed with cups and screws. It is CHA's preference in flatted developments to have one master key to access all common services.

## 3.6 ROOFS

a) All truss designs must incorporate a 98mm minimum height of ceiling tie.

b) Concrete tiles to BS473, 500 installed in accordance with manufacturer's recommendations and BS5534 Pts.1 & 2. Use of manufacturer's design services is recommended (where planning permits, smooth finished profiled tiles to be used in complimenting colours).

c) Sarking, if provided, should be certified sheet plywood, OSB or traditional butt jointed softwood boarding.

d) Detailing of eaves and verges to be low maintenance.

e) Proprietary eaves skirt or roof felt underlay to be fitted under the felt at the eaves and draped into the gutter.

f) Insulated, draught stripped lockable loft hatch to be provided to all roof spaces. Access to be from common stair in flatted blocks.

g) Ventilation of roof void in accordance with Building Standards (Scotland) Regulations. Insulation in attics and high performance roof underlay should be installed in such a manner as not to compromise this performance at any time.

h) Safe access facility to roof for future maintenance eg Velux (side opening) or roof light including safe method of reaching same within building.

i) Where deemed necessary by the designer and alternative economic safe access restraint cannot be provided, safety anchorages are to be provided for maintenance on property over two storeys.

j) Dry ridge and verges preferred.

k) Parapets and box gutters must not be used.

l) Dormer window features to be low maintenance.

m) Rainwater gutters in front of dormers to be avoided.

n) Soffits/fascias and bargeboards to be UPVC on buildings over 2 storeys

## 3.7 WINDOWS

### WINDOWS GENERAL

a) All developments must have fully reversible composite or UPVC windows to the association's standard specification or equal approved high performance A rated windows.

b) All windows to be fitted with restrictors (regardless of location). Chrome, stainless steel or powder coated handles and ventilators to be provided throughout.

c) All stairwell windows to be capable of cleaning safely from both inside and outside. No external window or feature of building to be incorporated which cannot be safely accessed over outbuildings, porches or the like.

d) Window infills, features and timber linings etc to be designed with low maintenance costs in mind (surface finish to be consistent with window specification and be safely accessible for maintenance from the adjoining windows).

e) Should be manufactured by a firm currently registered under a third party quality assurance scheme and a certified Secured by Design licence holder, to BS7950:1997 for the enhanced security performance of windows for domestic applications.

f) Contractor to comply with BS8213-4 for the survey and installations of windows.

g) Ironmongery/Accessories: SAA finish to comply with the requirements of Housing for Varying Needs, all to comply with Secured by Design.

h) Windows to have appropriate exposure rating for project location.

## 3.8 FLOORING

a) All flooring to be 22mm tongued and grooved chipboard. All kitchens, bathrooms, shower rooms, toilets and utility rooms to be floored with moisture resistant chipboard to BS EN 312-P5.

b) All flooring should be glued and screw fixed to manufacturer's instructions. Adequate dwangs at joints to be included. Silent floor systems shall be encouraged as an alternative.

c) Where floating floors are specified, these must be installed as per manufacturer's instructions including inclusion of trimmers/dwangs below perimeter of heaters, baths and kitchen fitments to resist deflection. In flatted separating floors where the specification is not a 'deemed to satisfy' system or where the separating floor is entirely of timber, then a sound test shall be required in each flat.

d) Where possible at level or near-level sites, solid ground floors with timber floating floors are preferable to suspended floors.

e) On dwellings where suspended floors are used, crawlspaces between sleeper walls should be incorporated. All suspended floors to be ventilated to comply with the current Building Standards (Scotland) Regulations.

f) Insulation between battens over concrete floor units should be cellular slab type (not quilt).

g) Isolating membranes at perimeters should be carefully inserted and terminated under skirtings.

h) Solid concrete floors will not be acceptable.

## 3.9 PARTITIONS

a) Non loadbearing partition to be formed from softwood framing with 12.5mm taper-edged plasterboard screw fixed with taped and filled joints.

b) Partitions in flats with floating floors designed to minimise cracking at ceiling joints and sound transmission between rooms. Non load bearing partitions should be placed on top of flooring and suitably supported.

c) Plasterboard to kitchens/bathrooms walls & ceilings to be moisture resistant (top layer only).

d) Where walls around shower rooms and bathrooms are formed in timber stud construction sheet a plywood fixing base is required for grab rails.

e) Timber dwangs to be provided at all fixing points for heaters, radiators, kitchen fitments, electrical backing boxes, sanitary appliances and the like. Plasterboard fixings must not be used.

## 3.10 DOORS

a) Entrance doors to be minimum 44mm thick and to achieve at minimum a 'clear' opening width of 850mm within a 1000mm door set.

b) External doors to be composite or UPVC, fully draught-stripped and have barrier free low weather bar (max 25mm high), detailed to allow door to open over a quality carpet and underlay approx. 18mm thick. Timber door thresholds to be avoided wherever possible.

c) Consideration should be given to design of lintels over front and rear door openings to allow for future door opening devices.

d) External doors to be factory finished high performance laminated/insulated door set complete with 3 point locking system with Barrier Free threshold detail and minimal glazing. Metal faced doors to be avoided. Where 3 point locking systems are used, locking must be achievable with minimum effort by the throw of the cylinder or the lifting of the handle. All doors to be certified PAS24 and to BS5950 to satisfy 'Secured by Design' criteria.

e) Flat entrance doors must comply with fire rating with intumescent strip and smoke seal. Minimum 44mm thick and giving a clear opening width of 850mm minimum within a 1000mm door set and also must be 'Secured by Design' accredited.

f) Patio doors should be to a comparable specification/finish to all windows and should generally be of a sliding type or outward opening (inward opening doors are not permitted except in relation to access to balconies). All such doors must be 'Secured by Design' accredited.

g) Patio doors must be openable from outside (no lock out) and incorporate 3 point locking and securing keepers.

h) Section of entrance door frames to be adequate to accept 'box' keepers without overall weakness of frame.

i) Glazing to front and rear entrance doors to be restricted to top 40% of door to maintain security (less to front doors if possible).

j) Entrances doors/screens to common stairwells, corridors, etc. to be constructed of hardwood or laminated redwood. All doors to have kick plates both sides. Common doors to be minimum 850mm wide 'clear' opening within a 1000mm door set and be outward opening with restraints.

k) External store doors to be timber solid core construction or framed, lined and braced complete with suited lock, $1^{1}/_{2}$ pairs of hinges and cabin hook and eye.

