

THE GLASGOW STANDARD

A Design Schedule for Affordable Housing in Glasgow

Housing and Regeneration Services
231 George Street
Glasgow



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1.0 Introduction

Over the last 90 years, a number of attempts have been made to define minimum space standards in the public sector. Previous design standards include Homes for Today and Tomorrow by the Parker Morris Committee and The New Scottish Handbook known as Bulletin 1- Metric Space Standards. The concern at that time was to ensure that every home provided a basic level of functionality and amenity: space; heating and an indoor bathroom. Today the concern has moved to the quality of provision, ensuring that space can be used flexibly to respond to varying needs and that buildings are energy efficient and affordable.

This design schedule for housing outlines the standards required for properties funded through the Affordable Housing Supply Programme in Glasgow and brings together all of the good practice to set out an exemplar minimum standard for all new build housing in the city. This new minimum standard aims to give associations confidence and clarity about the standards expected but will also help to speed up the approval process meaning less delays. We would encourage all associations to engage in an early dialogue with Housing and Regeneration Services about their developments and in particular where the expected standards are difficult to achieve.

The standards in this document aim to enhance and support Council objectives by creating attractive, high quality, excellent places for people to live which also help to address health issues and protect the environment. We believe that social housing has a role to play in leading developments in innovation, sustainability and design. This may include considering how energy is distributed in projects, the use of new technology or materials and developments in off site construction.

Our standard demonstrates that Glasgow embraces best practice, encourages new technologies, is an exemplar of good design and most importantly delivers for our tenants. We have called this standard:-

The "Glasgow Standard"

Patrick Flynn
Head of Housing and Regeneration Services



2.0 Background

This document is part of a suite of documents relating to Glasgow's Housing Strategy which is a 5 year plan for housing in Glasgow. Glasgow's strategic housing priorities are to:

- Promote area regeneration and enable investment in new build housing
- Manage, maintain and improve the existing housing stock
- Raise management standards in the private rented sector
- Tackle fuel poverty, energy inefficiency and climate change
- Improve access to housing across all tenures
- Promote health and well being

The importance of continued and sustained housing investment to the Glasgow economy cannot be understated. Housing activity supports economic growth and the city drives economic growth for the wider region and country. This is recognised in the Scottish Government's Economic Strategy (2015) and [Glasgow City Region Economic Action Plan](#)

Glasgow's Housing Strategy, which was approved by Council in January 2017, sets out Glasgow City Council's housing supply target of delivering 15,000 new supply properties during the plan period, 7,500 of which are for affordable housing. Detailed analysis on Glasgow's housing system, neighbourhood profiles, and housing policy context which inform housing supply targets are available on [Glasgow Housing Strategy web pages](#).

3.0 Policy Context

In setting Glasgow's Housing Standard we have taken account of national standards such as [Housing for Varying Needs, Secure by Design, Creating Places, Designing Streets](#) and the Scottish Government's [Age, Home and Community](#), a strategy for housing Scotland's older people. This document aligns with and complements these national priorities.

We have also taken account of local policy and standards such as the [City Development Plan, Supplementary Guidance](#) and GCC's [Residential Design Guide](#) for New Residential Areas. The City Development Plan was adopted in March 2017 and introduced Policy CDP5 Resource Management, which is supported by Supplementary Guidance, SG5: Resource Management. The policy and Supplementary Guidance sets out expectations in relation to carbon reduction, achieving sustainability and energy requirements. The guidance states that from 1st September 2018, all new domestic buildings must comply with [Building Standards Technical Handbook, Domestic 2016 Section 7](#)- Sustainability Gold Level (Aspect 1 only) or one of the other options outlined later in this document.

Glasgow City Council has set out its investment priorities over the next 5 years (2019-2024) in its [Strategic Housing Investment Plan](#). The Strategic Housing Investment Plan (SHIP) is the affordable housing investment delivery plan for Glasgow's Housing Strategy and is encompassed within the housing strategy's Equality Impact Assessment. The SHIP is based on resource planning assumptions and covers a 5 year period. SHIP documents are reviewed annually and are submitted to the Scottish Government.

The SHIP recognises that there are significant social care housing needs in the city and the delivery of wheelchair housing is being monitored. Glasgow's Housing Strategy requires that all housing developments of 20 units or over must deliver 10% of units as readily adaptable which should ensure that the housing stock across the city becomes more accessible.

There is a need for more affordable larger family housing (4 or more bedrooms and 6 or more bedspaces). DRS has put in place an increased annual target for the delivery of larger family housing. These properties do not necessarily need to be houses in all instances, and the Council will work with RSLs to ensure the effective integration and design of these homes into developments.



4.0 The Principles

All units funded by the Affordable Housing Supply Programme in Glasgow must be designed to provide innovation and flexibility in internal construction and layout so that space can be altered if required in the future (with reference in particular to [Housing for Varying Needs](#)). The Glasgow Standard outlines the minimum design criteria for all units together with the basic levels of Housing for Varying Needs Part 1 and Part 2 (where relevant). We support and encourage associations to build in excess of this level. Where different requirements from different policies overlap the most onerous requirement must be achieved. In setting the standards in this document, Glasgow City Council aspires to meet the following principles:

High Quality, Affordable Homes - Providing high quality, affordable homes is key to improving the general well-being of Glasgow's citizens, not only in terms of the physical quality of housing but in improving the overall quality of life for existing and future residents and in tackling the root causes of poverty, poor health and inequality.

Safe and Secure - We want people to feel safe and secure in their own homes and we want to discourage crime in the community.

Sustainable - We want to contribute to [Glasgow's Carbon Management Plan](#) and [Affordable Warmth Strategy](#) by developing homes that have high sustainability standards and are developed around the principles of sustainability and the [Considerate Constructors Scheme](#). This will not only help the environment but it will help to protect tenants against increasing fuel costs and fuel poverty.

Meeting changing family needs - We want to build homes that are flexible, with the ability to adapt to the changing needs of existing and future tenants.

Wheelchair adaptable - We want housing to be built to good accessibility standards to meet both current needs and any needs that may arise in the future. A citywide target of 10% of new housing is designed to be wheelchair easily adaptable. All new build developments of 20 units and over must ensure that 10% of the units are to wheelchair adaptable standard. This requirement must be incorporated into the design from day one, as it is very difficult to incorporate it at a later stage.

Storage Space - We want homes to have adequate storage space in order that homes don't feel cramped and cluttered. Residents need space for everyday items such as bicycles, prams etc.



5.0 The Affordable Housing Supply Programme

In Glasgow, the Affordable Housing Supply Programme is managed by Glasgow City Council as part of the Transfer of the Management of Development Funding arrangement which was agreed at stock transfer in 2003. The process surrounding AHSP grant in Glasgow is outlined below:-

Strategy and Development Funding Plan

Strategy and Development Funding Plans will be requested from all developing associations during the summer each year. These should include any proposed developments that the association would like to complete within a 5 year period.

Project Proposal/Scheme Agreement

Following discussions with GCC's Development Funding Team, associations should submit a project proposal providing details of the site, number, type and tenure of properties, anticipated cost and timescales. The association will then be issued with a scheme agreement, setting out an "in principle agreement" to the project.

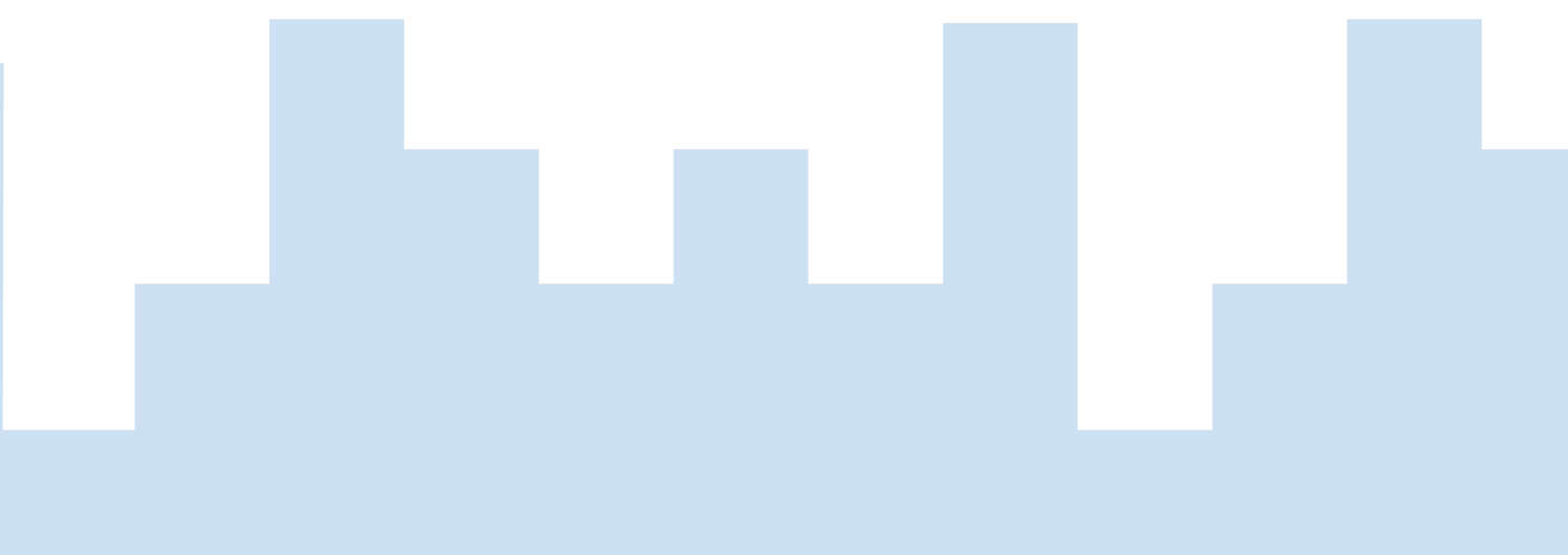
Feasibility Study/Acquisition

Where there is a requirement for a feasibility study or acquisition of a site, an application should be submitted to development funding and written agreement received before proceeding to commission studies or acquire sites.

Pre tender Technical Appraisal

This has been introduced by Glasgow City Council in order to minimise any delay at tender stage as previously tenders have been submitted with drawings that were not compliant with grant requirements. Drawings will now be assessed at pre tender stage to ensure compliance with this standard. (Please note that this is not the same as the previous cost plan requirements under the old HAG regime).

Associations should submit their proposed layouts and drawings for appraisal and approval prior to presenting their tender submission to DRS. Development costs and works costs do not need to be included at this stage, only layouts and drawings. DRS technical and development staff are happy to meet with design teams to discuss design/technical requirements at any time during the development process.



Tender Appraisal Application

Associations should submit a tender application including details of the project, housing mix, Scottish Social Housing Tender Price Index (SSHTPI), Housing Tender Return Form and QS report on tenders etc.

Technical staff will carry out an appraisal of the tender costs and an assessment will be made to determine if the costs fall within acceptable grant levels. Development funding will then issue a grant offer letter with any conditions attached. Please note that if an association submits an incomplete tender return, this will delay the evaluation of the tender beyond these timescales. Housing and Regeneration Services will endeavour to evaluate the tender application (complete submission) within the following timescales:

- Confirm if a submission is complete/incomplete within one week of submission.
- Projects over benchmark – tender evaluation within 6 weeks
- Projects that are under or achieve benchmark – tender evaluation within 2 weeks
- The design team should fully complete the HAG Tender Return / Scottish Social Housing Tender

Price Index (SSHTPI) from the [Scottish Government Website](#). DRS will assess the current housing tender price index on a project by project basis. The Building Cost Information Service (BCIS) housing tender price index is used to ensure that projects over benchmark have been inflated to the current rate. This changes on a month by month basis due to the tender price index set by the BCIS.

Site Start

Associations should proceed to site start, dependent on receipt of necessary planning, building and other consents such as Section 56 or roads construction consent. Associations must inform Housing and Regeneration Services when they start on site. Claims can be made as per the agreed claim schedule and proof of work completed.

Practical Completion

Associations must inform Development Funding when a project is complete and submit a completion form as soon as possible after this date.

Post Completion Review

6 projects per annum (one per Geographic Team) will be subject to a post completion review. This will include a review of all development files, an inspection of the development and a survey of tenants.

Housing and Regeneration Programme (HARP)

From autumn 2017, all information will be required to be submitted on the Scottish Government's HARP system.

6.0 Layouts & Adaptability

6.1 Layouts and Adaptability / Flexibility

Layouts should show how the minimum space requirements for notional furniture, circulation and the Building Standards (Technical Handbook 2017: Domestic) can be met taking into account the number of occupants and the range of activities each room may accommodate.

Designers should provide layout drawings with dimensions, room areas, Net Floor Area, Gross Internal Floor Area (GIFA), all openings, radiator positions, boilers, MVHR, meters and general storage and kitchen unit storage clearly illustrated in order to show how the design meets the standards set out in this document. Layouts should illustrate the position of all notional furniture, activity spaces and turning circles that are scheduled in [Appendix 4](#). Layout drawings should demonstrate how the design and construction of the dwelling will allow for the adaptability of future needs, for example future showers and their associated activity spaces. Please refer to [Section 8.0](#) Pre-Tender Information for more details.

Rooms should meet the minimum requirements, the onus will be on the designer to demonstrate that the dwelling is fully compliant with Glasgow Standard, accommodates all notional furniture, access and activity space requirements for the intended number of occupants as per HfVN (general and wheelchair users) requirements and the Building Standards (Technical Handbook 2017: Domestic). Flexibility, adaptability and costs are key considerations that must be incorporated into the design of the layout of homes.

Flexibility is the potential to use the rooms of a home in a variety of ways; for example, the ability to rearrange furniture in a room, make space for guests, convert a double bedroom into a twin bedroom, or create suitable spaces for work and study. Flexibility is determined by space and room layout, and also by the number of rooms in a home. Homes where the living areas and circulation spaces are entirely open plan might not necessarily create the greatest degree of flexibility when the home is in use.

Adaptability is the potential to amend the layout / spaces of a home by modifying the fabric of the building. Designers should aim to provide built-in adaptability by designing the structure to allow new openings to be made in internal walls with relative ease. Proposals should therefore be accessible and offer both adaptability and flexibility of the existing layout, resulting in a more sustainable solution that will simplify future modifications to the design and layout of dwellings; in turn reducing future cost and disruption. This should enable people to remain in their home as their circumstances and needs change.

7.0 Design

7.1 Design Quality

Glasgow is, and always has been, a creative city; renowned for its rich built and natural heritage. It is our responsibility as a sector to not simply preserve this asset, but also to create Glasgow's future assets. Our vision is a city where Quality Places support our communities, respect our environment, drive our economy and reflect our identity as a modern, forward-facing city.

Good design is a process that uses creativity and innovation to deliver the best outcomes and can guarantee that we get it right first time; avoiding scenarios where we are left with problematic buildings or places which fail our communities. [The City Development Plan](#) and the Supplementary Guidance supports this by putting place-making and people at the heart of the design process: Glasgow's [Design Guide for New Residential Areas](#) should be referred to when designing new projects.

Good design is not merely about how a building looks, it is an innovative and creative process that delivers value. Design provides value by delivering buildings and places that enhance the quality of lives. This can be:

- Physical value - enhances a setting;
- Functional value - meets and adapts to the long-term needs of all users;
- Viability - provides good value for money;
- Social value - develops a positive sense of identity and community;
- Environmental value - efficient and responsible use of our resources.

At the same time, new developments should embrace contemporary designs, promote innovation and new technologies. Passivhaus, triple glazing, district heating, zero Carbon, zero waste and a fabric-first approach are all encouraged.

Housing and Regeneration Services supports housing associations and designers to achieve this vision and make Glasgow an inspiring place to live.



8.0 Pre-Tender and Tender Submission Information

8.1 Pre-Tender Stage

Housing Associations must submit the Schedule of Accommodation, proposed layouts, drawings etc. together with a brief of performance specification to Housing and Regeneration Services (H&RS) for technical appraisal and approval; preferably 3 months prior to presenting their tender submission to DRS. Some indicative cost information would be useful at this stage if available. DRS technical and development staff are happy to meet with design teams to discuss design/ technical requirements at any stage during the development process.

8.1.1 Schedule of Accommodation

Housing Associations must include GCC'S Schedule of Accommodation with their technical appraisal submission at Pre-Tender stage. The Schedule of Accommodation should include:

- House/ flat type
- Number of units for each house/ flat type
- Clear indication of wheelchair/ wheelchair adaptable
- Number of bedrooms, apartments and bed spaces per dwelling
- Number of fitted wheelchair/ future wheelchair adaptable units
- Minimum aggregate of living areas (m2)
- Bedroom areas (m2)
- Kitchen and bathroom areas (m2) including en-suites and utility rooms
- General Storage (m2)
- Kitchen storage (m3)
- Net Floor Areas for each unit type
- Gross Internal Floor Area for each unit type
- Gross Internal Floor Area of communal areas
- Gross Internal Floor Area for the whole development
- Tenure



8.1.2 Architect Drawings & Specification

The Architect's drawings should be submitted electronically in PDF format which must include a scale bar. Drawings and associated documents should be submitted to the dedicated technical project officer and principal officer. They should include the following:

- GCC's Schedule of accommodation
- House/ flat type layout drawings at a scale of 1:50 (A3)
- Block drawings indicating the width of the communal corridor, size of the entrance platform and canopy; at a scale of 1:50 (A3)
- Elevations and sections at a scale of 1:100 (A3)
- Site plan which indicates the location and size of the wheelchair parking bays
- Bicycle and charging points
- Legends provided on all drawings
- Specification

8.1.3 Mandatory Drawing Information

The individual house/flat type layout drawings must include the following information:

- Net Floor Areas and Gross Internal floor Areas (GIFA)
- Room areas (m²) and dimensions
- Hall/ circulation areas (lower and upper) (m²)
- General storage space (m²)
- Kitchen storage Space (m³)
- Notional furniture and associated activity spaces
- Openings (doors and windows)
- Wheelchair turning circles
- Location of meters, boilers, radiators, MVHR and any other mechanical / electrical equipment
- Sustainability features (home office position etc.)

8.1.4 Process of submitting Pre-Tender Information

Registered Social Landlords are required to submit all the pre-tender information as detailed above and complete the tick list. All of the mandatory information, drawings and the completed tick list should be emailed to the dedicated technical project officer and the technical principal officer. The Pre- Tender Tick List indicates all mandatory information required for a complete submission, please refer to [Appendix 1](#).

All of the above information must be submitted in the correct format.

If the submission is incomplete, the pre-tender submission will be returned to the Registered Social Landlord.