l) Entrance doors to common stairwells and closes must open outwards and must comply with 'Secured by Design' criteria selecting from certified manufacturers. Close entry systems to be on the same side of the building as the parking provision. **Note:** Door entry systems and locking mechanisms must also be compliant when used in conjunction with door sets.

m) Internal pass doors to achieve at minimum a 'clear' opening width of 850mm within a 1000mm door set and to be hollow core pre-finished hardwood veneered flush panel plywood doors. (Fire rated doors to flatted dwellings.)

n) Submit veneer sample for approval.

o) Close Entrance Doors to be Martec Premier E type or equal approved fitted with concealed transom closers.

p) Close Entrance Doors to be fitted with one mag lock of 545kgs and one mag lock of 268kgs holding force to be fully rebated in to the frame. Mag Locks must be designed to accommodate the bulk of the magnet without interfering with the required opening width of the door or impacting on the integrity of the fire door edge.

q) All cupboard doors housing hot water cylinders, boilers or whole house ventilation units etc to be adequate to enable unrestricted removal of such equipment.

r) Outward opening toilet/bathroom doors for Amenity housing. Inward opening doors to have 'planted' screwed stops for ease of removal. Current regulations may dictate use of outward opening doors.

s) Wardrobe doors to be painted white and side hung and should comprise door leaves not exceeding 826mm wide. Mirrored doors should not be used.

## 3.11 IRONMONGERY

a) All ironmongery to doors and windows to be easy to manipulate and located at levels suitable for all users (see "Housing for Varying Needs").

b) Copies of keys must be obtainable from local retailer. A number/coded system is not acceptable.

c) Ironmongery fittings for each door to be as follows:

**i) House Front Door**

- 3 x 150mm brass or stainless steel hinges.
- 3 point locking system – key operation from the outside and thumb turn from the inside – keeper to be 'box type'.
- 1 set lever handles (not brass).
- Extended SAA letter plate..
- Door viewer with wide angle lens.
- Secured by Design Accredited.
- Property numerals – should not be screwed in to doors. Position to be agreed by CHA.

**ii) House Rear Door**

- 3 x 150mm brass or stainless steel hinges.
- 3 point locking system – key operation from the outside and thumb turn from the inside - keeper to be 'box type'.
- 1 set lever handles (not brass).
- Secured by Design Accredited.

**iii) Patio Door**

- To feature sliding mechanism. Hinged patio doors to be avoided.
- 5 lever sliding door lock.
- Secured by Design Accredited.

**iv) Internal Pass Door**

- 3 x 100mm steel loose pin or 'lift off' type hinges.
- Mortice latch.
- 1 set lever handles (not brass).

**v) Internal Self Closing Door**

- 3 x 100mm steel loose pin hinges or 'lift off' type hinges.
- Mortice latch.
- Hush latch.
- 1 set lever handles with screw on backplate (not brass, no roses).
- Type of door closure to be approved by CHA.
- Cushion stop material

**vi) Bathroom Door**

- 3 x 100mm steel loose pin hinges or 'lift off' type hinges.
- Bathroom lock with indicator and external release.
- 1 set lever handles with screw on backplate (not brass, no roses).

**vii) Flat Entrance Door**

- 3 x 150mm brass or stainless steel hinges.
- 3 point locking system - key operation from the outside and thumb turn from the inside - keeper to be 'box type'.
- 1 set lever handles (not brass).
- Extended SAA letter plate.
- Door viewer with wide angle lens.
- Intumescent strip and smoke seal in frame.
- Hydraulic door closer with 'check' facility.
- Draught stripping.
- Secured by Design Accredited

d) All doors to be fitted with skirting mounted door stops suitable to their location.

e) Communal entrance doors to blocks of flats require to be secured by an electromagnetic lock linked to the door entry system. Provide 3 fobs per property for door entry system.

f) 3 no. keys to be provided per property clearly labelled

g) Outward opening store doors and the like to be fitted with restrictor stays.

h) Internal door handle roses are to be of the screw on type.

i) Wardrobe door handles should be 'D' shaped not lever handles.

## 3.12 JOINERY & FINISHINGS

a) Skirtings, stops, facings, etc. to be dressed redwood.

b) Moulded MDF skirtings and facings may be used in lieu of redwood where a painted finish is to be applied.

c) All slatted shelving to be removable and have all edges chamfered.

d) All visible timbers inside cupboards to be dressed.

e) Dressed curtain plates to be fitted to all windows. Ends to be rounded and project 150mm beyond window.

f) Linen cupboards to be provided with 3 slatted shelves. Wardrobe shelving to be MDF with paint finish.

g) All shelving to have intermediate support where in excess of 1.20m long.

h) Junction between stair stringers and walls to be designed to incorporate timber cover plate next to wall.

## 3.13 DECORATIONS

a) Vinyl matt emulsion to walls and ceilings.

b) Internal woodwork to have a gloss finish.

c) External finished woodwork: microporous opaque or stained finish system to give minimum of 5 year lifespan.

d) Exposed pipes in rooms to be painted with gloss paint (not valves and isolators).

e) Thresholds: polyurethane gloss varnish.

f) Where painted wall finish is proposed in common areas, this should be hard wearing, practical and easily cleaned.

g) Common areas to be finished in light or bright colours.

# 4. Common Stairs, Corridors & Lifts

## 4.1 DOOR ENTRY SYSTEMS

a) Door entry systems must be installed to all communal stairs powered from a “shared” supply. The system should be Secured by Design approved include a video entry panel. Refer to item 3.11(d)

b) Provision should be made for hearing and visually impaired or wheelchair bound visitors (max height to top buttons – 1200mm).

**Note:** Panels to be engraved with street, flat numbers and service button – name plates not required.

Additional directional signage within or around flatted developments to be provided.

## 4.2 FLOOR FINISHES

a) Stair floor coverings and wall decoration should be hard wearing and easily maintained, finishes to be approved by CHA.

b) Matwell minimum 750mm deep and width of door plus 200mm to be provided at all entrances to common stairs complete with complementary textured matting, fitted ‘flush’ with floor finish.

c) Studded rubber floor or non-slip vinyl (min 2.5mm thick) to common stairs and corridors. All floor coverings to be washed down and ‘sealed’ as per manufacturer’s instructions. Maintenance details to form part of ‘handover’ package.

## 4.3 WALL FINISHES

a) Half height tiling to dado level in stairwells and emulsion above dado level preferred.

b) Wall finishes should be robust to withstand impact damage.

c) Each communal stair to have a ‘lockable’ twin socket power supply.