8.2 Tender Submission

Further to the information provided at the pre-tender stage the Housing Associations must submit the following mandatory information:

8.2.1 Projects that meet or are below benchmark:

- Works costs
- Development costs
- Scottish Social Housing Tender Price Index (SSHTPI) / Housing Tender Return Form
- QS Report on tenders
- Overall GIFA for the development
- CO2 emissions
- SAP ratings
- Heating and hot water costs per annum
- Confirmation that the project will comply with the Glasgow Standard, Secured by Design (SbD) and that an independent Certifier or Passivhaus Certifier (depending on the Sustainability Option chosen) has been appointed to certify the design and completion of the project

8.2.2 Projects over benchmark (Additional to the above)

- Detailed works costs and development costs split by tenure
- Contract Sum analysis (CSA)
- Priced Bill of Quantities
- Breakdown of professional fees + VAT
- Breakdown of other costs, fees + VAT
- Breakdown of abnormal / Ad hoc costs
- Breakdown of additional sustainability costs
- Breakdown of extra-over costs for Planning and Building Warrant costs
- Energy Performance Certificate (EPC) costs
- Third party warranty costs (if applicable)

8.2.3 Process of submitting Tender Information

All mandatory information / documents and the completed tick list must be uploaded via the Scottish Government's Housing and Regeneration Programmes (HARP). All the additional information must be upload via HARP as supporting documents. The Tender Tick List indicates all mandatory information required for a complete submission, please refer to Appendix 2.

All of the above information must be submitted in the correct format.

If the submission is incomplete, the tender submission will be returned to the RSL via HARP.

9.0 Space Standards

9.1 Dwelling Space Standards

The aim of this standard is to re-introduce and promote the minimum standard for affordable housing in Glasgow. Housing and Regeneration Services have set minimum internal space standards (Net Floor Area) for dwellings by defining overall space standards for a range of occupancy levels and breaking these down into suggested standards for individual rooms. The following standards will apply to all new residential developments and conversions (where applicable). Dwellings that exceed these minimum space standards are to be encouraged.

Table 1: Minimum Dwelling Space Standard

Number of bedrooms/people	Minimum Net Floor Area		
	One-storey dwellings (m2)	Two-storey dwellings (m2)	Three-storey dwellings (m2)
1 bedroom (1 person)	33.0		
1 bedroom (2 person)	48.5		
3 person	61.0	68.0	
4 person	73.5	79.0	
5 person	82.5	89.5	98.5
6 person	90.0	97.0	102.5
7 person	111.5	114.5	118.5
8 person	120.5	123.5	127.5
9 person	129.0	132.0	136.0
	Minimum Net Floor Areas for Wheelchair Adaptable		
1 bedroom (1 person)	43.0		
1 bedroom (2 person)	58.5		
3 person	75.0	82.0	
4 person	87.5	93.0	
5 person	100.5	107.5	116.5
6 person	108.0	115.0	120.5
7 person	122.5	136.5	140.5
8 person	133.0	151.0	155.0
9 person	147.5	161.5	165.5

Notes:

1. The figures above are based on the Scottish Government's Housing Investment Guidance Note HIGN 2008 /06.
2. The above areas are based on Net Floor Areas definition as detailed in this document.
3. The above figures do not include the additional space required to achieve the Building Standards (Technical Handbook 2017: Domestic) Section 7 and the Glasgow's sustainability requirements. These areas are additional to the above minimum requirements.
4. Any decision to include en-suite facilities, utility rooms, additional W.C etc. will require additional floor areas to be provided, above the minimum space requirements.
5. For upper cottage flats, please ensure that the staircase and entrance area is additional to the minimum space requirements.

9.1.1 All new build homes which are delivered directly by the Affordable Housing Supply Programme (AHSP) should be a minimum of two persons, two apartment (unless otherwise agreed with GCC).

9.1.2 Housing Associations and their design teams are required to design suitable house/flat types and layouts for wheelchair adaptable units, which comply with the standards included within this document. All wheelchair adaptable dwellings should be able to foresee the changing needs of tenants. If a wheelchair adaptable home occupies more than one storey the layout of the dwelling should be capable of providing a bedroom at entrance level and space for the provision of a through floor lift; plus allowance for a reasonable route for a tracking hoist from the main bedroom to the bathroom.

9.1.3 External staircases to cottage flats are no longer permissible under the Scottish Government's statutory Building Standards (Technical Handbook 2017: Domestic).

9.1.4 External deck access is discouraged to all new flatted developments

9.2 Defined floor areas.

9.2.1 Net floor areas.

	Including		Excluding
1.1	Living rooms, dining rooms, bedrooms, kitchens, and the like	1.7	Corridors and other circulation areas when used in common with other occupiers (Stairwells, lift-wells, landings) and balconies/ sun spaces
1.2	Areas occupied by fitted cupboards within those rooms	1.8	Internal walls whether structural or not, columns, piers, chimney breasts, vertical ducts, mutual walls and the like
1.3	Areas occupied by skirting	1.9	Areas with a headroom less than 1.5m
1.4	Halls incl. staircases	1.10	Fuel stores, lift rooms, tank rooms, plant rooms etc.
1.5	General storage (incl. Meter cupboards within the property)	1.11	Areas under the control of Statutory Undertakers or other external authorities
1.6	Bathrooms, showers, cloakrooms and en-suites		

9.3 Gross Internal Floor Area (GIFA)

Glasgow Standard relates to the Gross Internal Floor Area, which is the area of a building measured to the internal face of the perimeter walls at each floor level as described below:

Table 3: Definition of GIFA

	Including			Excluding
2.1	Areas occupied by internal walls, partitions and mutual walls.		2.13	Perimeter wall thickness and external projections.
2.2	Columns, piers, chimney breasts, stairwells, lift-wells, other internal projections, vertical ducts, and the like.		2.14	External balconies, covered ways and fire escapes.
2.3	Atria and entrance halls, with clear height above, measured at base level only.		2.15	Canopies.
2.4	Internal open-sided balconies, walkways, and the like.		2.16	Voids over or under structural, raked or stepped floors.
2.5	Structural, raked or stepped floors are to be treated as a level floor measured horizontally.		2.17	Greenhouses, garden stores, fuel stores, and the like in residential property.
2.6	Horizontal floors, with permanent access, below structural, raked or stepped floors.			
2.7	Corridors of a permanent essential nature (e.g. fire corridors, smoke lobbies).			
2.8	Mezzanine floor areas with permanent access.			
2.9	Lift rooms, plant rooms, fuel stores, tank rooms which are housed in a covered structure of a permanent nature, whether or not above the main roof level.			
2.10	Voids over stairwells and lift shafts on upper floors.			
2.11	Areas with a headroom of less than 1.5m.			
2.12	Integrated garages.			

Please Note: Internal face means the brick/blockwork or steel/timber frame not the surface of internal linings.

10.0 Sustainable Transport

10.1 Sustainable Transport (Cycle storage / Electric vehicles)

10.1.1 Sustainable Transport for new residential development (including houses, flats and or maisonettes)

The design and provision for sustainable transport should comply with the following:

- City Development Plan (CDP)
- City Development Plan Supplementary Guidance (SG) 11: Sustainable Transport
- Building Standards (Technical Handbook 2017: Domestic)
- Secured by Design

The City Development Plan (CDP) Supplementary Guidance (SG) 11: Sustainable Transport supports the policy in providing guidance how development proposals will be expected to address the transport implications. SG 11 includes detailed advice and guidance on Sustainable Transport, however in this standard we are only referring to the applicable information as detailed below:

- The provision and design of parking for vehicles, including the charging of electric vehicles in new developments;
- The provision and design of parking for bicycles in new developments.

10.2 Cycle Storage

To encourage cycling, this Supplementary Guidance aims to help meet the vision of the Scottish Government's Cycling Action Plan for Scotland that, by 2020, 10% of everyday journeys taken in Scotland will be by bike.

The Council shall require the provision of cycle parking in new developments and redevelopment proposals in line with the minimum cycle parking standards specified in **Table 4** below:

Table 4 – Cycle Provision

Type of Development	Minimum Standard
Mainstream Residential	<ul style="list-style-type: none">■ 1 space per unit unless a dedicated garage, or other storage facility/option (see paragraph 4.3d of SG 11), of sufficient size is provided.■ Visitor parking to be provided at a rate of 0.25 spaces per unit in new residential developments, where residents' cycle parking provision is provided communally.

Cycle parking for residents should generally be located within, or to the rear of, the residential building to ensure it is safe and secure.

Bike storage lockers/cupboards allocated to each unit, or cycle stands in a secure, covered compound, are the preferred solution for flatted developments. These should be easily accessible and usable and normally be on the ground floor or in the basement, providing the basement has ramped access or a suitable lift.

Dedicated provision, in the form of well-designed cycle storage, should be provided either in the rear curtilage of houses that will not have a dedicated garage, or a garage of sufficient size to accommodate both bikes and a car. Cycle storage could be in the form of a storage facility (such as a shed) or in the form of a pulley/hoist system in garages that are not, otherwise, of sufficient size to accommodate both bikes and a car. External storage should be well located and designed, to avoid impacting adversely on residential amenity. Cycle parking should always be safe, sheltered and secure.

10.3 Electric Vehicles

The Scottish Government's Climate Change Delivery Plan indicates that Scotland requires "almost complete decarbonisation of road transport by 2050 with significant progress by 2030 through wholesale adoption of electric cars and vans". Scottish Planning Policy states that "development plans should support the provision of infrastructure necessary to support positive changes in transport technologies, such as charging points for electric vehicles" and that "electric vehicle charge points should always be considered as part of any new development and provided where appropriate".

As a result, the Council expects that, in accordance with Table 5 below, a minimum percentage of the general car parking provided in new development should be in the form of "passive" EV spaces, designed to provide for easy conversion to electric vehicle charging use ("active" spaces) should demand manifest itself.

In new flats, the complications involved in managing use of, and access to, EV charging points (e.g. as residents move in and out of the development)) will be lessened where maximum passive provision can be delivered; facilitating easier conversion to additional active spaces should demand arise. As a result, Table 5 requires passive EV charging provision for 100% of spaces in new residential developments (of over 10 units) with communal off-street parking provision. Should exceptional circumstances mean that this would not be technically feasible, then a lower proportion of passive spaces may be acceptable. In detached, semi-detached or 25 terraced housing developments with dedicated garages or driveway space, it is expected that cabling will be provided to an appropriate point (either in-garage or next to driveway) for all new housing units (see Table 5). The cost and technical implications of providing passive provision are likely to be minimal.

Where active spaces are installed, either during the development process or at a later date, the Council expects that the factor (in flatted developments with dedicated communal car parking) will put in place, and operate, appropriate car park management arrangements. These should include arrangements for managing access to EV charging spaces (where each space in a flatted development is dedicated to a specified flat) and arrangements for paying for the electricity used during charging.

Active provision requires fully wired and connected 'ready to use' charge points at parking spaces. Passive provision requires the necessary underlying infrastructure (e.g. capacity in the connection

to the local electricity distribution network and electricity distribution board [see also SG 11, paras 7.4 - 7.5], as well as cabling to parking spaces) to enable simple installation and activation of a charge point at a future date.

The Council's Carbon Management Team can provide technical advice on the design and installation of passive and active spaces and associated infrastructural considerations.

Table 5 – Electric Vehicle Charging Provision

Residential Development	Minimum Passive EV Space Provision	Minimum Active EV Space provision
Detached, semi-detached or terraced housing with a dedicated garage or driveway	100%	-
Other residential (over 10 units) with communal off-street parking provision	Other residential (over 10 units) with communal off-street parking provision 100%	-

11.0 External Design Requirements

11.1 Car Parking Provisions

11.1.1 Communal car parking to flats and or maisonettes

The design and layout for parking should comply with the following:

- Building Standards (Technical Handbook 2017: Domestic));
- City Development Plan and supplementary guidance;
- Design Guide for New Residential Areas;
- Housing for Varying Needs.

11.1.2 Car parking within the curtilage of a dwelling

The design and layout for parking should comply with the following:

- Technical handbook – Domestic;
- City Development Plan and supplementary guidance;
- Design Guide for New Residential Areas;
- Housing for Varying Needs.

11.2 Access to Dwellings

11.2.1 Accessible routes to individual dwellings and blocks of flats

The design and layout for accessible routes to an entrance of a building should comply with the following:

- Technical handbook – Domestic;
- City Development Plan and supplementary guidance;
- Design Guide for New Residential Areas;
- Housing for Varying Needs.

11.2.2 Access paths to individual dwelling and blocks flats

- Access paths from the road pavement and parking space to the entrance of all dwellings should be step free.
- The width of accessible routes to all dwelling must comply with the Building Standards (Technical Handbook 2017: Domestic) (Safety).
- Any gate across an accessible route should offer a clear opening width of at least 850mm to allow wheelchairs and mobility scooters to pass through easily. The gate should open beyond 90 degrees to prevent any restriction in the width of the path. The gate latch should be able to be reached and operated from either side of the gate, from a wheelchair. This is best achieved by incorporating a hand-hole beside the latch.

- Where gates giving access to back gardens are lockable, the lock should be at a height of 900-1050mm from the ground, so that it is reachable from a wheelchair.

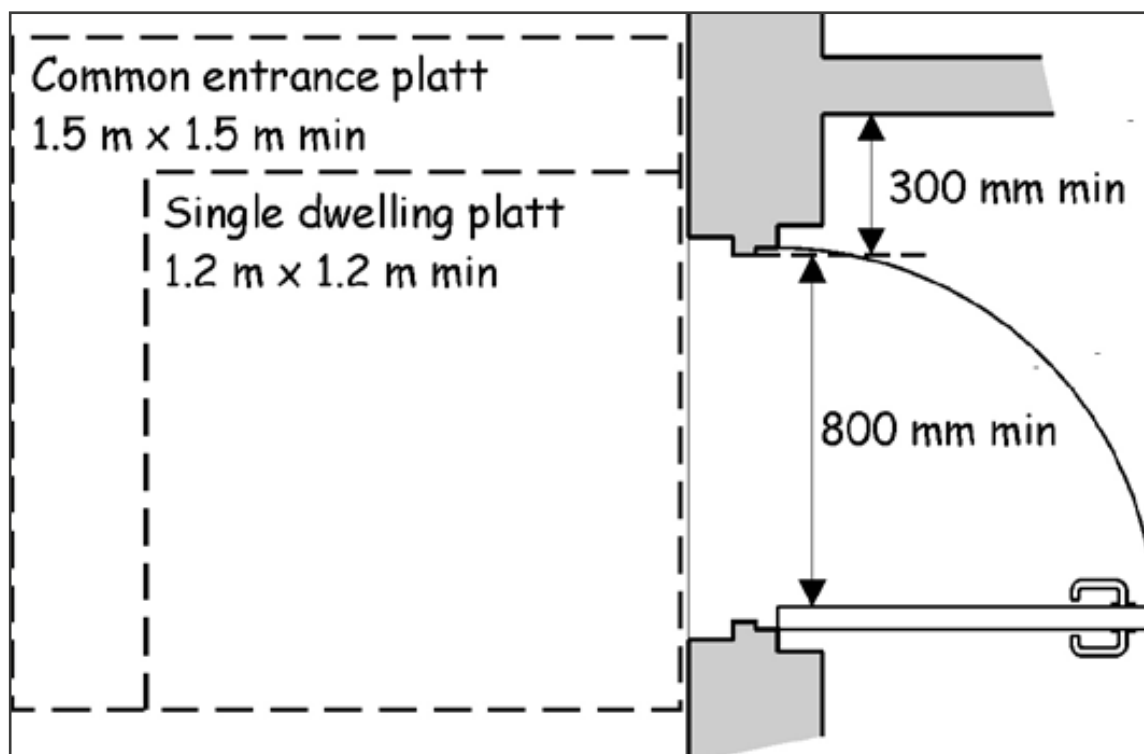
11.2.3 Accessible entrances to communal areas

- Each common entrance to a domestic building, and at least one entrance to a dwelling, should be accessible and designed to present as little restriction to passage as possible.
- Should have a clear opening width of at least 800mm.
- Common entrances must have an unobstructed entrance platt, measuring at least 1500mm by 1500mm; and any cross-fall required to prevent standing water should be at a gradient of not more than 1 in 50.
- Common entrances must be provided with a canopy, recessed entrance or similar means of protecting people entering the building from exposure to the elements. Minimum provision must be 750mm deep, across the width of the entrance platt, with an underside not more than 2.3m above the entrance level.
- Common entrances must be provided with a door entry system and a glazed vision panel (can be a side light or a panel to a door).
- Common entrances must have a means of automatic illumination above or adjacent to the entrance door.
- Ramps and handrails should comply with the Building Standards (Technical Handbook 2017: Domestic).
- The design and layout should comply with the above and the Building Standards (Technical Handbook 2017: Domestic) (Safety) and Figure 1.

11.2.4 Accessible entrances to individual dwellings

- Entrances to dwellings should preferably be step free. Whilst an accessible entrance to a house is commonly the front or main entrance, an alternate entrance may be designated as the accessible entrance where this provides a more convenient or practical route into the dwelling.
- All door openings should have a clear opening width of at least 800mm.
- Individual dwellings must have an unobstructed entrance platt of at least 1200mm by 1200mm; and any cross-fall required to prevent standing water should be at a gradient of not more than 1 in 50.
- The protection of a canopy or porch is of benefit to everyone, however this is a desirable feature as per HfVN Part 1 General Needs.
- Ramps and handrails should comply with the Building Standards (Technical Handbook 2017: Domestic).
- Individual dwellings must be provided with a door bell which button should be positioned between 1000-1050mm above the entrance platt and 200mm from any return wall or balustrade; for the benefit of visitors with limited reach or people who may use a wheelchair. Bell buttons should be clearly visible against their background to assist people who are visually impaired.
- Entrances must have a means of automatic illumination above or adjacent to the door.
- The design and layout should comply with the above and the Building Standards (Technical Handbook 2017: Domestic) (Safety) and Figure 1.

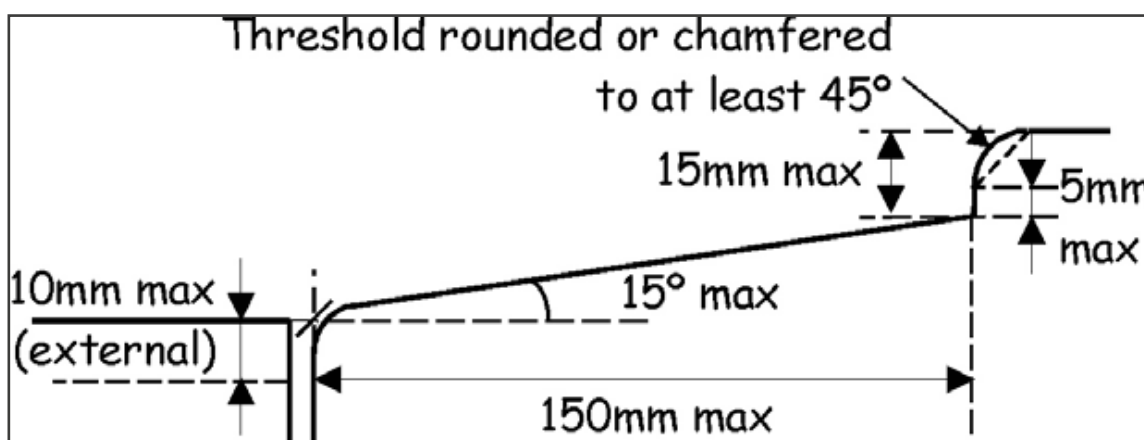
Figure 1: Common and Individual Accessible Entrances



11.2.5 Accessible thresholds for individual dwellings and blocks of flats

- All entrance doors should be accessible, and doors should not present unnecessary barriers to use;; such as a step or raised profile at a threshold that might present difficulties to a wheelchair user or be an entrapment or trip hazard to an ambulant person, whether or not using a walking aid.
- An accessible threshold should meet the Building Standards (Technical Handbook 2017: Domestic) and the drawing detailed below.

Figure 2: Level Threshold



12.0 Internal Access Design Requirements

12.1 Circulation in Communal Access Areas

12.1.1 Shared Circulation within buildings

The common areas of domestic buildings containing flats or maisonettes must provide circulation routes to allow safe and convenient passage including space for maneuvering at junctions and when passing through doorways. All corridors therefore must be a minimum width of at least 1200mm.

- All internal communal access areas must allow for the needs of older and ambulant disabled people; people with visual, hearing or cognitive impairment and - on ground floors and where there is lift access - wheelchair users and people maneuvering a pram or pushchair.
- There must be a clear space inside the door of at least 1200mm x 1800mm to allow for wheelchair maneuvering.
- A wheelchair user should be able to reach the door handle and therefore there should be a clear space beyond the opening edge of the door of at least 300mm.
- Circulation routes must be free of steps and have a width of at least 1200mm clear of all obstructions.
- To allow maneuvering space for both people and furniture, routes should be widened locally, at changes of direction, junctions and at the landing of any lift, to accommodate, clear of any obstruction, a 1500mm turning circle.
- Obstructions - other than on a wall opposite a doorway, or in the areas noted above, an obstruction such as a radiator may project up to 100mm, reducing corridor width to not less than 1.1m, over a maximum length of 900mm.
- For buildings containing accommodation for wheelchair users, the clear area inside the door should be a minimum of 1500 x 1800mm circulation route must allow for full wheelchair use and be at least 1200mm wide and widened locally to accommodate change in direction, junctions and at the landing of any lift, to be clear of any obstructions and provided with a 1500mm turning circle.
- Doors / openings within the common areas of a domestic building should comply with the Building Standards (Technical Handbook 2017: Domestic) and table 6 detailed below:

Table 6: Minimum clear opening widths for communal areas

Minimum Corridor width at door	Min. clear door opening width
1500mm	800mm
1200mm	825mm (can be reduced to 800mm if approached head on)

12.1.2 Vertical circulation in common areas of domestic buildings (Stairs)

Access stairs in common areas where they provided access to upper floor flats should be designed to be easy and safe to use by people with impaired mobility or visual impairment. There should be an accessible stair provided between each level of the building.

- Handrails to common stairs should comply with the Building Standards (Technical Handbook 2017: Domestic).
- Stairs in common areas should comply with the Building Standards (Technical Handbook 2017: Domestic).

12.1.3 Vertical circulation in common areas of domestic buildings (Lifts)

A building containing flats or maisonettes may be constructed without a passenger lift where not more than 4 storeys in height and where there is no dwelling with a principal living level at more than 10m above either a common entrance level or the level of the lowest storey.

In any building above this height, or where there are communal facilities on a level other than a common entrance level, there should be a means of unassisted access. This should serve each level of the building that contains a common entrance, an entrance to a dwelling or communal facilities. Unassisted access between storeys should be by passenger lift, with the installation meeting the recommendations of BS EN 81-70: 2003.

Any passenger lift should be designed and installed to include the following:

Lifts and circulations in common areas should comply with the Building Standards (Technical Handbook 2017: Domestic) and HfVN as detailed below:

Lift access allows flats at any floor level to have a step-free entrance and where lifts are provided they should be fully usable by disabled people, including people using 33 wheelchairs and those with visual impairment. Lifts should incorporate the following features (see also Disability Scotland Access Guide [6]):

- A clear landing at least 1500mm x 1500mm in front of any lift entrance.
- Automatic lift door(s) with a minimum clear opening width of 800mm.
- Internal dimensions of at least 1400mm deep and 1100mm wide.
- Controls inside the lift at least 400mm from the front wall.
- Controls with tactile indication so that they are usable by people with impaired sight.
- The lift door remaining open for at least 5 seconds.
- A continuous handrail fixed at 900mm from the floor.
- Audible and visual response to an emergency call.
- In multi-storey blocks, an audible indication of the operating system and location. Controls, both inside and outside the lift, reachable from a wheelchair and at a convenient height for ambulant people, within 900-1200mm from the floor;

12.2 Circulation Spaces and Internal Doors (individual dwellings)

12.2.1 Circulation spaces

- All main entrance doors should open into a circulation area and not a room.
- The area directly inside the front door must be a minimum width of 900mm and preferably 1200mm.
- Each accessible level, or storey, within a dwelling should have corridors with an unobstructed width of at least 900mm. This may be reduced to 800mm over a maximum length of 900mm by permanent obstructions (radiator or a future stair lift parking space; except on a wall opposite a doorway).
- Doors opening at right angles to a 900mm wide corridor are difficult to open from a wheelchair. Therefore if the entrance to rooms involves a sharp turn, the corridor width at that point should be at least 1200mm wide. If, in order to achieve this width, it is necessary to use space under a stair, the clear height of this area must be at least 1500mm above FFL.
- All staircases, landings and handrails must comply with the Technical Standards 2017 (domestic).
- Provision must be made for the future installation of a means of providing unassisted access, both within a storey and between storeys. The layout of all dwellings must be designed to allow for the future installation of a stair lift and comply with the minimum requirements in the Building Standards (Technical Handbook 2017: Domestic).
- If a dwelling has to be adapted for a disabled person who cannot use a stair lift, a through floor lift may be required. This needs a corresponding area of approximately 1200mm x 800mm on each floor, preferably in the corner of a room..

12.2.2 Internal Doors

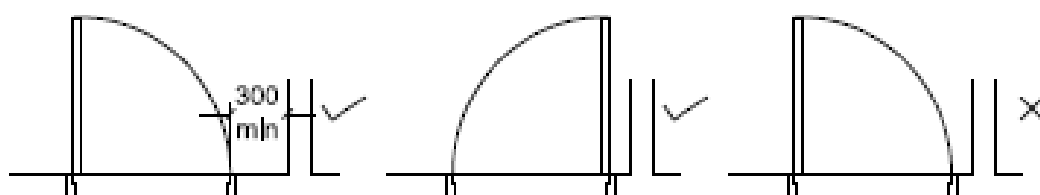
The width of the doorways and hallways should conform to the specifications below:

All internal pass doors within individual units must comply with the Building Standards (Technical Handbook 2017: Domestic) with the exception of the pass doors to en-suites and walk-in cupboards which are required to have a clear opening width of at least 750mm with a return of at least 300mm beyond the door opening edge as detailed below in **Table 7 and figure 3:**

Table 7: Minimum Clear Opening widths for individual dwellings

Location	Min. clear door opening width
Door from a corridor with a minimum width of 1050mm	775mm
Door from a corridor with a minimum width of 900mm (the opening width may reduce to 775mm where the door is approached head on)	800mm
Door between rooms	775mm
Door to en-suites or cupboard doors (walk in cupboards)	750mm

- Door frames should not have threshold plates as these may hamper the use of walking aids and wheelchairs.
- Bathroom doors that do not open outward should have easily removable door checks to facilitate access in the event of a person collapsing against the inside of the door.
- Doors should be hung with hinges adjacent to the corner of the room into which they open, or with a clear space of at least 300mm between the opening edge of the door and the return wall.
- All pass doors must be positioned to with a clear space of at least 300mm adjacent to the handle edge on the pull side of the door.



13.0 Internal Layout Design Requirements

13.1 Living Areas

The combined area of the living room, dining room and kitchen is an important measure of the quality of space provision within a home. The minimum combined living areas in this guide allow the designer freedom to organise and combine these spaces in different ways, while safeguarding the overall living space within a dwelling.

At present the market favours is for open plan living, dining and kitchen areas, however this is not always preferred and separation between the living area and the kitchen area may be more desirable. The design of the layout must be considered to allow for flexibility and future adaptations.

- 8.1.1** All dwellings must be designed for activities involving any members of the family, with or without guests.
- 8.1.2** To provide usable living spaces the rooms must be of a size and shape that allows space for circulation, notional furniture and activity spaces.
- 8.1.3** The path must be a minimum of 600mm wide for necessary circulation between furniture and access to windows and radiators. The path can overlap activity spaces.
- 8.1.4** The design of dwellings over more than one storey should provide space for the provision of a stair lift.
- 8.1.5** Notional furniture must be allowed as follows:
 - Easy seating for the number of bed spaces plus two
 - Bookcase and or storage unit with a total length of 2000mm and a height of 1500mm
 - Television (wall mounted or on TV stand, which would reduce the overall requirement for the bookcase / storage unit)
 - Occasional table
- 8.1.6** The minimum combined internal floor area of the living, dining and kitchen area meets the minimum aggregate area described in **Table 8**.

Table 8: Minimum Aggregate of Living Area (lounge/kitchen and dining area)

	No. of bed spaces per dwelling for general units					
	2	3	4	5	6	6+
Minimum area required for general units (m2)	23	25	27	29	23	31 (+ 2 m2 per additional person)
Minimum area required for wheelchair adaptable (m2)	24	26	28	30	32	32 (+2 m2 per additional person)

Note:

- 1. Figures for general units are based on the Interim London Housing Design Guid 2010.**
- 2. Figures for wheelchair adaptable units have been increased to accommodate additional activity spaces and circulation.**

Note:

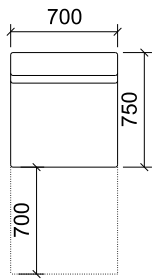
- 1. All drawings must demonstrate how the provisions can be achieved: via dimensioned living area layouts showing notional furniture, access and activity space requirements specific to the confirmed level of occupancy (i.e. number of bed spaces).**
- 2. Activity spaces must be clear of any structure, fitting, heating appliance or notional furniture; but spaces for different activities can overlap each other. Activity space requirements must be adhered to.**



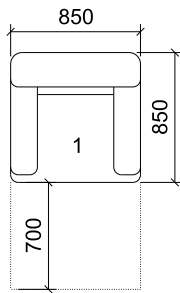
Glasgow Standard

Living room furniture layout designs

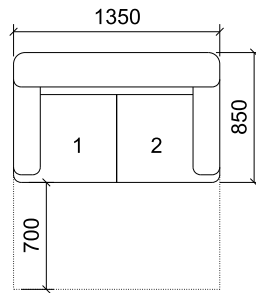
Figure 4: Notional Furniture



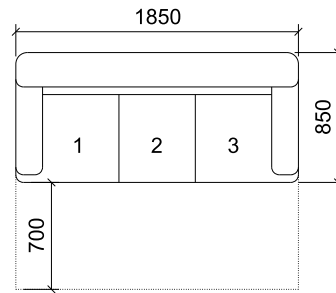
Easy chair



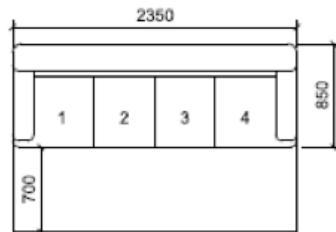
Armchair



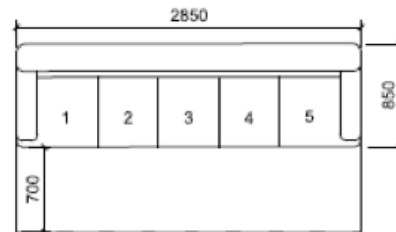
2 seater sofa



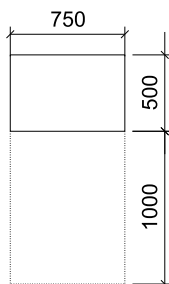
3 seater sofa



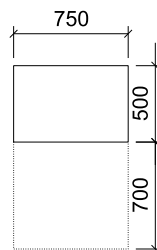
4 seater sofa



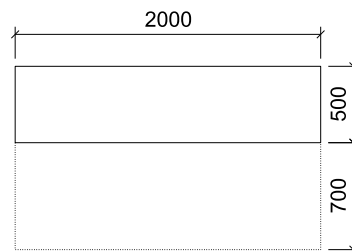
5 seater sofa



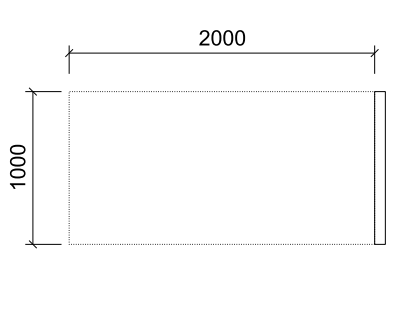
Bookcase/
Storage unit
(min)



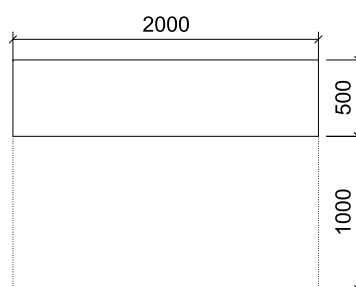
Bookcase/
Storage unit
(min)



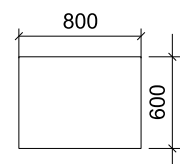
Bookcase/
Storage unit
(total)



TV on wall mounted bracket

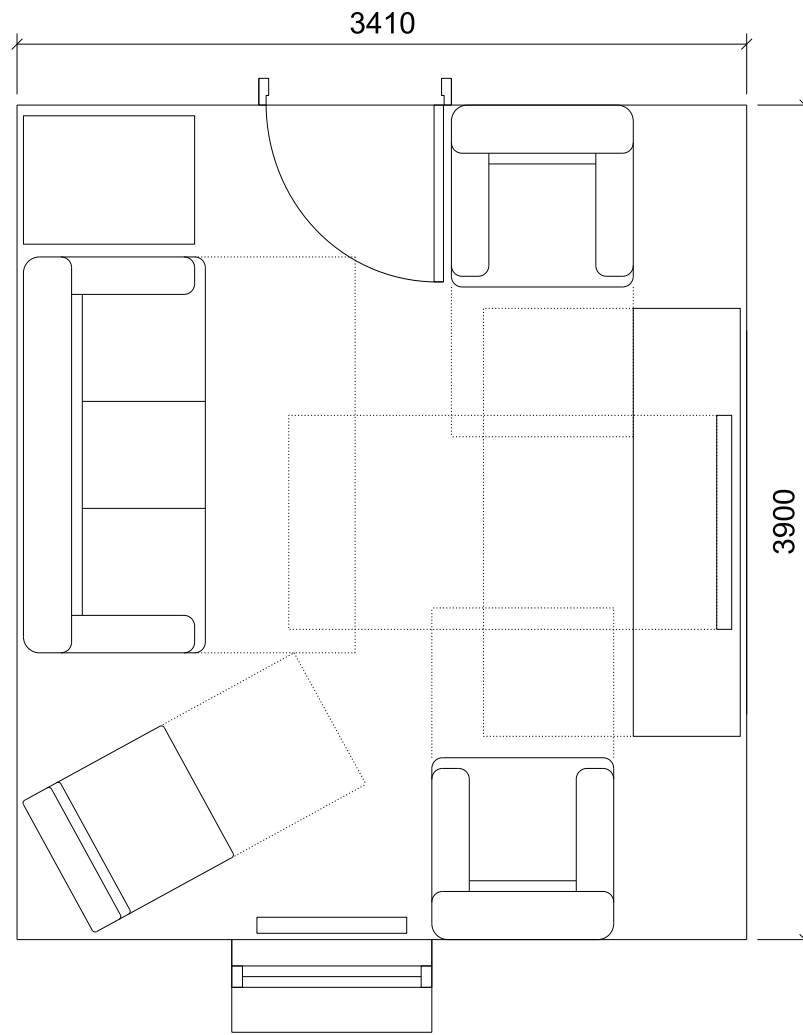


Bookcase/
Storage unit
(total)



Occasional table
(equivalent size)

Figure 5: Living Room Layouts



**Seating for 6 people
(TV above bookcase)**

13.2 Dining Areas

If a separate dining room is not provided then a dining space must be provided within the lounge or the kitchen area.

The dining space should be within easy reach of the kitchen.

If the kitchen is adjacent to the living area, the communal partition between the rooms should not be load bearing; to future-proof reconfiguration.

Notional furniture must be allowed for, as follows:

- Dining table and chairs, or space for a wheelchair, for the number of bed spaces plus 2 occasional visitors;
- Sideboard/dresser if this area is in a separate dining room.