## 4.4 COMMON LIGHTING

a) All landings and corridors to have natural daylight to avoid the need for artificial light during daylight hours and dark corners to be avoided.

b) Where there is a requirement for artificial lighting, this should provide adequate lux levels at flat entrance doors.

c) All light fittings must be accessible for maintenance (max height 2.80m) and should not be located over wells or items which impair safe access.

d) External lighting to be designed to West Dunbartonshire Council adoptable standards where applicable.

e) Stair lighting system to common access stairs to be activated by PIR motion sensors.

f) Lighting system to common access stairs and passage to be fed from an unmetered/metered landlords supply.

g) Stair lighting fittings to be low energy type.

h) Shared supply consumer unit to be split load type with lighting and door entry system controlled by RCD.

## 4.5 HANDRAILS

a) Handrails on both sides of stair.

b) Handrail to be 45 – 50mm in diameter and be mounted on a dressed softwood backplate at 900mm above nosing height, with a finger clearance of 50mm.

c) A handrail should be provided securely fixed to the wall on both sides of all common access passages leading to amenity flats.

d) Corridors at ground floor level should be at least 1.2 metres wide and where space is required to turn a wheelchair at the entrance door the width should be not less than 1.5 metres.

## 4.6 LIFTS

a) Lift specification must be provided and approved by CHA.

b) Clear opening at lift doors must be 800mm wide, minimum.

c) Internal dimensions of lift car must be no smaller than 1400mm deep and 1100mm wide.

d) Lift control panels to be at a maximum height to top of panel of 1200mm above FFL.

e) Internal telephone with emergency direct line required. (Details to be confirmed prior to ordering and installation).

f) 2 Alarm sounders and remote alarm sounders required.

g) Full set of emergency instructions to be located in convenient location within lift car with similar instructions adjacent to ground floor lift door.

h) Lift to be fully certified and tested with a further test prior to the expiry of the defects liability period.

i) Lift car design etc. should comply with 'Housing for Varying Needs'— Section 8.7.1.

j) Lift car controls to be anti-vandal standard.

k) Hydraulic lifts not to be used over 5 storeys.

l) Lifts to be checked and overhauled six months after practical completion and adjustments made. Final check at end of twelve month DLP period.

m) Lift to be provided with a 24 hour emergency response service following handover.

# 5. Internal Hallways & Stairs

a) Long lengths of hallway or hallways with corners should be avoided with a square hallway being preferred where possible.

b) Coat hooks to be provided in an internal store.

c) Radiators in circulation areas should be carefully positioned so as not to hamper movement or reduce the width of a hall below 900mm.

d) All staircases should have straight flights with top and bottom landings, allowing for the possible future installation of stair lifts. (In accordance with current Building Regulations). Where possible stairs should have natural daylight.

e) All stairs should have a handrail on one side and in the case of amenity housing on both sides.

f) Door entry phones must be located within inner halls next to living room/master bedroom and not in vestibules.

# 6. Living Rooms

a) The main living area should have space for all fittings and furniture needs for the household's leisure activities allowing for adequate circulation throughout the room.

b) Plans should show furniture layouts conforming to the dimensions given in the Scottish Homes document "HfVN – A Design Guide – Part 1" which gives minimum furniture provision and space requirements. An identified location should also be made for a future through floor lift to a bedroom above.

c) Irregularly shaped living rooms should be avoided wherever possible. Where this is not possible it is imperative that sensible furniture layouts and everyday use of the room is achievable.

d) Window sills should be of a height that allows a seated person to see out – suggested maximum height 600mm.

# 7. Bedrooms

a) All bedrooms should comply with the dimensions and furniture layouts given in the Scottish Homes document “HfVN – A design guide – Part 1” and comply with current building regulation standards. Plans detailing furniture layouts should be provided.

b) Irregular room shapes and very narrow rooms should be avoided.

c) It is desirable that the bed can be placed in a minimum of two positions.

d) Bedroom windows should have a maximum sill height of 900mm.

e) Built-in wardrobes should preferably be provided with side hung doors, shelf and hanging rail at approximately 1700mm high.

f) Wardrobes against an external wall should be avoided.

# 8. Kitchens

## 8.1 GENERAL

a) Each kitchen should be designed to provide an efficient working space. The equipment and appliances should be arranged in a manner that makes for ease of operation and minimum cost of service installation wherever possible - **no services should pass behind domestic appliance spaces.**

b) Layout of kitchen should comply with activity space requirements of current Building Regulations. In addition, consideration should be given to “Housing for Varying Needs” (HfVN).

c) Minimum 1200mm space in front of all fitments and 1500mm diameter turning circle available for potential wheelchair use.

d) Provision should be made for dining either within the kitchen or living area with a space for a table and an adequate number of chairs as required by HfVN.

e) Internal kitchens should be avoided.

f) In family houses of 5 persons or over a separate utility room should be provided close to the rear entrance to the house.

g) The kitchen layout should be agreed with CHA as early as possible in the design process.

h) Each kitchen should be equipped with storage units to meet regulation requirements. However, enhancement of the minimum requirements is encouraged in particular the provision of sufficient units. A typical kitchen should have between 8 and 12 units.

i) Kitchen fitment layout to be designed to avoid any gaps or voids, cover plates/infills or matching materials to be used as required.

j) Each kitchen must also be provided with, as minimum, a stainless steel single bowl minimum gauge of 0.9mm and single drainer.

k) Wall units must not be fixed above the cooker, refrigerator spaces or sink bowl location.

l) Windows behind kitchen fitments to be avoided to allow for cleaning windows.

m) Central heating boilers should not be located over domestic appliance spaces to avoid conflict of service pipes and vents.

## 8.2 APPLIANCES

Spaces should be provided for the following appliances:

a) **Washing Machines**
A space with worktop should be provided adjacent to the sink, minimum 620mm wide, for an automatic machine.

b) **Tumble Dryer**
A space of 620mm minimum wide should be allowed to accommodate a tumble dryer preferably adjacent to an external wall with a suitable venting provision installed complete with backdraught shutter or similar.

Where this is not possible a space should be provided for a condensing washer dryer appliance.

c) **Cooker**
A space of 620mm minimum wide with a worktop either side for a cooker (edges protected).

Non combustible cooker plinths to be provided to ensure top of the cooking surface is level with adjacent worktop surfaces as necessary.

Minimum 150mm clearance between free standing cooker appliance and outer edges of the adjacent wall units.

d) **Refrigerator**
A space of 620mm minimum wide should be located at the end of any run of units to allow a free standing fridge freezer to be accommodated.

e) **Dishwasher (In 5 person houses and larger)**
A space of 620mm minimum should be located adjacent to the sink for a dishwasher.