Note:

1. **All drawings must demonstrate how the provisions can be achieved: via dimensioned dining area layouts showing notional furniture, access and activity space requirements specific to the confirmed level of occupancy (i.e. number of bed spaces).**
2. **Activity spaces are clear of any structure, fitting, heating appliance or notional furniture; but spaces for different activities can overlap each other. Activity space requirements must be adhered to.**

Figure 6: Notional furniture

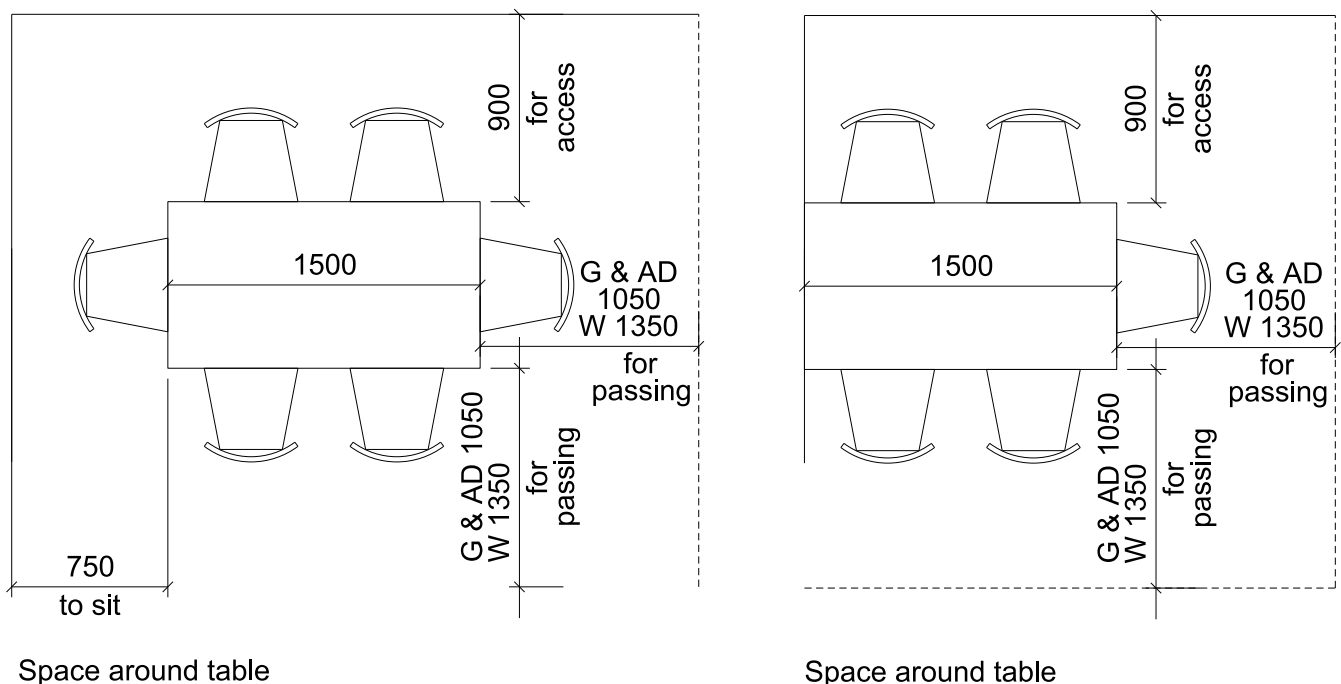


Figure 6: Notional furniture

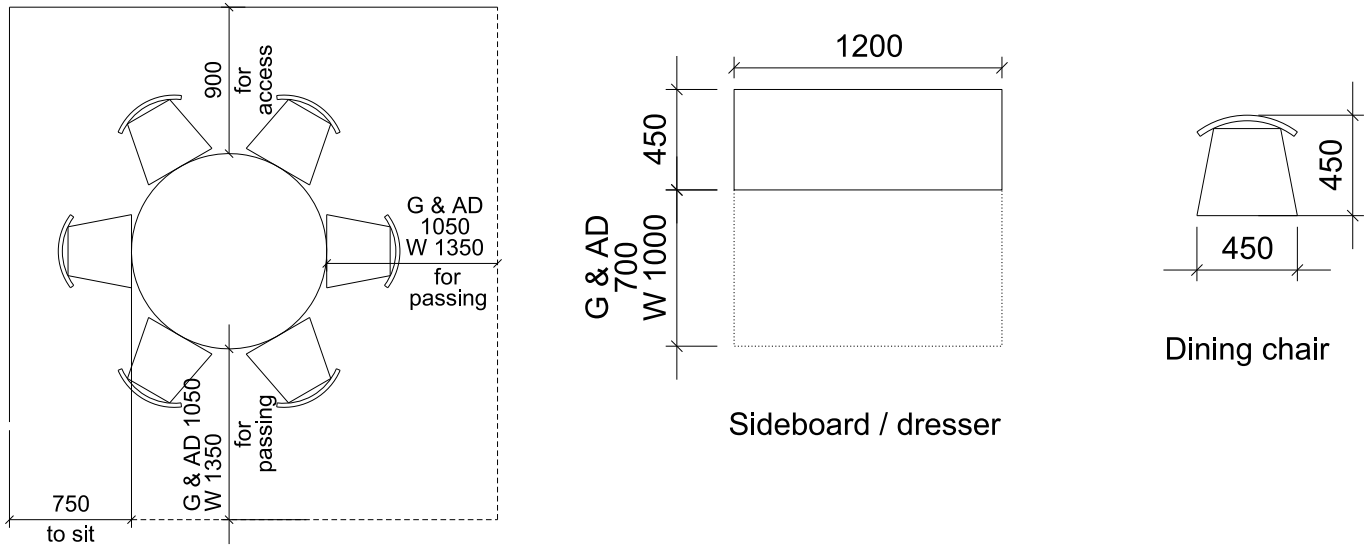


Figure 7: Rectangular Tables

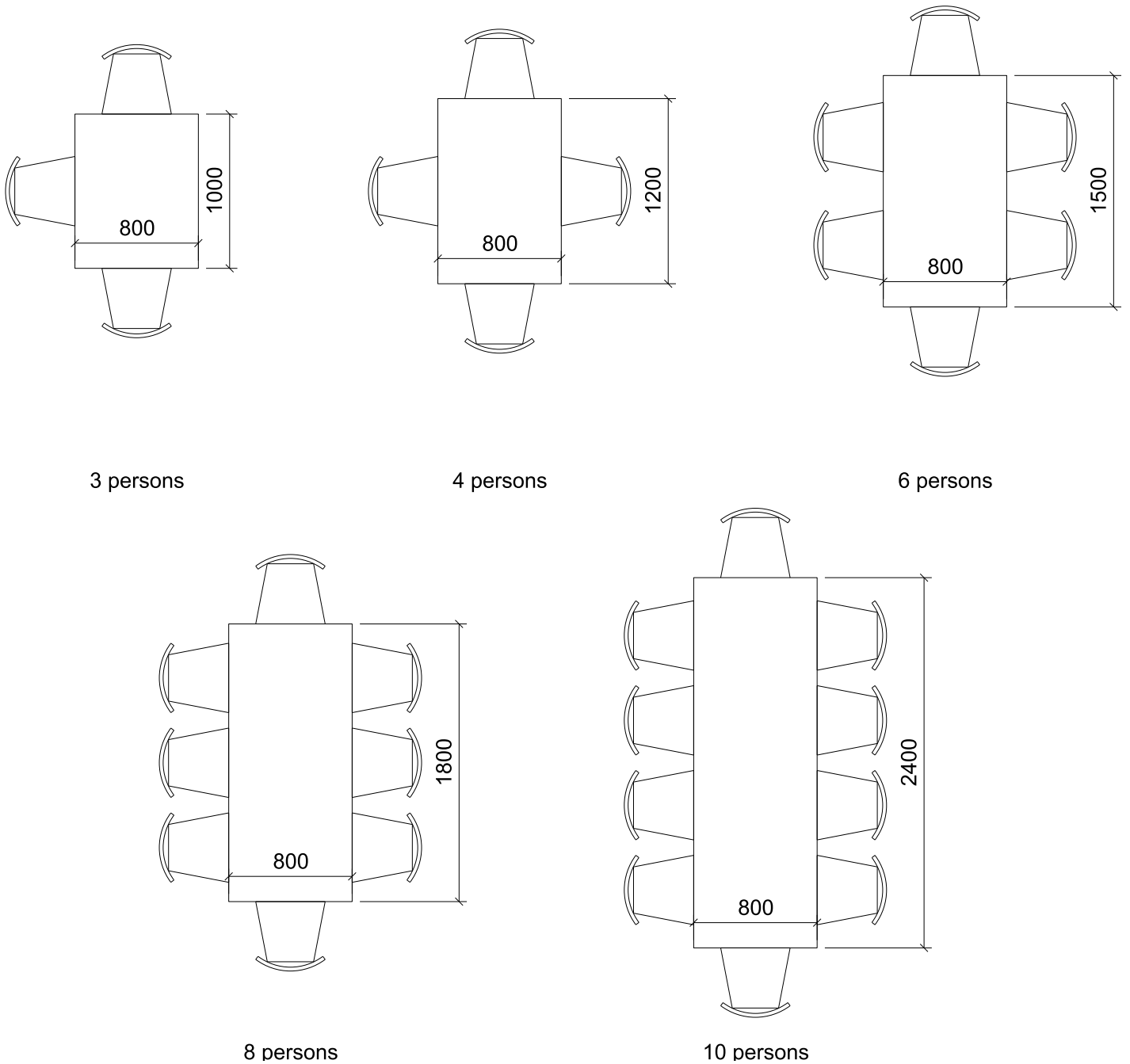
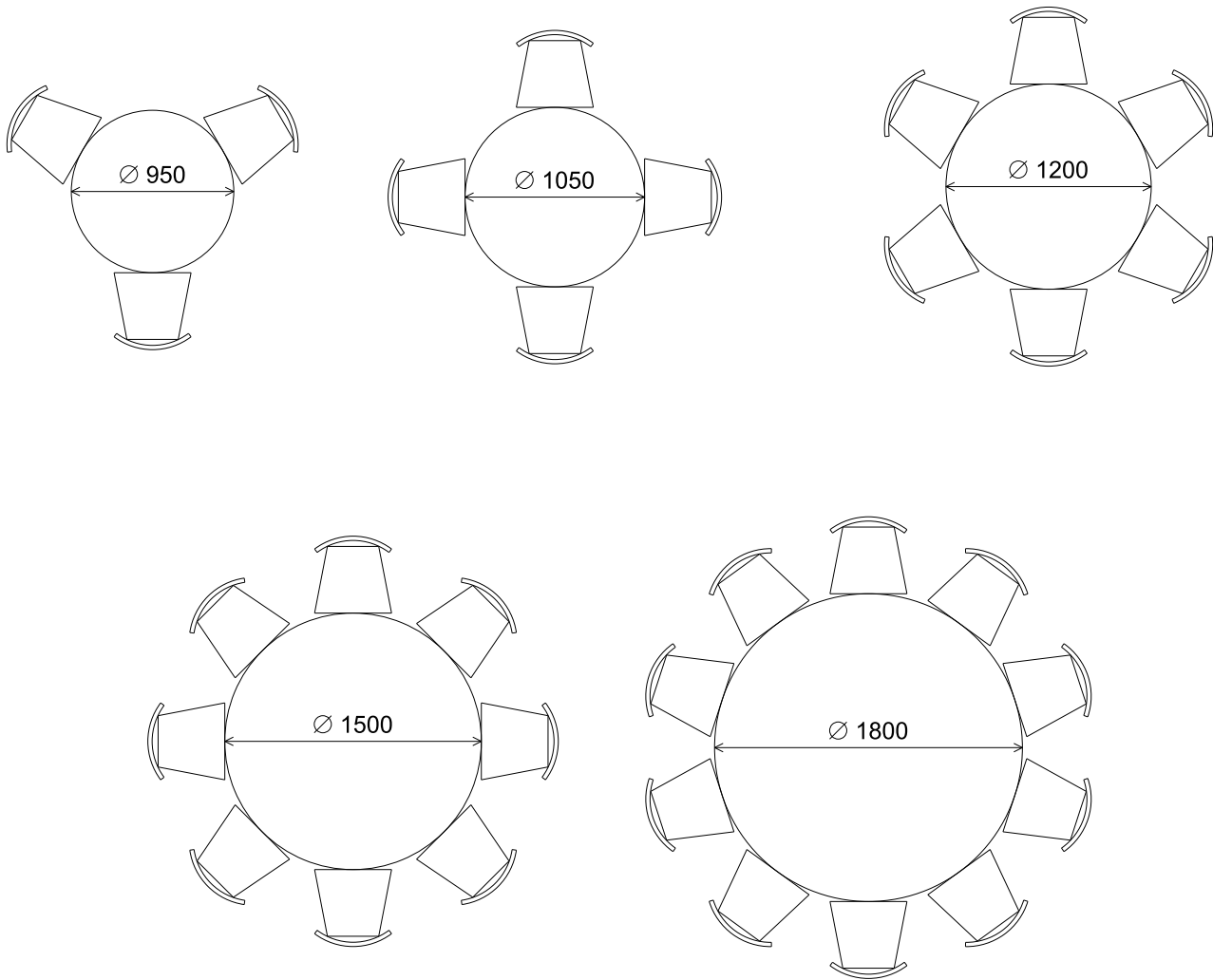


Figure 8: Circular Tables



13.3 Kitchen and Kitchen Storage Requirements

13.3.1

All kitchens must be designed to accommodate the appliance and equipment that users are likely to need and have adequate and accessible storage for food and utensils. Adequate storage is essential for the convenient use of a kitchen. The Building Standards (Technical Handbook 2017: Domestic) **Section 3**, requires all dwellings to have at least 1m³ of storage in the kitchen, but this is a minimal amount even for small households and is inadequate in family housing.

The Council requires the following minimum kitchen storage requirements for all new residential developments (and conversions if applicable). These requirements are included within **Table 9**.

Kitchens should be designed to accommodate the following requirements:

- All layouts should include an unobstructed manoeuvring space of at least a 1500mm by 1500mm square or an ellipse of 1400mm x 1800mm.
- There must be a clear space of at least 1200mm in front of all fittings and appliances.
- Floor spaces must be allocated for: cooker; full height fridge-freezer and washing machine; plus a minimum 625mm clear width suitable for either a dishwasher or a tumbler drier with vent.

- The layout of the fittings and appliances should give a continuous sequence of worktop – sink – worktop – oven/hob – worktop.
- A minimum of 300mm width worktop should be provided to both sides of the hob / cooker. The space for a cooker or hob must never be in front of a window or where window curtains could be over the hob.
- There should be space provided on the worktop surface for microwave, kettle and toaster.
- It is preferable that a minimum of 900mm should be provided within the worktop length.
- A minimum of 600mm should be provided between cooker and sink.
- In larger flats and houses, a separate utility room for washing and drying may be more desirable (this would be in addition to the minimum space standard requirements).

Table 9: Minimum aggregate kitchen storage capacity and Worktop length

Flat / House	No. of bed spaces per dwelling						
	2	3	4	5	6	7	7+
Kitchen unit Storage	1.5 m ³	1.6 m ³	1.7 m ³	1.8 m ³	1.9 m ³	2.0 m ³	2.0 m ³ + 0.1 m ³ per additional person
Clear Worktop Length	1.5lm	1.7lm	1.7lm	2.1lm	2.3lm	2.5lm	2.5lm + 0.2lm per additional person

Notes:

1. Figures are based on the requirements within *Housing for Varying Needs Part 1*.
2. Kitchen storage capacity excludes Aspect 8 (material use and waste).
3. Kitchen storage is built-in and free of boilers, hot water cylinders and other obstructions.
4. Kitchen storage is excluding storage for cleaning equipment (vacuum cleaner, mop, ironing board etc).
5. Kitchen storage capacity excludes waste, washing machines, ovens, dishwashers and tumble driers.
6. Fully fitted wheelchair kitchen must meet the minimum requirements.
7. The minimum worktop lengths above exclude space for the kettle, toaster and microwave.

13.4 Utility Room

- 13.4.1** It is always desirable in any size of dwelling to provide a dedicated utility room with space and provisions for a boiler, washing machine and tumble drier or even to accommodate wheelchair storage. Any decision to include utility rooms will require additional floor areas above the minimum space standard requirements and the minimum living area (kitchen, dining and lounge area).
- 13.4.2** There must be a clear space of at least 1200mm in front of all fittings and appliances.

13.5 Bedrooms

It is important that affordable housing provides good sized bedrooms to enable a wide range of people to access and use them. Bedrooms should comply with the following:

- All double / twin bedrooms should be able to accommodate either a double bed or 2 single beds.
- The double bedroom should also be able to accommodate two single beds as an alternative layout to ensure that properties can be let to a range of household types. The architect should provide 2 layouts to demonstrate the ability to achieve this flexibility.
- At least one bedroom in all dwellings must allow for a wheelchair access 'path' from the door to the bed and clear space beside the bed of at least 800mm wide.
- At least one bed space must be able to be accessed from a wheelchair.
- Bedroom(s) should allow for notional furniture with associated activity spaces. A 600mm wide circulation path should provide access to windows and radiators.
- The minimum activity space in front of a wardrobe is 1000mm but if measured to a bed this can be reduced to 700mm (for general needs only).
- If the wardrobe has sliding doors the minimum activity space in front of these doors should be 700mm.
- The minimum activity space in front of a drawer unit can be reduced from 1000mm to 700mm when measured to a bed (for general needs only). Where built-in shelved storage is provided in conjunction with the minimum built-in hanging space, this may replace some, but not all, of the drawer requirements. This must be agreed with Glasgow City Council and comply with the requirements set out in **Section 8.6 and Figure 11**.

Table 10: Minimum floor areas for bedrooms

	The minimum floor area for general use	The minimum floor area for wheelchair Adaptable
Single Bedroom	7m ²	10m ²
Double / twin bedroom	11.5m ²	14.5m ²

Notes:

1. All drawings must demonstrate how the provisions can be achieved: via dimensioned layouts showing notional furniture, access and activity space requirements specific to the confirmed level of occupancy (i.e. number of bed spaces).

2. Activity spaces are clear of any structure, fitting, heating appliance or notional furniture; but spaces for different activities can overlap each other. Activity space requirements must be adhered to.

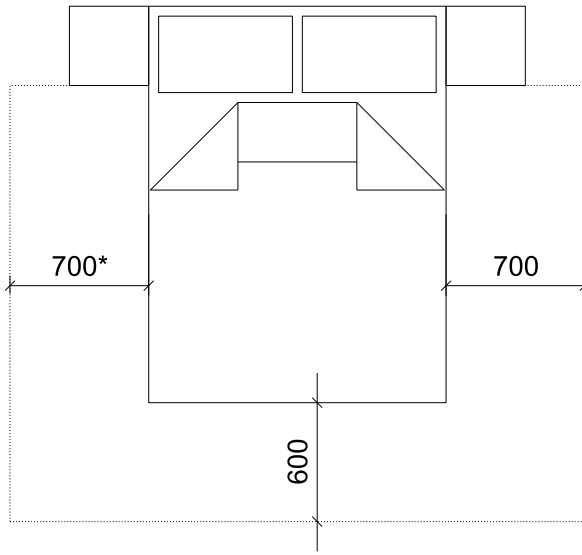
3. Single beds are not allowed to be placed together (side by side or end to end).

4. Beds are not allowed to be placed in front of windows.

5. No box rooms allowed (rooms under 7m²)

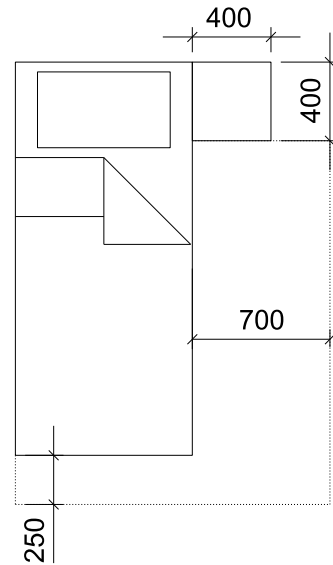
Glasgow Standard

Bedroom furniture layout designs



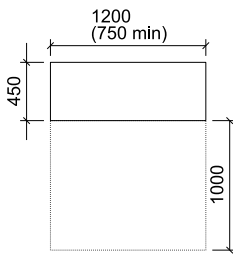
**Double bed
General needs and
ambulant disabled**

* Note at least one bed should provide 800mm

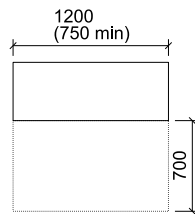


**Single bed
General needs and
ambulant disabled**

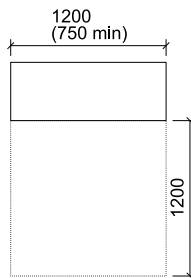
Drawer units



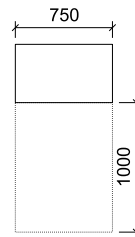
1200mm
General needs and
ambulant disabled



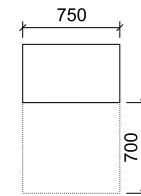
1200mm
General needs and
ambulant disabled-
to a bed



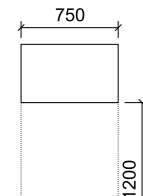
1200mm
Wheelchair user



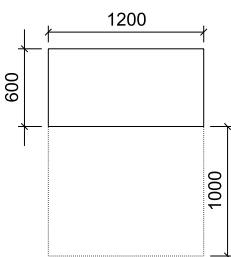
750mm (min)
General needs



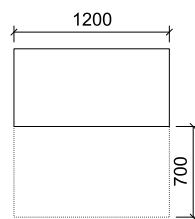
750mm (min)
General needs -
to a bed



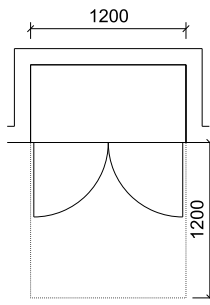
750mm
Wheelchair user



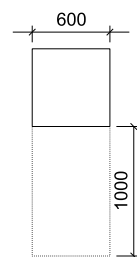
Double wardrobe unit
General needs and
ambulant disabled



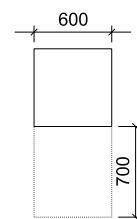
Double wardrobe unit
General needs and
ambulant disabled-
to a bed



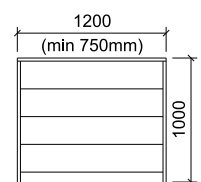
Built-in
Double wardrobe unit
Wheelchair user



Single
wardrobe unit
General needs and
ambulant disabled



Single
wardrobe unit
General needs and
ambulant disabled-
to a bed

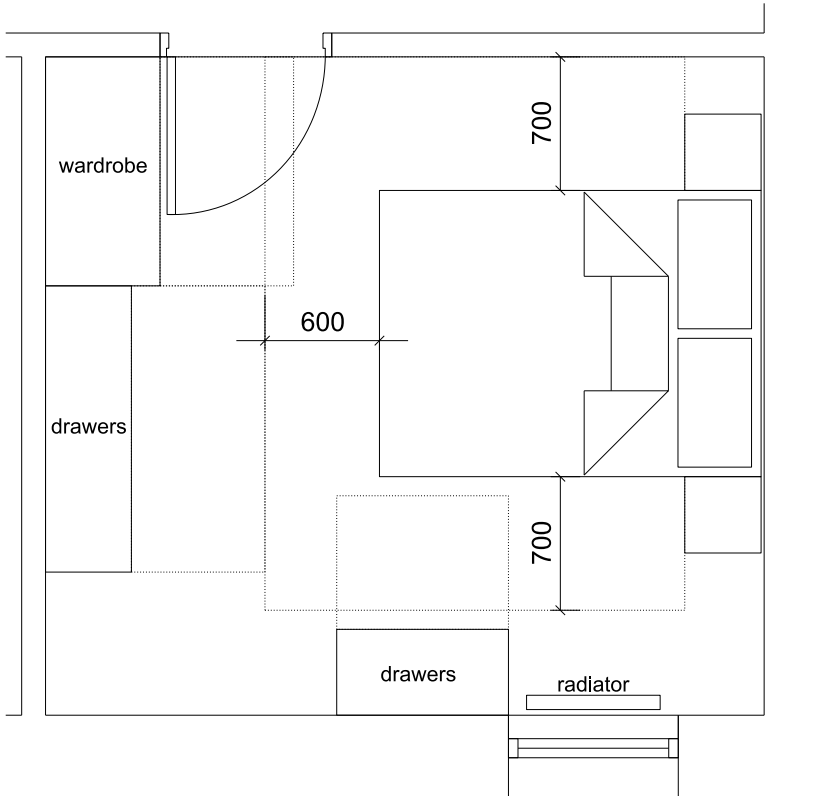


1200mm x 450mm
0.54m² drawer x 4no.
= 2.16m² drawer provision

**Freestanding single
Drawer provision
per bedspace
HfVN 11.4.1**

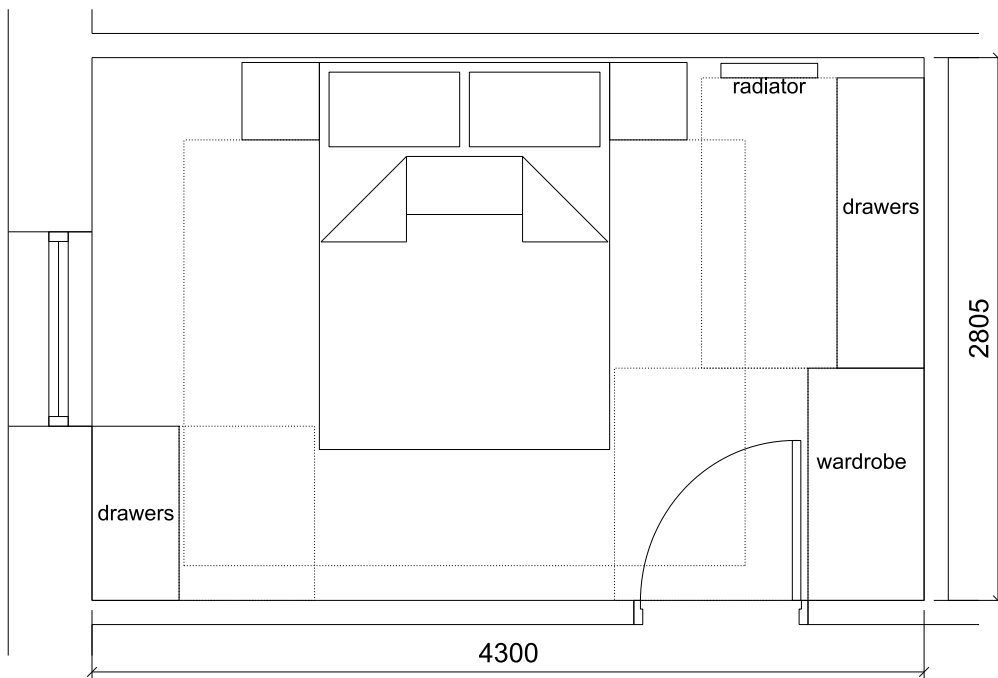
Wardrobes - freestanding

Figure 10: Typical Bedroom Layouts



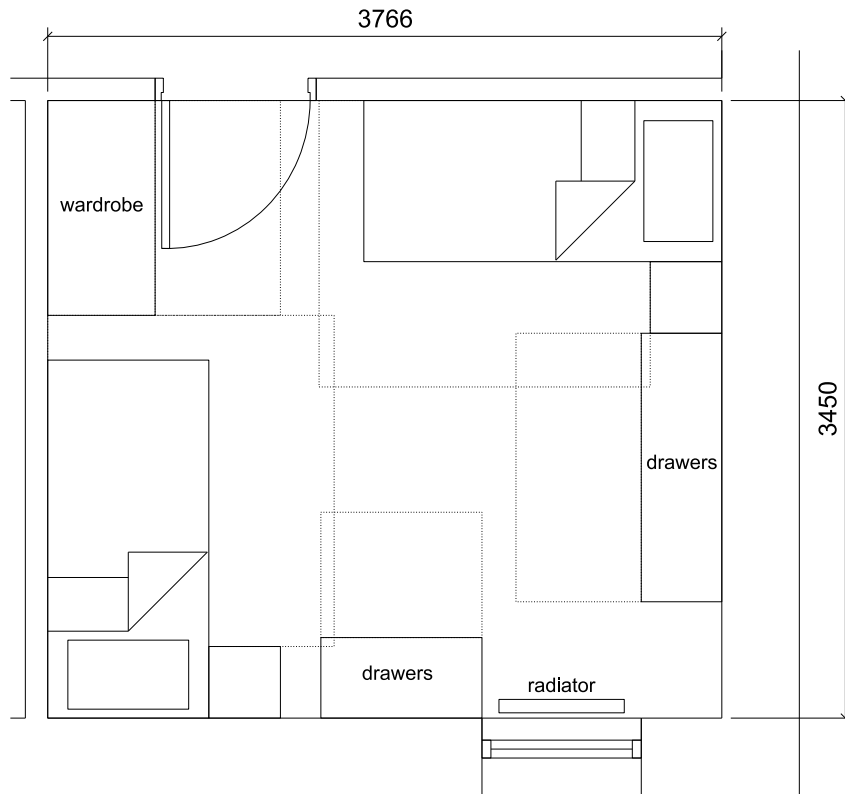
12.99m²

Double bedroom
Glasgow Standard 12.99m²



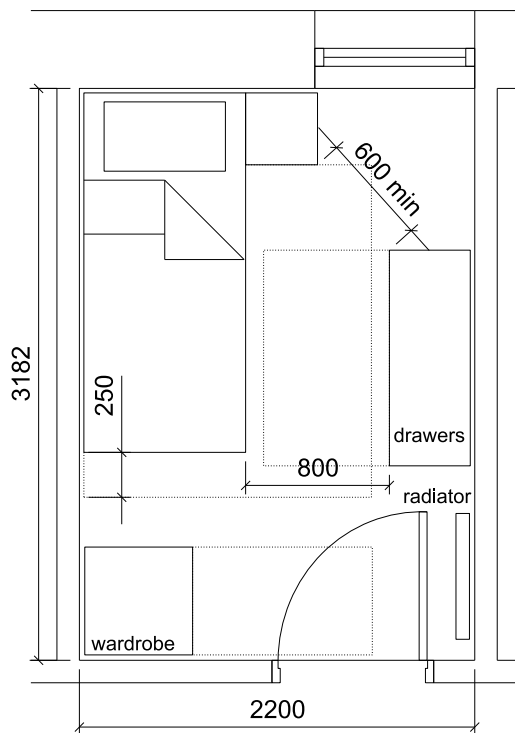
12.06m²

Double bedroom
Glasgow Standard 12.06m²
With double bed - using separate wardrobe and drawer provision



12.99m²

Double bedroom
Glasgow Standard 12.99m²
With twin beds



7.00m²

Single bedroom
Glasgow Standard 7.00m²

13.6 Built in wardrobes

If the design incorporates built in wardrobes within the bedrooms, the floor space occupied by built-in wardrobes will count towards the floor area of the bedroom.

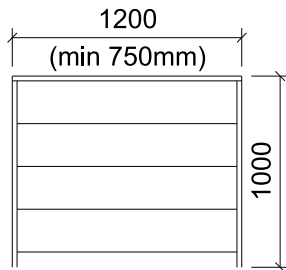
13.6.1 Accessible built-in shelves (enclosed)

Where built-in shelves are provided within the built-in hanging space, this may reduce some, but not all, of the drawer unit requirement by agreement. The built-in shelves should be in addition to the 600mm hanging space required for each person in the bedroom. If a bedroom is designed with built-in clothes hanging space and shelves for clothes, the following are required:

- At least one drawer unit at a minimum of 750mm wide will be required per bedroom.
- Built in shelves to the side of the hanging space will be acceptable for the reduction in drawer units.
- The cubic capacity area for the built in shelves must be equal to the reduction in cubic capacity area for the drawer unit.
- The top shelf of the fitted wardrobes will not account for the reduction of drawer units.
- Minimum clear width of built in shelves to be 600mm.
- A maximum of six shelves are permissible from floor level to 1500mm in height.
- Minimum clear depth of 600mm.
- 1000mm clear access area if doors open outwards.
- 700mm clear access area for sliding doors.

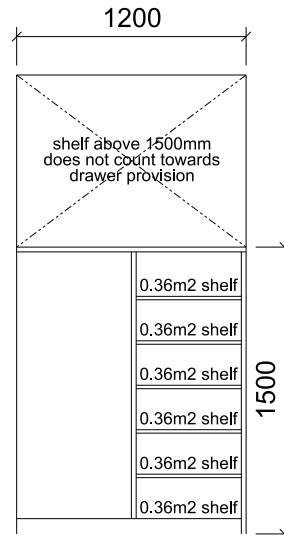


Figure 11: Built in Wardrobe/Shelf Provisions



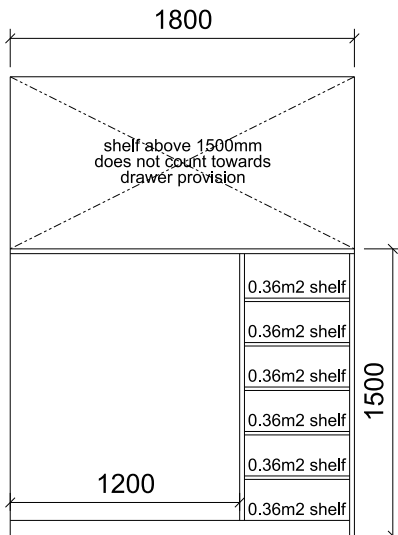
1200mm x 450mm
 0.54m² drawer x 4no.
 = 2.16m² drawer provision

**Freestanding single
 Drawer provision
 per bedspace
 HfVN 11.4.1**



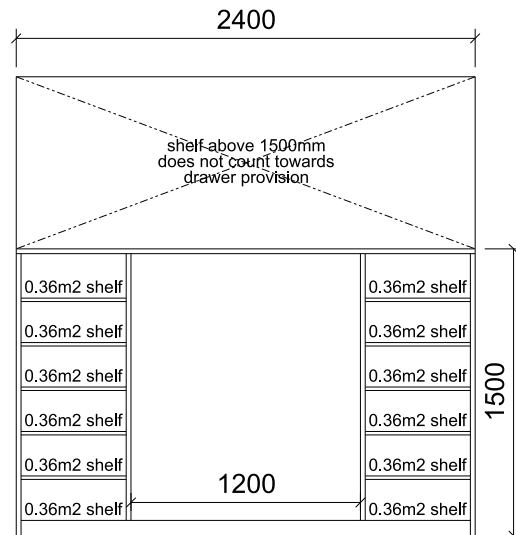
600mm x 600mm
 0.36m² shelf x 6no.
 = 2.16m² drawer equivalence

**Built-in
 Single wardrobe and
 single drawer provision**



600mm x 600mm
 0.36m² shelf x 6no.
 = 2.16m² drawer equivalence

**Built-in
 Double wardrobe and
 single drawer provision**



600mm x 600mm
 0.36m² shelf x 12no.
 = 4.32m² drawer equivalence

**Built-in
 Double wardrobe and
 double drawer provision**

13.7 General Storage

13.7.1 Minimum aggregate general storage capacity

All residents require storage space to accommodate the variety of goods associated with day-to-day living. Storage is an important factor in ensuring that properties are future proof and that people have enough space to enjoy their homes. Without adequate storage space, people's belongings will take space away from rooms and limit their enjoyment of them.

Appropriate levels of built-in storage space should therefore be incorporated into every dwelling. The Council requires the following minimum storage provision in all new residential developments (and conversions if applicable). These requirements are included within the net floor areas set out in the space standards in Table 11 below. They are in addition to built-in kitchen units and wardrobes and should ideally comprise floor to ceiling storage.

Storage should be provided through dedicated, built-in storage cupboards such as airing, utility and cloak cupboards, cupboards under the stairs (minimum height 1.5m) or built-in wardrobes (by agreement). Storage space should reflect the range of households to be included within a development.

All dwellings (flats and houses) should provide at least 1 No general storage cupboard with a minimum dimension of 1200mm x 1200mm.

The depth of storage cupboard should be designed to ensure that it is easily accessible for all users and should not exceed 1200mm. The definition of a walk in cupboard is where the depth is greater than 600mm.

The activity space provided in front of all cupboard doors should be a minimum of 1000mm.



Table 11: Minimum aggregate general storage capacity

	Number of bed spaces per dwelling						
	2	3	4	5	6	7	7+ *
Dwellings	1.5m ²	2m ²	2.5m ²	3m ²	3.5m ²	4m ²	(+ 0.5 m ² per additional person)

Notes:

- 1. Figures are based on The New Scottish Housing Handbook Bulletin 1, Edinburgh City Council Design Guide, Department for Communities and Local Government Technical Housing Standards – nationally described space standards and the Interim London Housing Design Guide 2010.**
- 2. Storage cupboards should be provided in addition to the notional furniture listed in [Appendix 1](#).**
- 3. Storage is built-in and free of boilers, hot water cylinders, meters, ventilation equipment, washing machines, tumble dryers, fixed furniture and other obstructions.**
- 4. Storage has a minimum internal height of 1500mm.**
- 5. In addition to general storage (above), wheelchair adaptable units require additional storage space for wheelchairs and special equipment. (Minimum size of 1200mm x 1200mm).**
- 6. In two or three storey dwellings there should be general storage provided at each level of the dwelling.**

13.8 Bathrooms

All bathrooms, accessible toilets and en-suites should offer both adaptability and flexibility of layouts. This gives a more sustainable solution that will simplify modifications to the design and layout of dwellings, helping to reduce cost and disruption and better enabling people to remain in their home as their circumstances change.

The layout and dimensions of all bathrooms must accommodate different needs and allow for:

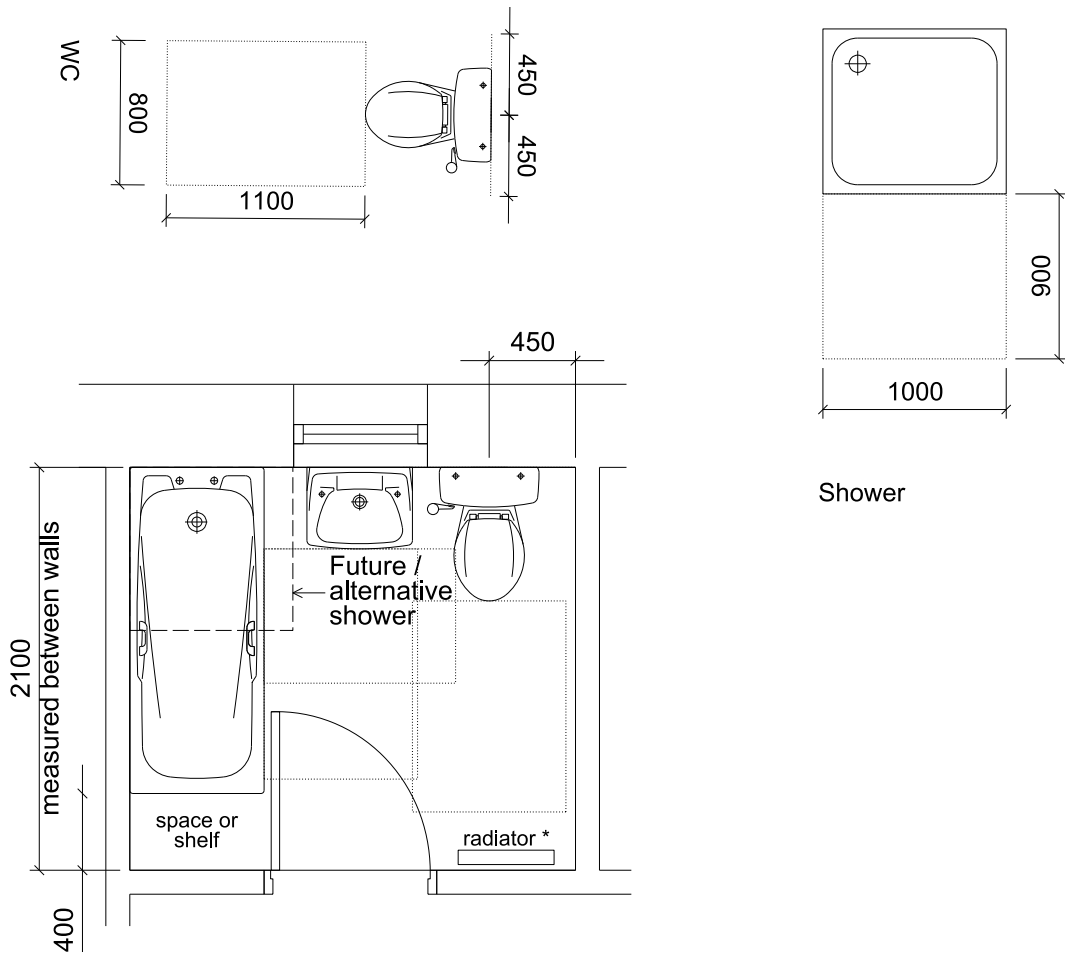
- All layouts/designs incorporate ease of access to the bath, shower, WC and wash hand basin.
- The main bathroom must not be accessed through a bedroom or a habitable room.
- It must be of a design and size that allows for different and changing needs and should allow for flexibility in its use and layout, with minimum adaptation works and costs.
- A bath or a shower so that the occupant can have whichever best suits their needs. The layout must allow both to be fitted but not necessarily at the same time.
- Drawings must indicate an area of 1000mm x 1000mm for the installation of a future level access shower (which may overlap with a bath). A floor gully should be provided at initial stage.
- All bathrooms must be designed for adaptation to meet the needs of occupants and future occupants.
- A minimum of 2100mm between walls, to allow for a space of 400mm at the head/end of the bath to allow for a shelf or space for the tenant's fixtures. The 2100mm must be clear of soil pipes and boxing-in to conceal pipes or any other fittings.
- The minimum size for the bath must be 700mm (w) x 1700mm (l), with an activity space of 1200mm (l) x 800mm (w) of clear floor space at some point along the bath. If the activity space is measured to a wall then the activity space must increase from 800mm to 900mm in width.
- WC's in bathrooms must be positioned with their center line 450mm from a wall with a minimum activity space of 1100mm x 800mm in front of WC.
- WHB's in bathrooms should have a minimum dimension of 550mm x 425mm and the center line should be at least 500mm from any adjacent wall, with a minimum activity space 800mm (l) x 700mm (w) below basin rim (or 900mm (w) where measured to a wall) and 1000mm above basin rim.
- If showers are provided in lieu of the bath (due to the tenant's needs) then the minimum activity space in front of the shower tray would be 1000mm (l) x 800mm (w). When the activity space is measured to the wall then this width would increase to 900mm.
- In flats or bungalows that are designed for an occupancy of 5 persons or more, consideration should be given to providing a minimum of one bathroom plus one additional WC.
- It should be possible to replace the bath with an accessible shower without adversely affecting access to other sanitary facilities and altering pipework.
- Windows should be easily accessible and not be located above the bath or shower.