## 8.3 BASE & WALL UNITS

a) All carcass units to be produced from 18mm high density coreboard with minimum 80g/$m^2$ high wearing melamine finish, manufactured to BS EN 312 Type P2 and meeting the requirements of BS6222:Part 2: 2009 Level H.

b) Shelving – all exposed edges to be melamine lipped in colour to match.

c) 750mm high wall units.

d) 180 degree concealed hinges should be fitted as standard.

e) 'D' shaped handles to be fitted as standard.

f) Base unit corner posts should be manufactured from foil wrapped MDF.

g) Wall unit corner posts should be manufactured from MFC.

h) All drawer units should be supplied with 15mm MFC base, epoxy coated steel sides and back, pressed steel mounting brackets and include a minimum (1Nr) 500mm wide cutlery tray.

i) All units should be supplied with adjustable shelves and held in position with self retaining bearers.

j) Minimum $1m^3$ combined capacity to meet the current SHQS requirements.

k) The choice of 3 different styles in colour and handle options offered by the supplier should be considered as appropriate.

l) Infill pieces and kickplates to match unit doors.

## 8.4 WORKTOPS

a) 40mm post formed worktop to be moisture and heat resistant BS EN 204.

b) Mitre joints to be factory pre-formed where possible and sealed in accordance with the manufacturers recommendations, aluminium joint strips may be used in isolated instances as directed on site.

c) Worktops must extend a minimum of 300 mm either side of the cooker.

d) Sink cut outs to be sealed with high modulus silicone sealant to BS EN ISO 11600.

e) The choice of 4 different colour options offered by the supplier should be considered as appropriate.

f) Wall boarding to be provided to 450mm above worktops and from skirting to full height of wall units in cooker space.

g) Wall boarding options to be offered in 3 different colours plus one to march the worktop finish.

## 8.5 SINKS

a) Stainless steel inset single bowl sink with single drainer, minimum gauge to be 0.9mm.

b) Chrome plated unit with mixer tap and ceramic disks.

c) The hot and cold water services to the sink must be fitted with valves and blank caps for a washing machine and dishwasher (if appropriate). The sink base unit should be cored to either accommodate these spurs or allow a flexible hose connection to be made from the washing machine (the tails should be extended to not less than 100mm from the adjacent haffit) to ensure the adequacy of the appliances flexible supply and waste connections.

d) Sink waste must not run behind an appliance space.

## 8.6 SERVICES

a) All service outlets, sockets, etc. should be set at 150 mm above worktop level to the bottom of the socket.

b) “Multigrid” engraved switches should be used where appropriate to the size of the kitchen and available wall space.

c) 3 twin 13 amp switch socket outlets to be provided above worktop level for general use.

d) All switches to incorporate neon lights and to be engraved indicating their use, i.e. refrigerator, washing machine, tumble dryer, water heater, cooker, etc.

e) A low level unswitched 13 amp socket outlet to be provided at the fridge space operated by a double pole wall switch with pilot light (engraved) above the worktop but not directly above the fridge space in a manner that would be obscured by fridge freezer.

f) Low level unswitched 13 amp socket outlets to be provided to the tumble dryer and washing machine and dishwasher (if appropriate) spaces and operated by a double pole wall switch with pilot lamp above the worktop (engraved).

g) A cooker control switch with a pilot lamp should be installed adjacent to the cooker space but not behind the cooker and connected to a low level cable outlet.

h) Ventilation should be by a low energy constant trickle fan with humidistat control and pull cord override. (Where positive ventilation is proposed this shall negate this requirement.)

i) Lighting – the kitchen should be illuminated by pendant fittings with low energy light bulbs.

# 9. Bathrooms

## 9.1 GENERAL

a) Bathrooms should comply with 'Housing for Varying Needs'.

b) Internal bathrooms should be avoided.

c) The bathroom should not be directly opposite the entrance door.

d) Towel rails should be provided in all bathrooms.

e) Partitions forming bathrooms and separate WC compartments should be sound insulated within the stud void, with dwangs capable of supporting grab rails and poles adjacent to the bath and WC.

f) Door to be fitted with external release lock.

g) Properties with no additional shower room should have future provision for over bath showers.

## 9.2 LAYOUT

a) The layout and dimensions of the bathroom must allow for a bath to be replaced by a shower if this becomes necessary for particular residents' needs.

b) The position of drainage services and the location of windows are important to ensure minimal future disruption if baths are replaced by showers. Drainage should be designed to avoid the requirement for pumped drainage systems.

c) Bathrooms should be accessible to someone in a wheelchair to enter and close the door.

d) The layout of bathrooms should allow free access to windows for opening.

## 9.3 SANITARY WARE

a) Bathrooms must be furnished with a bath, wash-hand basin and a WC.

b) All sanitary ware to be white.

c) Access panels should be designed in such a manner that the removal of skirtings or appliances is unnecessary for easy access – bath panels shall be constructed in decorative high pressure laminate board and in one piece. The system of fixing should be re-usable without damage to the panel.

d) Enamelled steel bath 1700mm long with non-slip finish, twin handgrips and chrome plated ¼ turn lever type taps with ceramic discs.

e) A 400mm shelf, which can be used as a seat, should be provided at the head of the bath (not the tap end).

f) Additional framing to be installed for fixing of shower fitting.

g) Vitreous china wash hand basin and pedestal (white) minimum size 550mm x 425mm.

h) All taps should be operated by ¼ turn short lever tap heads with inbuilt flow restrictors and be of a chrome finish utilising ceramic disks.

i) The WC should have its centre line 450mm from a wall capable of taking support rails to allow for possible future installations of grab rails.

j) Low level close coupled W.C. in glazed fireclay (white) with a white plastic seat and cover. Cistern to be dual flush and Eco 4/2.6 litre capacity.

k) Lever handle flush is required. Push button flushes to be avoided.

## 9.4 FINISHES

a) Decorative high pressure laminate board to be provided at full height to 3 sides of the bath, above the WHB and to the seat at the end of the bath, complete with proprietary fixing system and sealing. Any decorative wall panelling should have butt joints or T&G joints, not joining strips.

## 9.5 LIGHTING

a) The light fitting should be LED closed bulkhead fitting operated by a pull switch inside the door, close or adjacent to the door facing, or by a rocker switch from outside the bathroom adjacent to the door opening.

## 9.6 VENTILATION

a) Ventilation should be by a low energy constant trickle fan with humidistat control and pull cord override and should be silent running. (Where positive ventilation is proposed this shall negate this requirement.)

## 9.7 SERVICES

a) Services should be organised in such manner that all pipework is accessible for maintenance purposes and lengths of supply and waste pipes kept to a minimum. Hand holes and access caps to be fitted to all pipework to allow easy cleaning where necessary.

b) All water services to bathroom appliances should be fitted with suitable isolating valves.