Note:

- 1. All drawings must demonstrate how the provisions above can be achieved: via dimensioned bathroom layouts, room areas, access and activity spaces for each fitting.**
- 2. Activity spaces are clear of any structure, fittings and heating appliance; but spaces for different activities can overlap each other. Activity space requirements must be adhered to.**

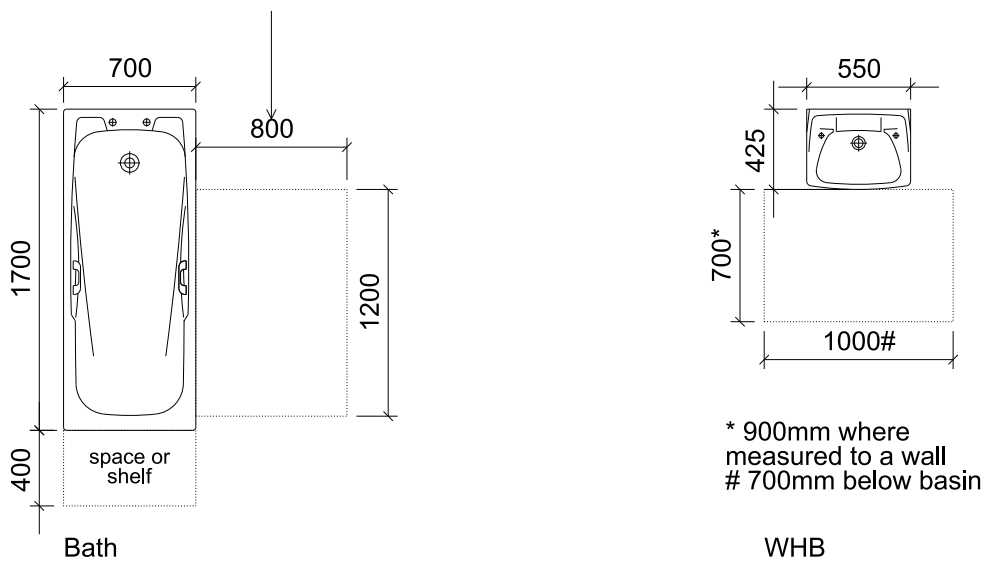


Figures 12: Bathroom layouts/dimensions



* Where serving older or vulnerable people, Low Surface Temperature radiators are necessary

From Technical Handbook Fig 3.3.1



* 900mm where measured to a wall # 700mm below basin

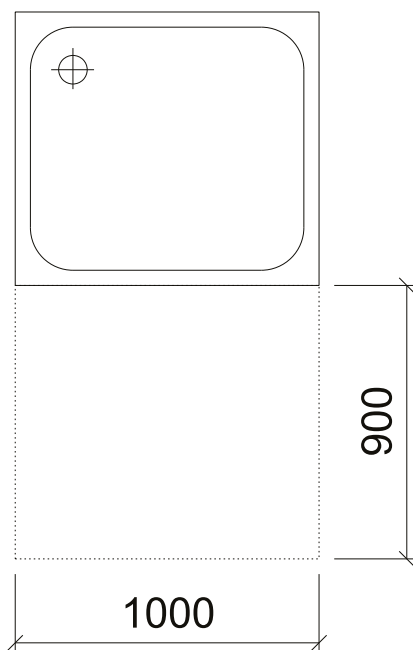
13.9 Accessible toilets and future shower provisions

All dwellings should provide wheelchair accessible entrance-level WC's, complete with drainage provision to enable a shower to be fitted in the future.

Accessible sanitary accommodation should incorporate the following:

- A maneuvering space that will allow a person to enter and close the door behind them. This should be at least 1100mm long x 800mm wide, oriented in the direction of entry, and clear of any door swing or other obstruction.
- Provide the appropriate activity space for each sanitary facility as per the Building Standards (Technical Handbook 2017: Domestic). These may overlap with each other and with the manoeuvring space noted above. A door may open over an activity space.
- A hand rinse basin can be installed within an accessible toilet / shower area only if there is a full-size wash hand basin elsewhere within the dwelling.
- An accessible shower room should be of a size that will accommodate either a level access floor shower with a drained area of not less than 1.0m x 1.0m (or equivalent) or a 900mm x 900mm shower tray (or equivalent). The drained area of a level-access floor shower may overlap with activity or manoeuvring spaces where access to other sanitary facilities is not across the drained area.
- Space for future shower can be in an enclosed space of a size that, alone or by incorporation within the accessible toilet, will permit formation of an accessible shower room with a minimum 800mm x 800mm activity space provided in front of the shower entrance.
- The future-shower provision space can offer useful storage space, however the design must demonstrate that sufficient storage can be provided if this space is adapted.

Figure 13: Shower Tray and activity space



13.10 En-suite toilets

If a dwelling is designed with an en-suite then the space provided is in addition to the minimum space standard set in Section 4.

En-suite accommodation should incorporate the following:

- A maneuvering space that will allow a person to enter and close the door behind them. This should be at least 1100mm long x 800mm wide, oriented in the direction of entry, and clear of any door swing or other obstruction.
- An activity space of 800mm long x 800mm wide must be provided in front of the shower tray.
- A hand rinse basin can be installed within an en-suite only if there is a full size wash hand basin elsewhere within the dwelling.
- A bathroom of 2100mm between walls must be provided elsewhere within the dwelling.

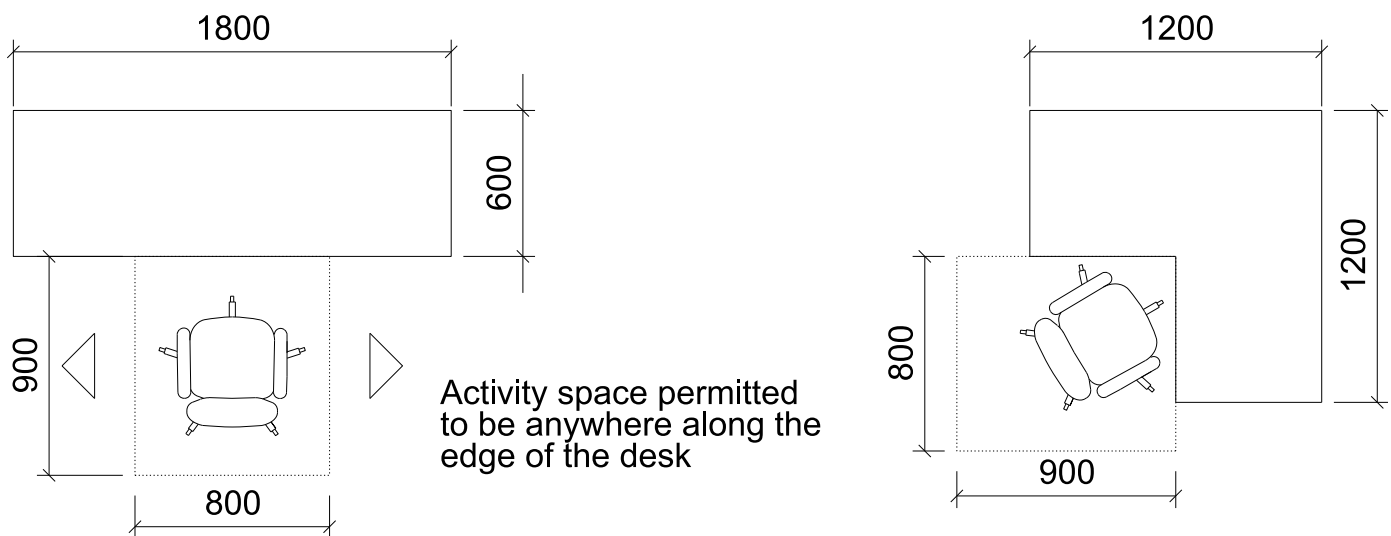
13.11 Study and Work

Flexible working patterns, wider access to home computing and developments in internet technology are making it possible for more people to work from home. Occupants of all ages will also require space in the home to study.

Dwelling plans should demonstrate that all homes are provided with adequate space and services to facilitate working from home. This dedicated space must comply with Building Standards (Technical Handbook 2017: Domestic) Section 7, Sustainability, Silver Standard Aspect 6.

If dwellings are over 150m² (net floor area), 2 compliant workstations must be designed within the layout of the dwelling.

Figure 14: Silver Standard Aspect 6 Work Space



Option 1

Option 2

13.12 Windows

Opening and closing of windows should be as simple an operation as possible and should not involve people having to stand on chairs, or other fittings or furniture, to reach controls. There should be access in front of all windows to ensure that they can be operated easily and from floor level.

- Ensure independent control of opening windows, passive and mechanical ventilation to requirements of Building Regulations and to reasonable level of comfort. Ensure balance of daylight, views out, privacy and security.
- Ensure the minimum access path and an unobstructed area is provided in front of all windows.
- Ensure that occupants can approach the window to operate controls for opening and ventilation.
- Ensure that wheelchair users can approach the window to operate controls for opening and ventilation.

13.13 Future proofing internally (power and communication)

The use of technology within the home will increase in the future and allowances should be made, especially for wheelchair adaptable units.

Grant applicants should be able to demonstrate that any housing proposal has considered, and/ or taken account of, current and future smart-home technology requirements or installation needs.

In most circumstances, this is likely to be the provision for:

- Future wiring zones
- Door entry systems and automatic controls
- Alarm call systems and safety devices
- Flexibility for mounting heights for controls

This will help people with particular needs to live more independently and in general terms is likely to future-proof dwellings to be adaptable to people's changing needs over time.

13.14 Future Proofing Internet and Broadband Access

In line with action 14 of the **Fairer Scotland Action Plan** and Scottish Government Guidance (MHDGN 2017/01), homes delivered under the Affordable Housing Supply Programme should include ducting to help future-proof access to internet and broadband services.

Grant applicants should consider fibre broadband as being the equivalent of a utility service and should be able to demonstrate that any housing proposal has considered and/ or taken account of current and future digital services requirements or installation needs. In most circumstances, this is likely to be the provision for future broadband cable connection(s) by ensuring that adequate internal ducting exists for fibre or network cable runs from a logical exterior connection point. Grant applicants are advised that if ducting within new homes can be shared with other services, the cost is likely to be marginal or neutral as fibre optic cabling can be inserted into existing ducting as required. If additional ducting is needed however, the cost will vary according to the

size of the dwelling and the configuration of wireless and fixed data points – an indicative cost of £200 per home would be a good estimate, which should be accommodated from within the existing grant subsidy framework.

Consideration should be given to the provision of:

- An accessible location and power supply for central digital devices such as a wireless hub or router and;
- Additional, internal spurs in living and bedroom areas, and;
- The potential impact which construction methods, materials and/ or design may have on the ability of wireless signals to penetrate within the home.

13.15 Smoke and Fire Detection

Following a consultation on fire and smoke alarms, the Scottish Government published changes to the fire and smoke alarm regulation to improve home safety on 18th March 2018. This has been extended to all homes.

All homes should have the following alarm requirements:

- At least one smoke alarm installed in the room most frequently used for general daytime living purposes,
- At least one smoke alarm in every circulation space on each storey, such as hallways and landings,
- At least one heat alarm installed in every kitchen,
- All alarms should be ceiling mounted, and
- All alarms should be interlinked.
- Carbon monoxide detectors must be fitted where there is a carbon-fuelled appliance or a flue.

Interlinked smoke alarms

The requirements mean that all alarms must be interlinked. The tenant may not hear an alarm closest to the fire but, by having an interlinked system, they will be alerted immediately.

Alarm types: Mains-wired

You can install specified types of sealed long-life battery alarms however these must also be hard wired.

Installing mains-wired alarms in flats and in houses over three storeys also requires a building warrant from your local authority.

Tenements/blocks of flats

In a shared property, such as a tenement or a block of flats, there is no requirement for different properties to fit alarms linked to each other.

13.16 Summary of General Needs

The requirements detailed within this section 13 are summarised in the General Needs Design Criteria (**Table 12**).

General Needs Design Criteria

The table below has been adapted from the Housing for Varying Needs standards for housing design for General Needs. The majority of design criteria are considered to be a 'basic' requirement, but a few additional design criteria are given as 'desirable', which are of benefit to many people and should be included if possible. The levels of provision are asterisked in the right hand columns headed 'Basic' and 'Desirable'.

Table 12: General Needs Design Criteria Summary

REQUIREMENTS FOR DWELLINGS FOR GENERAL NEEDS				
Feature	Design Criteria	Reference (HFVN Part 1 or Technical Handbook)	Basic	Desirable
Access to Individual Dwellings	Step-free access from road pavement and parking space to dwelling entrance	7.3	*	
	Paths within curtilage of sufficient width	7.3	*	
	Gates of sufficient width	7.4	*	
	Step-free entrance	7.5	*	
	Steps, ramps, handrails of suitable design	Technical Handbook	*	
	Platform of suitable size at the door	7.5	*	
	Doors positioned with a return of at least 300mm beyond the door opening edge	7.5	*	
	Door bell/ entry system at suitable height and position	7.11	*	
	External light at entrance	7.11	*	
	Canopy or porch at entrance	Technical Handbook		*
	In-curtilage parking of suitable size	7.13	*	

REQUIREMENTS FOR DWELLINGS FOR GENERAL NEEDS

Feature	Design Criteria	Reference (HFVN Part 1 or Technical Handbook)	Basic	Desirable
Access to Blocks or Flats	Step-free access from road pavement and parking space to a communal entrance	7.3	*	
	Paths of sufficient width	Technical Handbook	*	
	Step-free entrance leading to flats on ground floor and/or with lift access	7.6	*	
	Step-free entrance to all blocks	7.6	*	
	Steps, ramps, handrails of suitable design	Technical Handbook	*	
	Platform of suitable size at the door	7.6	*	
	Doors positioned with a return of at least 300mm beyond the door opening edge	7.6	*	
	Door bell/ entry system at suitable height and position	7.11	*	
	External light at entrance	7.11	*	
	Canopy or porch at entrance	Technical Handbook	*	
Communal Access Areas, Stairs and Lifts	All doors with clear opening width at least 800mm	8.2	*	
	Level threshold	Technical Handbook	*	
	Door ironmongery of suitable design	8.3	*	
	Area inside the door and circulation areas allow for people with impaired mobility	8.4	*	
	Access stairs suited to use by people with impaired mobility or sight	8.5	*	
	Any lift is fully usable by disabled people	8.7	*	
	Communal areas with features to help those with visual impairment	8.8	*	
	Signage suited to people with visual impairment	8.8	*	

REQUIREMENTS FOR DWELLINGS FOR GENERAL NEEDS

Feature	Design Criteria	Reference (HFVN Part 1 or Technical Handbook)	Basic	Desirable
Entrance Doors to Individual Houses or Flats	All entrance doors with clear opening width of at least 800mm	9.2/9.8	*	
	Level thresholds where access is step free	Technical Handbook	*	
	Up-stand at other thresholds no more than 25mm	9.3	*	
	Door ironmongery of suitable design	9.4	*	
	Area inside entrance door of adequate size	9.6	*	
	Doors positioned with a return of at least 300mm beyond the door opening edge	9.6	*	
	Any lobby is of sufficient size	9.7	*	
	All main entrance doors must open into a circulation area and not a room	9.6	*	
Circulation Spaces and Internal Doors	Passages should be a minimum of 900mm wide and preferably wider	10.2	*	
	Stairs allow the addition of stair lift and have no tapered treads	10.3	*	
	Doors positioned with a return of at least 300mm beyond the door opening edge	10.4	*	
	Doors with clear opening width of at least 750mm	10.5	*	
	Pass doors without threshold plate	10.5	*	
	Door ironmongery of suitable design	10.7	*	

REQUIREMENTS FOR DWELLINGS FOR GENERAL NEEDS

Feature	Design Criteria	Reference (HFVN Part 1 or Technical Handbook)	Basic	Desirable
Living and Sleeping Areas	Living room and dining space of a size that allows for notional furniture with the required activity spaces and circulation "path" must be a minimum of 600mm	11.2 & 11.3	*	
	Bedroom(s) of a size that allows for notional furniture and the required activity spaces and circulation "path" must be a minimum of 600mm	11.4	*	
	Double bedrooms allow for double bed and have the flexibility to accommodate twin beds so that the occupant can have whichever best suits their needs	11.4	*	
	At least one bed space can be accessed in a wheelchair	11.4	*	
Storage	Provision is made for adequate and accessible general storage	12.1 & 12.2	*	
	In family houses there is storage space for a pram	12.1	*	
Kitchen	All layouts should include an unobstructed manoeuvring square 1500mm x 1500mm or an ellipse of 1400mm x 1800mm.	Technical Handbook 3.11.3	*	
	Layout with continuous sequence of worktop-sink- worktop-cooker/hob-worktop	13.2	*	
	Minimum 300mm long worktop provided both sides of the cooker	Technical Handbook	*	
	Clear space of at least 1200mm in front of all fittings and appliances	13.2	*	
	Adequate space for appliances	13.2	*	
	Adequate and convenient storage	13.3	*	