# 10.Stores

a) General storage should be provided in suitable locations throughout the house and of a volume which will comply with the storage standards in section 3 of this document. Stores off of livings rooms should be avoided.

b) A linen store with slatted shelves must be provided.

c) All other stores should have solid shelving.

d) Walk-in stores should be provided with an electric light and lever handles and a latch to the door.

# 11. Electrical Services Generally

## 11.1 GENERAL

a) Consumer units should be of the split busbar type with residual current overload and miniature circuit breakers and be located where easily accessible. Consumer units to be segregated from water mains and preferably located in a cupboard in the hall (not in wardrobes or tank cupboards). Where are cupboard positioning is not feasible, consumer units should be boxed in.

b) Electrical switchgear, meters and consumer units must be fitted onto a non-combustible board with a fire resistance of 1 hour, an alternative would be plywood, painted with 2 coats of intumescent paint giving a fire resistance of 1 hour.

c) Installation to comply with current edition of IEE regulations.

d) Provide adequate protection where timbers have been notched for wiring.

## 11.2 SWITCHES & SOCKETS

a) Switches and sockets should comply with HfVN Standards.

b) **Power point requirements are as follows:**

- Living room: 4 x 13A twin outlets.
- Kitchen: 3 x 13A twin outlets (in addition to specific equipment provision).
- Single bedroom: 3 x 13A twin outlets.
- Double bedroom: 3 x 13A twin outlets (1 double socket located at each side of bed location).
- Hall: 2 x 13A twin outlets.

c) Double sockets should have outside rocker swtiches.

d) Water heater boost controls to be located above worktop in kitchen.

## 11.3 LIGHTING

a) All lamp holders in houses and flats to be fitted with a low energy bulb (equivalent to 100 watt tungsten) prior to final inspection.

b) Provide bulkhead or similar weatherproof external light fittings to front and rear doors, rear doors to have PIR operation with daylight sensor and manual switching override and a minimum life expectancy of 10 years. Low energy bulbs and fittings to be used.

c) Pendant drops should terminate at a maximum height of 2200mm above floor level and should be installed so as to allow doors with a minimum clearance of 75mm from the bulb.

## 11.4 DOORBELLS

a) Each property is to be fitted with a mains operated door bell.

## 11.5 TELEPHONES

a) A single telephone outlet point must be provided in the living room and main bedroom of each dwelling and should be located adjacent to one of the double switch sockets.

## 11.6 SMOKE AND HEAT DETECTORS

a) Smoke & heat detectors are to be mains powered and interlinked with a 10yr lithium battery backup. At least 1 smoke alarm installed in the principal habitable room, 1 in every circulation space on each storey such as hallways and landings, 1 in every access room serving an inner room and at least 1 heat alarm installed in every kitchen.

## 11.7 CO & CO2 DETECTORS

a) CO & CO2 detectors to be fitted as required with mains power and 10 year lithium battery backup.

# 12. Plumbing Services Generally

## 12.1 HOT & COLD WATER STORAGE

a) Cold water storage should be avoided wherever possible and where unavoidable, should not be located in the roof space.

The preference is for a mains fed unvented hot water cylinder to be fitted.

Where hot water cylinders are fitted, they should have a single side entry immersion heater in gas heated properties and a dual side entry immersion heater in electrically heated properties. The maximum working pressure at hot taps/washing machines is to be 3 bar.

b) Water system to be designed to current water by-laws (stop cock and double check valve to be labelled) including any testing for lead content required by local authority. Minimum water pressure at mains of 2 bars required.

c) Pressure reducing valves and thermostatic valves to be fitted to baths and installed in accordance with prevailing requirements and by laws.

## 12.2 PIPEWORK

a) All pipework under floors must be adequately insulated to current regulations. Where pipework is located in unheated spaces, they should be protected against heat loss or frost as applicable.

b) All pipework to appliances should be fitted with isolating valves immediately below or adjacent to the appliance for easy removal and replacement of that fitting and/or taps, etc.

## 12.3 DRAINAGE STACKS

a) All soil vent pipes and ventilation stacks in ducts and roofspaces to be suitably insulated to minimise sound transmission and condensation internally or externally.

b) All drainage stacks passing through dwellings and roof voids should be insulated to avoid condensation and reduce noise transmission.

c) All rainwater pipes to have handholes for rodding. Alternatively trapped gulleys with raising piece and grating.

d) Where there is a danger of vandalism or proximity to landscape maintenance machinery, one length (2m) to be cast iron.

## 12.4 ACCESS

a) Where a service main to flats is located within a common stair, lockshield valves will be fitted at the point of entry to the property and a screw down valve fitted immediately inside the unit. The valves should be labelled to identify the pipe.

b) Drain down valves/scours to be fully accessible.

c) In ground floor situations, scours and overflows for hot & cold water system are to be provided to the exterior of the building, utilising a safe form of termination. In upper floor locations the scour will be fitted within a cupboard with a clearly marked access panel.

d) Lockshield valves to each flat to be accessed through face of service ducts or the like at a height of not exceeding 2.00m above landing level.

e) Surestop valves should be fitted below kitchen sinks in all properties.

## 12.5 CYLINDERS

a) Where low pressure hot water central heating with a system boiler is installed an indirect hot water cylinder or unvented hot water cylinder will be required and this should be fitted with an electrical immersion and thermostat.

b) Immersion heater switches in cylinder cupboards to be identified as to ‘on/off’ and ‘standard’ or ‘low’ tariff.

c) Provide easy access to cylinder and connections for future maintenance.

d) Hot and cold water systems to be flushed out to ensure potential for grit damaging ceramic discs in taps is minimised.

e) All hot water cylinders and the like must be connected by means of mechanical type fittings for ease of removal.

## 12.6 DRAINING DOWN

a) All water systems must be capable of being drained down via permanent copper scour pipes taken to the outside of each building.

b) Allowance made for draining down at point of handover and re-commissioning all ‘wet systems’ unless instructed otherwise.