REQUIREMENTS FOR DWELLINGS FOR GENERAL NEEDS

Feature	Design Criteria	Reference (HFVN Part 1 or Technical Handbook)	Basic	Desirable
Bathroom	Size and layouts must be able to accommodate a bath with a clear space of 400mm/400mm shelf or a shower so that the occupant can have whichever best suits their needs if this is needed and access in a wheelchair	14.2 & 14.5	*	
	A minimum of 2100mm between walls to allow for flexibility of positioning the bath	14.5	*	
	Allowance for fixing grab and support rails to walls	14.2	*	
	Fittings and activity spaces of suitable size	14.3 To 14.6	*	
	Any bath incorporates a shower or allows for future provision	14.5	*	
	WC should be of 450mm from the centre line to the wall	14.3	*	
	The centre line of the wash hand basin should be at least 500mm from any adjacent wall	14.4	*	
	Allowance for fixing grab and support rails to walls - robust wall construction	Technical Handbook 3.12	*	
	The position of the WC and WHB should allow access to window controls and the bath or shower should not be positioned below the window	16.3	*	
Additional WC	WC of adequate size at ground floor/entrance level where bathroom is upstairs	14.8	*	
	Drawing must indicate an area of 1000mm x 1000mm for the installation of a future level access shower at ground floor/entrance level (with gulley)	Technical Handbook	*	

Additional WC	Provision of additional WC in flats/ bungalows over 5 person			*
	Transfer space to front or side of WC	Technical Handbook 3.12.3	*	
Windows	Controls easily and safely accessed, reached, and operated	16.3	*	

REQUIREMENTS FOR DWELLINGS FOR GENERAL NEEDS

Feature	Design Criteria	Reference (HFVN Part 1 or Technical Handbook)	Basic	Desirable
Heating and Water Services	Heating, radiators and ventilation controls easily accessed, reached and operated	11.1, 17.1 & 17.2	*	
	Crosshead or lever type taps	17.5	*	
Power and Communications	Allowance for additional future wiring	18.1	*	
	Sockets, switches and controls of suitable design and at suitable location and height	18.2	*	

14.0 Wheelchair Adaptable Standard

14.1 Wheelchair Adaptable

The Building Standards (Technical Handbook 2017: Domestic) sets out the minimum requirements for accessibility that all new homes are statutorily obliged to meet. However, it makes only a basic provision for inclusive design, with its focus on ensuring disabled people can visit new homes and does not enable full independent living for all disabled people.

The Glasgow Standard is suitable for anyone designing new homes for wheelchair adaptable dwellings and for wheelchair users. This standard will also provide helpful guidance when considering modifications, adaptations and extensions to an existing home to suit changing needs. The standard aims to outline the minimum design considerations for wheelchair adaptable and wheelchair users, however people have a varying range of physical impairments and of different needs. Wheelchair users may live alone or with others and some dwellings may have more than one wheelchair user.

This standard will provide designers with the technical information necessary to ensure that 10% of new homes are readily adaptable for wheelchair users and that other disabled people can comfortably access and use all parts of the home.

Housing and Regeneration Services are committed to providing 10% of homes (both flats and houses) to wheelchair or readily adaptable standard for each development of 20 units and over, rounded down.

In order to meet Glasgow City Council's minimum Affordable Housing Supply Programme grant requirements, wheelchair adaptable units should comply with the following:

- Where a tenant has been identified, the dwelling should be designed to Housing for Varying Needs Part 1 wheelchair standard, and take into account the tenant's needs and occupational therapist's requirements; whilst being designed flexibly to accommodate different wheelchair users with other requirements in the future. A copy of the occupational therapist's report and amended layouts must be passed to Housing and Regeneration Services for assessment and sign-off.
- If no specific tenant has been identified, these units should be designed to a readily adaptable standard (please refer to sections 10, 11 & 12 for further details).
- Space for wheelchair turning is required in all apartments (1500mm diameter or an ellipse of 1400mm by 1800mm).
- The level of subsidy awarded is linked to the number of bed spaces per dwelling therefore a 4 person flat receives more subsidy than that for 3 persons. With wheelchair adaptable dwellings, a flat which is adequately sized for 4 person general needs will be deemed suitable for a 3 person household where there is a wheelchair user. To ensure that Associations are not penalised for meeting the wheelchair adaptable quota, such units will be assessed for grant on the basis of their general needs bed space numbers.
- Layouts should be provided to demonstrate compliance in both configurations, e.g. 3P Wheelchair adaptable and 4P general needs; both of which would be required to comply with minimum space standards.

- Readily adaptable means that the build form of the dwelling should be flexible enough to accommodate a range of needs and circumstances for the tenant if they need it in the future. This does not mean that the property has to be built to fully fitted wheelchair standard, rather that the property is designed in a way that it can be easily adapted at a later date at minimum costs; should the needs of the tenant, or future tenant, require it.

14.1.1 Definition of accessible / adaptable

Accessible and adaptable are terms used to refer to housing or features in housing. Each term has a different meaning and purpose. These differences are subtle but important. They are frequently used, commonly interchanged and sometimes misunderstood.

14.1.2 Accessible Design

Accessible generally means that the dwelling meets the minimum mandatory requirements set out in the Technical Handbook. Dwellings that are accessible are intended to be usable in such a way that the level of amenity ensures that the welfare and convenience of all occupants of, and visitors to the building.

14.1.3 Adaptable Design

Adaptable housing is an approach to residential design and construction in which homes can be modified at minimal cost to meet occupants' changing needs over time. By building flexibility into homes from the start, adaptable housing:

- helps people stay in their own homes through illness, injury and aging
- provides more accessibility for people with disabilities
- reduces the cost of future renovations to accommodate people with disabilities

Adaptable housing should include basic features such as level entrances, door positions and wider openings, adequate storage, circulation areas, wider halls and corridors, transfer space, bedrooms, living areas, bathrooms, kitchens, installation of a stair lift, through floor lift and parking provisions.

14.1.4 Key Features / Internal Planning of Wheelchair Adaptable Units

Designing wheelchair adaptable housing is not simply a matter of drawing turning circles on plans in the right place. The designers need to ensure that the key points below are considered and incorporated into the design to ensure that all homes are flexible and adaptable to suit people's changing needs over time. The key points to be considered are as follows:

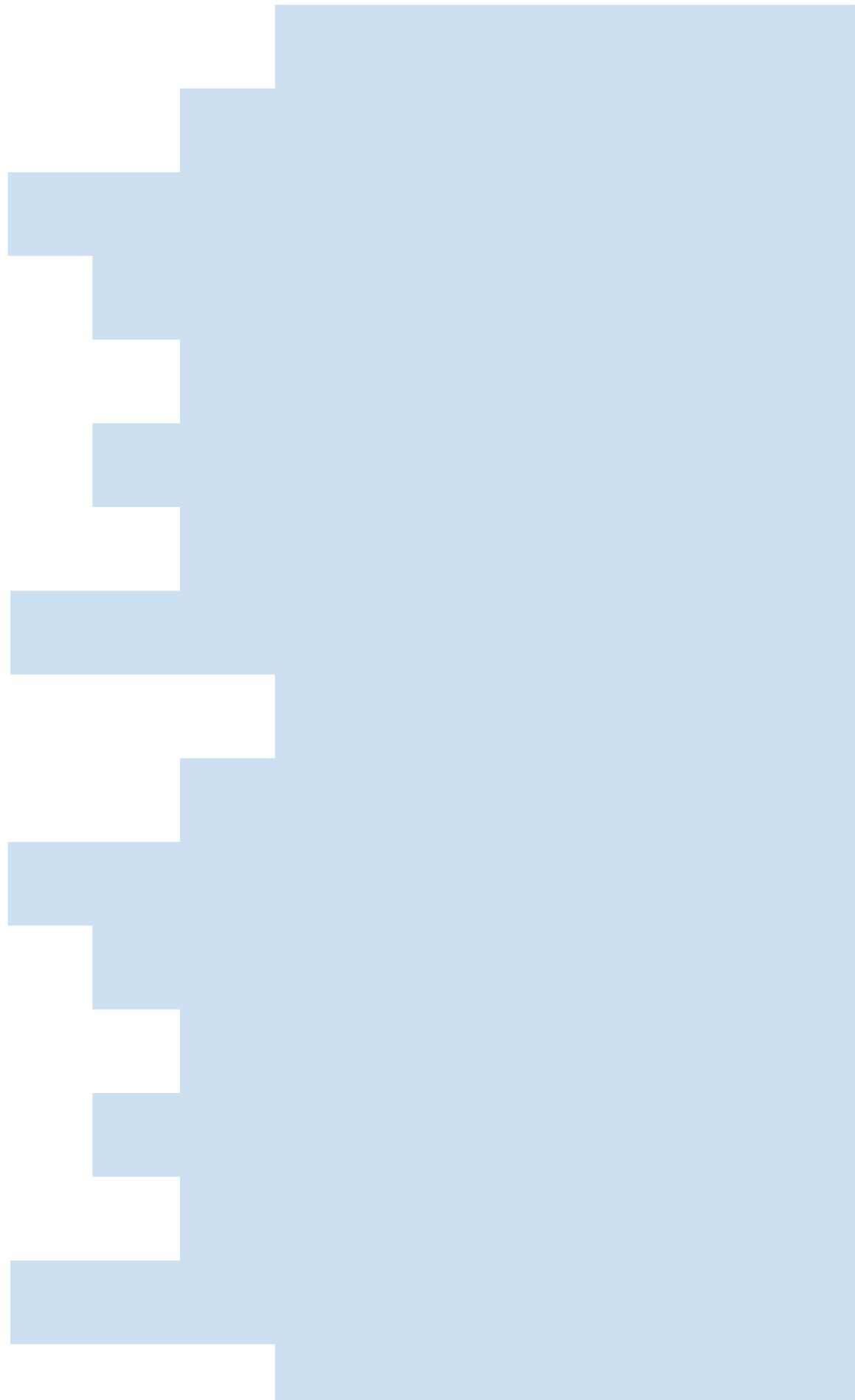
1. Parking
2. Approaching the home
3. Entering and leaving the dwelling (communal and individual entrances)
4. Moving around inside (circulation, pass doors and activity spaces)
5. Storing equipment and General Storage
6. Moving between levels within the building
7. Using the living spaces
8. Using the kitchen
9. Using the bathroom
10. Using the bedrooms
11. Windows and internal doors
12. Technology, power and communication
13. External facilities

14.1.5 Internal Planning of wheelchair adaptable units

Designers and RSLs should also take account of the following layout considerations:

- Efficient circulation will enable a wheelchair user to turn 360° at the front door, and approach and turn through all doorways, hallways and around corners and the approach to built-in cupboards.
- Where a wheelchair adaptable unit is on more than one level, each storey layout must indicate where the future space for a through floor lift has been positioned; such that it will link circulation areas at each level on the respective storey layouts, provide the necessary trimming within the floor structure and demonstrate that all furniture can still be accommodated.
- Provision for a wheelchair-accessible WC on the entrance level storey including the future shower provision.
- Dedicated space within the dwelling will enable a wheelchair user to manoeuvre and transfer to a second wheelchair, leaving the other wheelchair on charge without interfering with circulation space.
- Dedicated storage area for specialist equipment.
- Indicate that all doors open beyond 90° where practicable to achieve effective clear width of opening without excessive door width.
- Demonstrate the relationship or differentiation of living and dining areas, kitchen and circulation, taking account of household type, dwelling size and likely living patterns, ensuring ease of wheelchair movement and providing some flexibility of use.
- Ensure that living areas can be satisfactorily furnished (notional furniture) with their associated activity spaces, and accommodate wheelchair movement, including access to windows doors and radiators.
- Show how wheelchair users can conveniently use kitchens without major adaptation; minimise the need for excessive movement between kitchen functions, i.e. L- or U-shaped (rather than linear) layouts and with convenient access to dining area.
- Indicate a direct connection between a main bedroom and bathroom.
- A furniture layout should show how a wheelchair user can enter and leave bedrooms easily, access three sides of a double bed or three sides of a single bed, turn and manoeuvre to approach all furniture and operate window and radiator controls.
- Bathroom layouts should show how a level-access shower area of at least 1000mm x 1000mm, without an approach ramp, could be accommodated. This could overlap a 1700mm bath area to allow either to be installed; allow space for side, oblique and front transfer to the WC, a 1500mm manoeuvring space clear of all fittings, 1100mm in front of the WC clear of all obstructions.
- Adaptable dwellings of 4P or greater should show a 2nd wheelchair accessible WC (which could be in an en-suite bathroom); possibly with provision for a shower in the side transfer space. The 2nd WC should have the side transfer space on the other side to the 1st WC.
- Indicate storage space throughout and how this will be accessed.
- Ensure unhindered access to operate windows and radiators; and approach secondary doors where practicable.
- Ensure level access through to balconies, patios and gardens.

- Each habitable room should provide a clear sightline through a window or glazed door for a seated person.
- Plan for the life of the building not just initial occupants, and aim for a degree of built-in adaptability.



15.0 External Design Requirements

Wheelchair Adaptable

15.1 Car Parking Provisions and Accessible Routes

15.1.1 Parking Provisions for wheelchair adaptable units (Individual dwellings)

- Where a parking space is provided for a wheelchair adaptable unit, it must be provided with a car space within 15m of the entrance.
- The future provision of a covered carport for a wheelchair adaptable dwelling should be designed to a minimum size of 3600mm xx 5700mm for future installation.

15.1.2 Parking Provisions for wheelchair adaptable units (Communal Parking)

- All developments of 20 units or more must provide 10% wheelchair adaptable units. There must be at least 1 car parking space for each wheelchair adaptable unit.
- Where a parking space is provided for a wheelchair adaptable unit, it must be provided with a car space within 15m of the entrance.
- Spaces intended for use by a wheelchair user should have a minimum width of 3400mm and preferably 3600mm.
- A length of 4800mm is the minimum requirement for the wheelchair space.

15.1.3 Accessible routes to individual dwellings and blocks of flats

The design and layout for accessible routes to an entrance of a building should comply with the following:

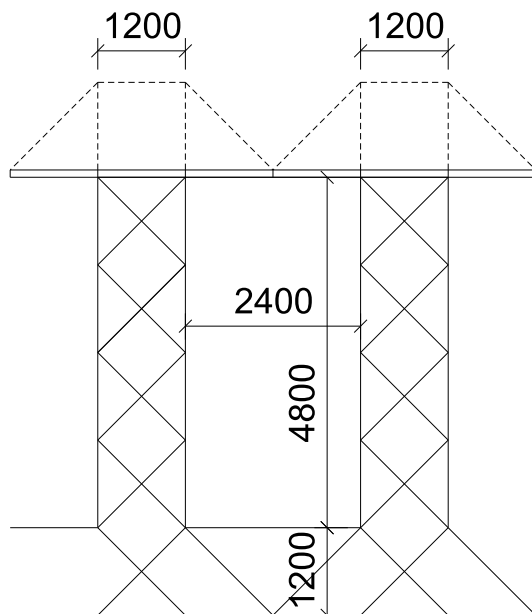
- Building Standards (Technical Handbook 2017: Domestic);
- City Development Plan and supplementary guidance;
- Design Guide for New Residential Areas.
- Housing for Varying Needs (HfVN)

15.1.4 Access paths to individual dwellings and blocks of flats

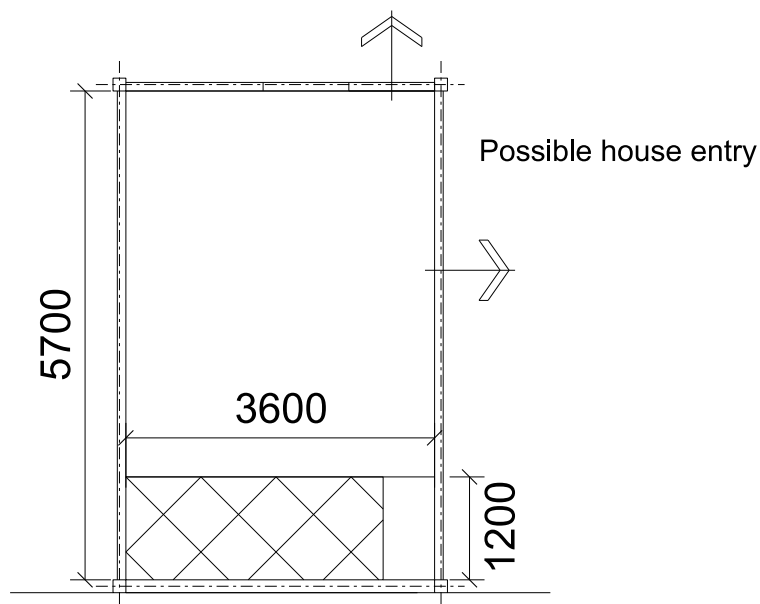
- Access paths from the road, pavement and parking space to the entrance of all dwellings should be step free.
- The width of accessible routes to all dwellings must comply with the Building Standards (Technical Handbook 2017: Domestic) – (Safety).
- Housing for Varying Needs (HfVN)

Glasgow Standard

Parking and Access Zones layout designs



Communal accessible parking
Perpendicular to carriageway
Domestic Technical Handbook



In-curtilage accessible driveway
with canopy
sized in accordance with
Housing for Varying Needs
Perpendicular to carriageway

15.2 Entrances for wheelchair adaptable units

15.2.1 Principal Private Entrances (individual dwellings)

- Comply with the general requirements as per Section 11 plus;
- The level platform at the door should have dimensions of 1500mm x 1500mm.
- The clear space beyond the opening edge of the door should be 300mm or 550mm if the door opens outwards.
- External light.
- Canopy or porch which must extend a minimum of 1200mm from the face of the door.

15.2.2 Communal Entrances (flatted developments)

To enable a wheelchair user to enter the principal communal entrance they should incorporate the following basic requirements:

- Comply with the general requirements as per Section 11 plus;
- The level platform at the door should have dimensions of 1500mm x 1500mm or 1500 x 1800mm where the door opens outwards.
- The clear space beyond the opening edge of the door should be 550mm.
- External light.
- Canopy or porch which must extend a minimum of 1200mm from the face of the door.