# 13. Heating

## 13.1 HEATING

a) The preferred option for central heating is gas combi boilers. The system should be accurately sized to provide heating to suit the property and a minimum of 11 litres of water per minute for up to 3 apartment flats/houses and 14 litres for 4 apartment properties and above.

c) Consideration should be given to the position of the HWC where applicable e.g. pipe runs and termination.

d) Filling loop hoses are to be clipped to the wall using a proprietary 15mm pipe clip after disconnection and capping of the heating and cold water mains connections.

e) Where the length of the condensate pipe from the boiler to the waste connection exceeds the manufacturer's recommendation, the use of a condensate pump will be permitted.

f) Consideration will be given to the use of plastic heating pipework with push-fit connections. Approval of specification must be obtained from CHA. The use of copper to the exposed tails to radiators is a requirement.

g) TRVs to be top mounted.

h) Radiator positions to be approved by CHA.

i) Consideration to be given to zone control

## 13.2 HEATING DESIGN PERFORMANCE STANDARDS

a) Heating system designed to attain the following minimum design temperatures at –4°C external temperature:

| | |
|---|---|
| Living Room | 21°C |
| Kitchen/dining | 18°C |
| Bedrooms | 21°C |
| Hall | 18°C |
| Toilet | 18°C |
| Bathroom | 21°C |

b) The heating must be designed to meet the current regulations and boiler manufacturer's guidance at all times. All warranties must be completed and the boiler and property registered with the boiler manufacturer.

c) Consideration should be given to the use of Low Surface Temperature radiators and controls within any particular needs dwellings.

d) All controls should have a 7 day time switch and be capable of switching the system off and on at least twice a day and include an override facility. Consideration should be given to the position of the controls.

e) Where a system boiler or similar system is installed with a Hot Water Cylinder a 3KW immersion heater must be fitted to the cylinder.

# 14. TV & Broadband

## 14.1 COMMUNAL TV (IRS)

a) All new flatted blocks within housing developments, should be served from one single communal TV system. This system being able to provide, as a minimum, Sky +, Digital Terrestrial and DAB radio to every CHA property within the development.

**Note:** The design and installation of the communal IRS (Integrated Reception System) is to be fully compliant, and in accordance with The Sky Homes Specification for a coaxial Integrated Reception System (New Build MDU 2014) or as appropriately revised for future additions.

b) The installation shall be capable of providing the following services:

- Digital Terrestrial
- Digital Satellite
- FM Radio
- DAB Radio

c) One landlord's electrical power socket outlet must be provided in a location suitable for providing power to the TV systems "Head End Equipment".

d) All aerial rigs should be mounted on poles in a location suitable to provide adequate signal levels, easy access for ongoing maintenance and to minimise visual intrusion.

e) All coaxial distribution cables should be installed within the fabric of the building during first fix. Cables located within walls should be "contained" to facilitate their easy removal and replacement at a later date if required.

f) Outlet plates should be located in the living room and all bedrooms. The living room outlet should have a minimum of 5 outlet points, two for satellite, one for audio, covering DAB and FM, one for digital terrestrial TV, and one for the return path. Bedroom outlets should provide for digital terrestrial only.

g) All face plates should be double screened, flush mounted and located adjacent to two double power sockets in accordance with the proposed furniture layout.

h) All amplifiers, switches and all distribution equipment should be located in a dry, lockable, secure metal Bemco or similar cabinet, located in a communal area for ease of future maintenance. Cabinets should not be located in roof spaces accessible only from individual flats.

i) All IRS systems should have a 10% additional capacity within the system to accommodate possible future expansion. Switches, Amplifiers etc should be designed with this in mind.

j) All IRS systems should be fully commissioned by a suitably qualified “Systems Engineer” and appropriate commissioning and test certificates provided to the client on completion of the installation. All outlet plates are to be tested and signal levels, Carrier to Noise levels and frequencies are to be in accordance with the Sky Homes Specification.

k) A system design drawing should also be provided as part of the hand-over documentation, showing as-built cable routes, location of “Head-End” equipment and specific design details of the system including cable loss, amplifier sizes and specification, switch details etc.

## 14.2 INDIVIDUAL CO-AXIAL TV

a) For non-flatted developments, properties should have individual TV aerials or alternative “Hybrid” TV system with the same system performance as the IRS system.

b) Each installation should be capable of providing a digital terrestrial TV service to the Living room and all bedrooms.

c) All aerial rigs should be mounted externally on poles in a location suitable to provide easy access for ongoing maintenance and to minimise visual intrusion.

c) All face plates should be double screened, flush mounted and located adjacent to two double power sockets in accordance with the proposed furniture layout.

d) Commissioning certificates are to be provided for all TV outlets to ensure acceptable signal levels are being achieved. Signal levels, etc, to comply with those detailed within the Sky Homes Specification.

## 14.3 CABLE/FIBRE TV

a) CHA may consider the installation of Cable TV to all developments to provide residents with an additional choice. However, this will be assessed on a development by development basis and dependent on capital cost, service availability and added benefit to residents.

b) An allowance may be required for the installation of Cable TV ducting and wiring where possible to an accessible junction box externally (TV/phone socket located in living room only next to terrestrial outlet). This will be agreed during the design stage in conjunction with CHA’s development team.

## 14.4 FIBRE BROADBAND

a) All properties should have the provision to be connected to the fibre broadband network

b) All properties not being connected to fibre broadband should be ducted for future fibre connection.

c) CHA preference is to install communal wifi systems in all new build flatted developments.

# 15. External Works

## 15.1 FRONT & REAR GARDENS

a) All family houses should have direct access to a private rear garden. If there is only one door to the garden it should be from the kitchen or kitchen/dining area or rear hallway.

b) It is highly desirable that houses should be arranged in such a manner that residents do not have to carry lawnmowers, bins, etc. through the house from front to rear garden areas. Provision should be made to accommodate refuse and recycling bins, clothes drying. All with associated level paving surfaces.

c) For flatted developments emphasis should be on high quality landscaped areas that will produce both social and environmental benefits.

d) Where individual or communal gardens are to be grassed they should be turfed.

e) Small grassed areas should be avoided

f) Communal landscaping should be minimised with any excess land added to private gardens where viable.

## 15.2 LANDSCAPING

a) All landscaped and grassed areas must be easily accessible for maintenance and all landscaping layouts and specifications must be reviewed and approved by CHA maintenance prior to construction. Access must not be by way of communal or private gardens.

b) Manholes and rodding eyes and the like in landscaped areas to be haunched in concrete and have a cast iron cover.

c) Planting beds adjacent to paths to have pre-cast concrete edging.

d) **Trees** - Are to be specified to benefit visual amenity, seasonal variation, screening, shelter/shade but to prevent negative effects, such as root damage, proximity to buildings and leaf fall. Existing/neighbouring trees should be inspected to avoid the negative effects above.

e) **Shrubs and Herbaceous Plants** - The choice of plants must be carefully considered to avoid removal when they become too big for their location. New planting should be protected by fencing in vulnerable situations.

f) **Grass** - Where a lawn is the desired finish it should be kept as simple as possible, with the minimum of obstructions such as specimen shrubs, for the purpose of easy maintenance. Wildflower meadows (requiring soil of low fertility) should be considered if the situation allows it.

g) **Pedestrian Movement** - 'Desire lines' should be given careful consideration in new landscape schemes, and either discourage their use by planting barriers or fencing or endorsing them by providing footpath links.

h) **Ground Preparation** - All stones and builders' rubble should be removed and the subsoil cross ripped before spreading topsoil. The topsoil must comply with the NBS/British Standard.

## 15.3 DRYING AREAS

a) Shared drying facilities – Clothes poles accessed by a slabbed pathway must be provided in each garden area. Properties with private gardens must have clothes poles and lines fitted with minimum of 1.7m of drying line per apartment.

## 15.4 BIN STORES/RECYCLING

a) Arrangements for the storage, recycling and removal of refuse must meet the requirements of West Dunbartonshire Council.

b) All base surfaces to be appropriate for ease of washing down. Bins located to front of houses must be adequately screened.

c) Chute systems should be avoided.

d) Large bin stores where required must have wash down services, artificial lighting and be well ventilated. Such stores should not be located in an area where the transmission of smells to habitable accommodation is likely, nor easily overlooked from habitable rooms.

e) Communal bin enclosure should be on a concrete base and have a gate. These should also have provision for washing down and drainage. Segregating partition should be provided.

## 15.5 BOUNDARY TREATMENTS

a) All front gardens to individual houses must have plot demarcation.

b) All boundary treatments/details must have prior written approval from CHA.

c) Between individual rear gardens there should be a 900mm high ‘vertical slatted’ timber fence.

d) Site boundaries to be defined by rylock fencing with a timber top rail. Consideration will be given to alternative boundary treatments depending on site specific circumstances.

e) Boundaries next to amenity areas or flatted blocks to have 1800mm high fence or alternative as above.

f) Where appropriate, gates should be provided to rear garden areas from access path (minimum width 900mm).

g) Ensure consideration is given to the removal of overhanging branches on existing boundaries.

## 15.6 WALLS

a) Where provided boundary walling should not have brick on edge copes.

## 15.7 ACCESS TO DWELLINGS

a) Paths should be constructed using concrete paving slabs, tarmac or brick paviours and comply with HfVN.

## 15.8 STEPPED ENTRANCES

a) Steps should be avoided wherever possible. Where steps are unavoidable these must not be placed in the length of the pathway. A 140mm step shall be considered only where maximum gradients would otherwise be exceeded.

b) Handrail provided at one side where more than one step is required and in accordance with current building standards

c) Handrail provided at both sides for elderly amenity housing.

d) Provide a level platform at the entrance door to comply with current building standards.

e) Level access and level thresholds should be provided to at least one doorway to the house unit (preferably the front door).

## 15.9 ACCESS STAIRS

a) To be in accordance with current building standards.

## 15.10 PUBLIC ROADS & FOOTPATHS

a) All roads and footpaths, which are to be adopted must be designed and constructed to West Dunbartonshire Council Roads Department standards including swales, retention ponds and the like. Adoption of roads and footpaths should be maximized.

b) Dropped kerbs should be incorporated at all road crossings.

c) All gully gratings and the like, located within paths, roads and car parking areas must be of cast iron material of appropriate duty (no PVC to be used).

d) Provide for the supply and erection of name plates/access direction signs, etc.

e) Provision for the supply of grit bins where adopted by West Dunbartonshire Council.

f) Public footpaths must be constructed and lit to West Dunbartonshire Council adoptable standards (roads adoption to be maximised).

g) All public footpaths throughout the site should be well lit and open, avoiding dense planting of trees and bushes or high fences in close proximity to footpaths which might hinder visual security and compromise resident safety. All to comply with Secured by Design.

h) Roadways – all roadways must be constructed to West Dunbartonshire Council standard for adoption. SUDS should be constructed to adoptable standards.

## 15.11 EXISTING ROADS & FOOTPATHS

a) Where required by West Dunbartonshire Council existing footpaths brought up to adoptable standard.

b) Existing street lighting standards re-positioned /upgraded to West Dunbartonshire Council adoptable standard.

## 15.12 STREET LIGHTING

a) All street lighting to roads and footpaths, which are to be adopted, to be designed to West Dunbartonshire Council standards. Extent of adoption should be maximized.

## 15.13 COMMUNAL CAR PARKS

a) Parking to be provided as close to dwellings as practicable, long continuous areas to be avoided.

b) Parking spaces to be clearly defined with different appropriate hard wearing surfaces, e.g. brick paviours or tarmac with coloured chip rolled in having road painted lines or similar.

c) Low walls adjacent to parking spaces are to be avoided.

d) Car park lighting to be fed from a 'shared' supply if not from adopted street lighting.

## 15.14 COMMUNAL PLAY SPACES

a) Surface to be finished with proprietary safe play surface around equipment.

b) Play area to be bounded by fence or railing designed to contain children safely whilst allowing supervision.

c) A bench to be provided within the play area. Approval to be obtained from CHA.

d) Within development, access to play space should be possible without crossing any vehicular traffic route. Where required, barriers should be installed on pavements in accordance with the requirements of the current Disability Discrimination Act.

e) A dog guard and gate to be provided at entrance.

f) Location and design of play area to allow for natural surveillance by residents by family accommodation.

g) Liaise with West Dunbartonshire Council regarding play equipment specification, including surfaces.

h) Obtain CHA's approval to specification.

# 16. Wheelchair Housing

## 16.1 INTRODUCTION

The aim of this section of the Technical Brief is to provide additional guidance on the design of accommodation for wheelchair users. The Technical Brief compliments the general requirements made within the main CHA Design Guide in respect of wheelchair accessible housing. All wheelchair housing must comply with HfVN.

## 16.2 ACCESS TO THE DWELLINGS & MAIN ENTRANCES

a) Level access required from external car parking space to the curtilage of dwelling house, garden driveway, car port and the home.

b) In curtilage or designated car parking space capable of enlargement to 3.6m.

c) Main entrances covered, with a level area (1200 x 1200mm) and a threshold provided outside all external doors.

d) Main paths to be 1200mm wide with firm even surface.

e) Where applicable, dropped kerbs of 25mm and of same width provided at access roads. Dropped kerbs incorporate a non-slip surface which is different from the pavement.

f) Ramped areas should have handrail and safety edges both sides.

g) Car ports minimum of 3.6m wide x 6.6m deep and 2.2m high adjacent to the main entrance where possible.

h) Provision should be made for battery charging of electric vehicles within the car port.

i) Lighting required within carport and external door locations.

## 16.3 INTERNAL CIRCULATION & STORAGE

a) External door to achieve a minimum ‘clear’ opening width of 850mm within a 1000mm door set.

b) All internal doors to achieve a minimum ‘clear’ opening width of 850mm within a 1000mm door set.

c) Internal door faces should be protected by kick plates to both faces.

d) Front entrance doors to contain spy lens or vision panel set at 1200mm maximum height.

e) Door handles and locks should be fitted at height of 900mm-1000mm.

f) 1800mm diameter wheelchair turning circle inside external door.

g) Corridors or secondary entrance halls to be minimum 1200 mm wide.

h) Corridors that incorporate main entrance doors to be 1500mm wide.

i) Coat hooks should be placed at height of 1200mm.

j) Balconies (where appropriate) have level access approach and incorporate an 1800mm diameter wheelchair turning space.

k) Provision made for wheelchair storage and charging of electric wheelchairs within the home allowing turning circle of 1800mm in diameter. A double socket provided for this purpose.

l) Door frames, furniture, switches, and sockets to contrast with surrounding surfaces.

## 16.4 KITCHENS

a) Worktop, cooker, worktop, sink, worktop arrangement should be in a 'U' or 'L' shape.

b) Kitchen units and worktops height adjustable.

c) Main work area consists of 1000mm worktop with space for side opening oven and hob to one side and sink to the other.

d) Sink, shallow with insulated basin flexible plumbing with lever taps with swivel arm extending over drainer and work surface.

e) A1800 mm turning circle and at least 1350 mm clear space should be in front of appliances/drawers/cupboards.

f) Knee access required beneath worktops in food preparation areas and next to fixed units/appliances.

g) Trolley space or portable storage cabinet required under worktop.

h) Slip resistant floor covering required.

i) Allowance should be made for adaptations to meet the requirements of the allocated resident.

j) Additional shelved storage space to be provided between 400mm and 1350mm from floor level and adjacent to main work area.

k) Additional spaces for tumble drier (if not provided elsewhere) and dishwasher.

l) Pan storage drawer, pull-out worktop adjacent to oven and food preparation area, 'carousel' corner units, wire basket drawers with telescopic runners, adjustable worktop over washing machine space.

m) Access to fridge freezer to be provided from seated position. Appliance set in housing unit within the reach range of 450mm-1200mm.

n) Wall cupboards to be fitted 300mm above worktop and this should be able to be fitted with pull down storage baskets.

o) Sockets and cooker controls located on walls above worktops with switches on plinths at the front.

p) Three rows of white 150mm square glazed tiles above the worktop with additional tiling below to allow for height adjustment.

q) Window controls should not be accessed over a worktop or sink.

## 16.5 BEDROOMS

a) Bedrooms to provide for a wheelchair turning circle (1800mm diameter).

b) All bedrooms designed to accommodate wheelchair access to 3 sides of a bed with normal furniture requirements.

c) Minimum 1800 mm clearance allowed for the assisted transfer from a wheelchair onto the bed. At least 1200 mm allowed for carers on non-transfer side of the bed.

d) A clear space of at least 1400 mm allowed to approach, reverse and pull out drawers or wardrobe doors.

e) At least 1350mm allowed to approach furniture with knee spaces suitable for wheelchair use.

f) Built in wardrobes to be provided with hanging rails no higher than 1200mm. Front opening doors provided.

g) Provide 4 double sockets, 2 of which to be positioned either side of the bed.

h) Two-way bedroom light pull switch to be provided.

i) In a house, provision made for audio and visual monitoring equipment from one bedroom on upper floor.

## 16.6 BATHROOMS

a) Walls in bathrooms and toilets should be capable of taking grab rails.

b) Doors to bathrooms and WCs should be outward opening and fitted with locks that can be opened from the outside.

c) A level access shower tray with electrically operated shower should be provided with thermostatic controls having 2 metre hose and extended shower tray. (Routinely 1000mmx1000mm shower area is required.)

d) Shower curtains to be provided.

e) Bath, flat-bottomed with a slip resistant base and robust to take HSC Trust equipment.

f) The bath should incorporate a transfer seat at clear end of bath to comply with HfVN.

g) Minimum bath size is 1700mm x 400mm high.

h) The WC position should allow for unobstructed frontal, oblique or lateral transfer from the wheelchair. An 850mm clear space provided for side transfer.

i) WC position to provide both left-handed and right-handed transfer options.

j) WC seat height to be 450mm in all WC compartments and bathrooms.

k) Design provides for direct access for a potential ceiling mounted hoist from a main bedroom to the bathroom taking account of door / lintel / track configuration, as well as appropriate roof strengthening and partition knock out areas.

l) The ceiling should be designed sufficiently strong to support track for hoist.

m) Spur point to be provided to enable installation of specialist equipment, for example closomat installation.

n) Wash hand basins should be wall mounted and height adjustable.

o) Slip resistant floor covering to be provided with welded cove skirtings.

p) Decorative wall panelling to be provided in lieu of wall tiles.

## 16.7 FIXTURES & FITTINGS

a) Window sill height in main habitable room to be 600mm from floor level.

b) Windows that are operated by a single handle should be located no higher than 1200mm from floor level.

c) All windows fitted with safety catches to restrict sashes to a 100mm opening gap initially.

d) Trickle vents to be incorporated at low level.

e) All windows to allow for ease of access and cleaning.

f) Controls, meters and thermostats should be visible and accessible and within easy reach located in high use rooms and/or circulation areas.

g) The consumer unit should be located in an accessible location in store off the hall at a height of 700mm to 1050mm from floor level.

h) Mains water stop cock should be at least 750mm from a corner and control height 800mm.

i) Full containment provision to be installed in all houses with additional circuits for remote controlled door opener, both internally and externally, door entry system with privacy switch, filtered supply for call system, installation of electric hoist and installation of Clos-O-Mat.

j) Telephone installation should serve entrance, kitchen, living room and bedrooms with socket height of 800mm.

k) Door entry call points should be located in living room, kitchen and main bedroom.

l) Provision of TV outlet points in living room and all bedrooms.

m) Light switches to be 900mm to 1050mm from floor level and level with door handles.

n) Power sockets to be 700mm to 1000mm from floor level and min 750mm from a corner.

o) Low surface temperature radiators to be provided. Underfloor heating can be used alternatively.

## 16.8 GARDENS

a) Level paved garden to be provided. Minimum area to be 2.4mx3.6m.

b) Gates to have clear opening of 900mm, operable from both sides and not spring loaded.

c) Access paths should be a minimum of 1200mm wide.

d) Refuse bins to be sited to rear of house and accessible for wheelchair user. (Refer to 15.4)


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