16.0 Internal Access Design Requirements

Wheelchair Adaptable

16.1 Doors and Circulation in wheelchair adaptable dwellings

16.1.1 Individual Dwellings

The width of the doorways and hallways should conform to the specifications below:

- All Entrance doors must have a clear opening width that allows a wheelchair to pass through. They must therefore have a minimum clear width of at least 840mm. Designers should ensure that setting out takes account of the appropriate thickness of fire-rated door leaves.
- All entrance doors must open to a circulation area and not a room.
- Entrance door to individual units positioned with a return of at least 300mm beyond the door leading edge: 550mm is preferable.
- The circulation space immediately inside the door must allow for a person in a wheelchair adaptable unit to turn through 180° from any position. It must therefore have a minimum width of 1500mm extending at least 1500mm back from the face of the door.
- There should be storage space for an outdoor wheelchair and space alongside this for transferring to and from an indoor chair. This will require an area 1100 x 1700mm, with adjacent circulation space.
- Passages must be designed to allow a wheelchair user to have access to all parts of the dwelling. Passages should generally be at least 1200mm wide, but a width of 1000mm is adequate for lengths of up to 900mm, provided there is no door opening at a right angle to the direction of the passage.
- All Pass doors to individual units must have a clear opening width of at least 800mm with a return of at least 300mm beyond the door leading edge.

Circulation through habitable rooms should ensure:

- In a wheelchair adaptable unit the living room and dining space be of a size that allows for notional furniture and 800mm wide path.
- In a wheelchair adaptable unit the bedroom(s) be of a size that allows for notional furniture and 800mm wide path.
- That - while in wheelchair adaptable dwellings the storage and transfer space may be used for another purpose such as general storage provided that the space is additional to the minimum requirements for storage and provided that the dwelling is not used by a wheelchair user - this is reversible, should a wheelchair user be allocated to the property.

16.1.2 Flats or Communal Access Areas

The width of the doorways and hallways should conform to the specifications below:

- All Entrance doors must have a clear opening width that allows a wheelchair to pass through. They must therefore have a minimum clear width of at least 840mm.
- Entrance door positioned with space of at least 550mm beyond the door leading edge for communal areas.
- Circulation routes must allow for full wheelchair use and be at least 1200mm wide and widened locally to accommodate changes in direction, junctions and at the landing of any lift, to be clear of any obstructions and provided with a 1500mm turning circle.
- The circulation area immediately inside the main entrance door must have a minimum dimensions of 1500 x 1800mm.
- Circulation routes must be free of steps and have a width of at least 1200mm clear of all obstructions.
- Routes to any facilities, (e.g. refuse store, rear door) should be step free and should have a minimum width of 1200mm with no obstructions.
- To allow maneuvering space for wheelchair user's routes should be widened locally, at changes of direction, junctions and at the landing of any lift, to accommodate, clear of any obstructions, a 1500mm turning circle.
- Obstructions - other than on a wall opposite a doorway, or in the areas noted above, an obstruction such as a radiator may project up to 100mm, reducing corridor width to not less than 1.1m, over a maximum length of 900mm.
- Doors / openings within the common areas of a domestic building should comply with the Building Standards (Technical Handbook 2017: Domestic) and table 6 detailed below.
- Access stairs must comply with the Building Standards (Technical Handbook 2017: Domestic).
- Handrails for communal access areas must comply with the Building Standards (Technical Handbook 2017: Domestic).
- All individual flatted doors must have a minimum clear opening of 840mm.
- Domestic buildings (flatted specialist developments) containing accommodation solely for fully compliant wheelchair users, all circulation routes must allow for full wheelchair use and be at least 1800mm to allow two wheelchairs to pass.
- Lift access allows flats at any floor level to have a step free entrance and where lifts are provided they should be fully usable by disabled people. The lift must comply with the Building Standards (Technical Handbook 2017: Domestic); however in such buildings it is preferable that the internal dimensions of the lift are 1400 x 1600mm.

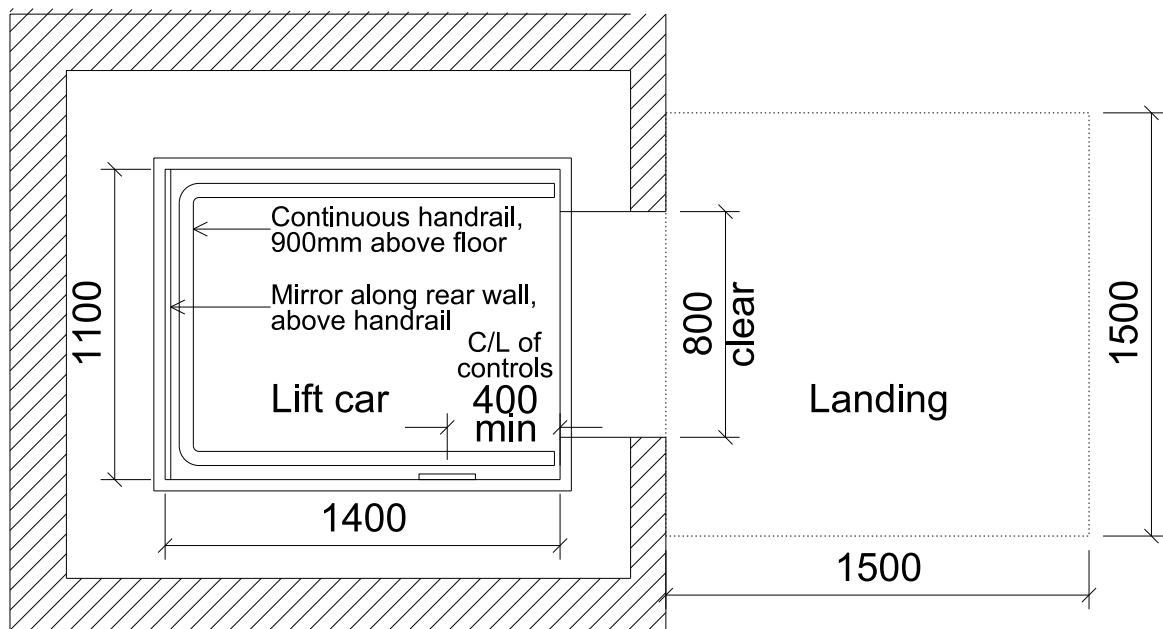
16.1.3 Vertical circulation in common areas of domestic buildings (Lifts and stairs)

Buildings that are designed for disabled adaptable units and are of a height that must include a lift within the design should consider the following:

- Comply with the general requirements as per Section 12 plus:
- In such buildings it is preferable that the internal dimensions of the lift are 1400mm x 1600mm to allow for numbers of people with walking aids or in wheelchairs.

Staircases, handrails and ramps must comply with the Building Standards Technical Handbook 2017 Section Safety.

Figure 16: Lift for Wheelchair adaptable



Lift - Older people and wheelchair accessible

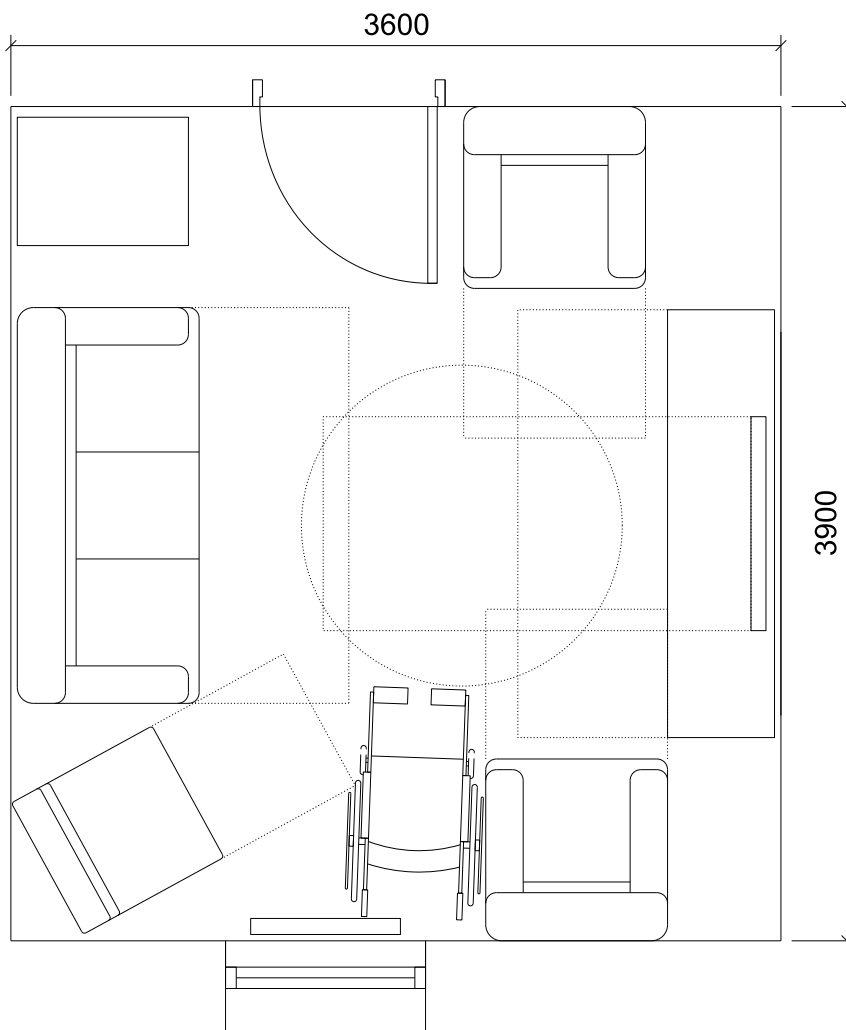
17.0 Internal Layout Design Requirements

17.1 Living areas for Wheelchair adaptable units

The layout and the living space is crucial to aid the independence of the wheelchair user when about their home. This space must accommodate the usual notional furniture with space for a wheelchair user of the household to circulate and transfer from their wheelchair to sitting. The space must provide wheelchair users access to furniture, circulation and transfer to seating; and to approach and operate windows, radiators, equipment and controls.

- Comply with the general requirements as per Section 13 plus:
- All layouts should include an unobstructed maneuvering circular space of at least 1500mm diameter or an ellipse of 1400mm by 1800mm.
- The clear path must be a minimum of 800mm wide for necessary circulation between furniture and access to windows and radiators. The path can overlap activity spaces.

Figure 17: Living Room Layouts



Seating for 6 people
in wheelchair dwelling
(TV above bookcase)

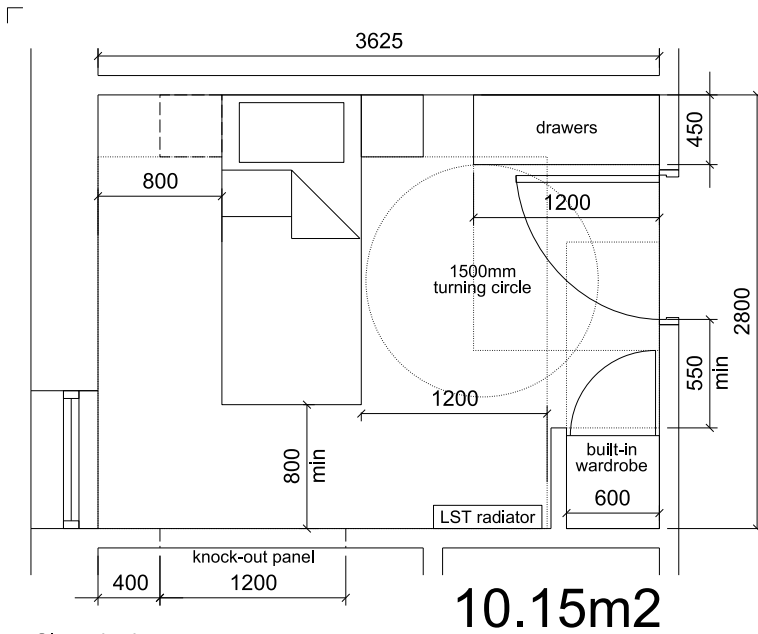
17.2 Bedrooms for Wheelchair adaptable units

The layout and space within the bedroom must accommodate the usual notional furniture with space for a wheelchair-using member of the household to circulate and transfer from their wheelchair to beds. The space must provide wheelchair users access to furniture, and the ability to circulate around it; and to approach and operate windows, radiators, equipment and controls.

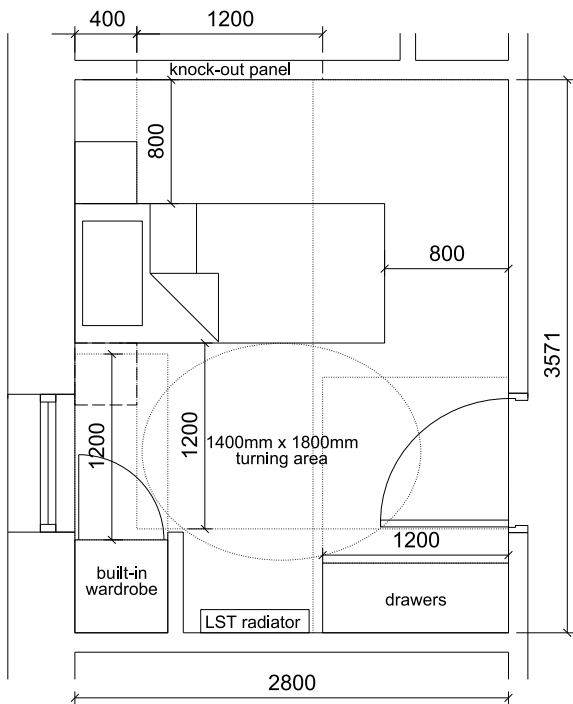
- Comply with the general requirements as per Section 13 plus:
- All layouts should include an unobstructed maneuvering circular space of at least 1500mm diameter or an ellipse of 1400mm by 1800mm.
- One bedroom should make provision for connection between bedroom and bathroom by means of a knock out panel (minimum width 1200mm).
- The ceiling structure should be suitably robust to facilitate the future installation of a ceiling track hoist to run from the main bedroom into the bathroom.
- Every bedroom should provide a minimum clear access route, 800mm wide from the doorway to the window, between furniture and for access to windows and radiators.
- The wheelchair bedroom should provide a minimum 1200mm wide clear access on one side of the bed, 800mm on the other side and at the foot of the bed.
- Clear access / activity space of 1200mm should be provided in front of all other notional furniture. All other bedrooms must be accessible in a wheelchair and allow access to the bed.
- All bedrooms must have clear access / activity space of 1200mm in front of drawers and wardrobes.
- Beds for wheelchair user should be accessed on three sides.
- All bedrooms should be accessible to a wheelchair user.

Glasgow Standard

Figure 18: Bedroom layout designs

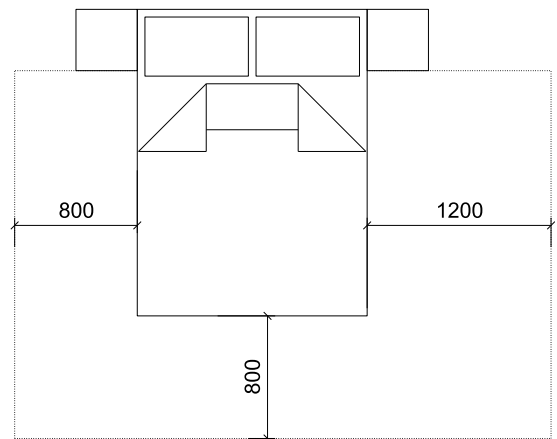


Single bedroom
Wheelchair user
Glasgow Standard 10.08m²

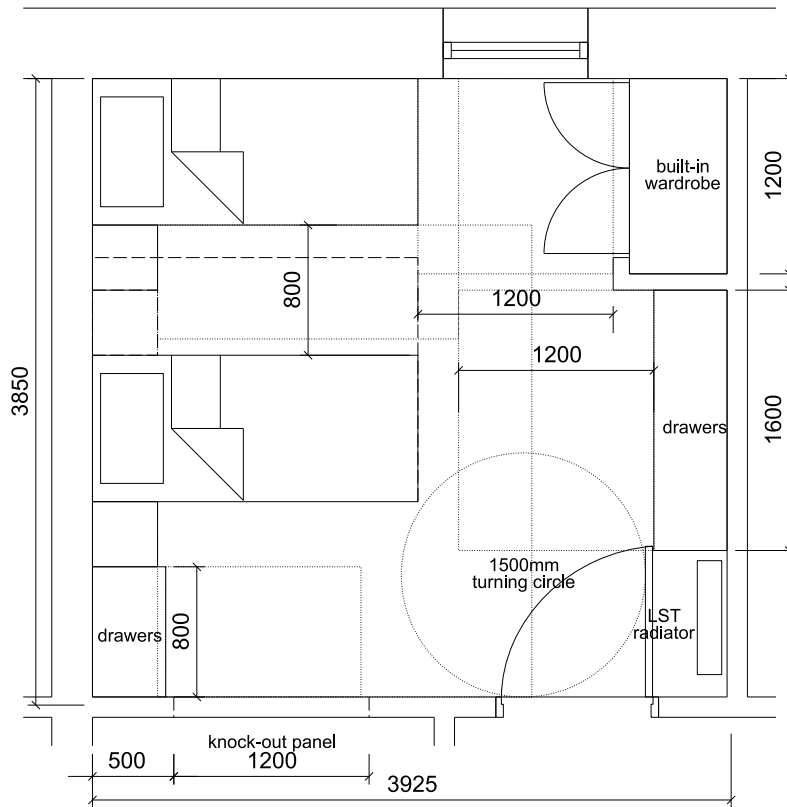


10.00m²

Single bedroom
Wheelchair user
Glasgow Standard 10.00m²
With access from both sides of the bed

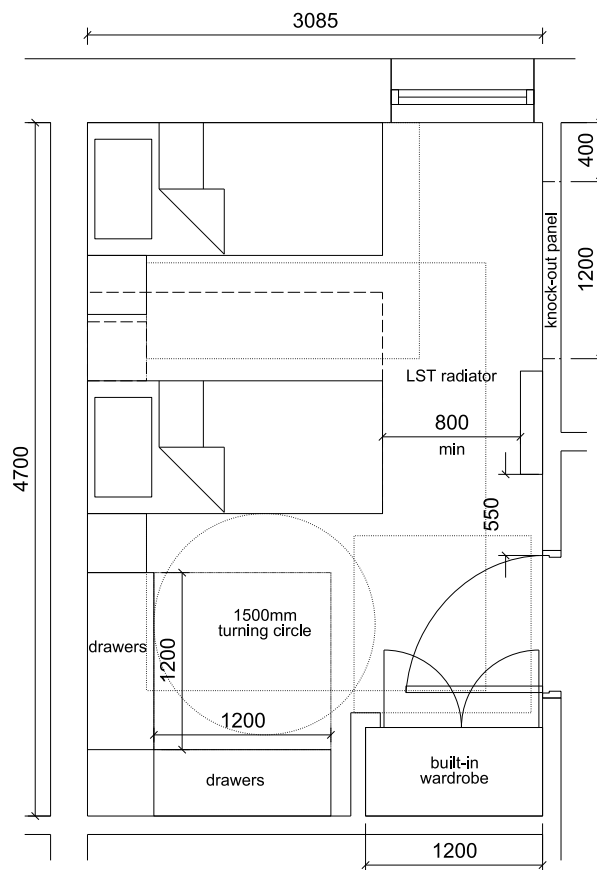


**Double bed
Wheelchair user**



Double bedroom
 Wheelchair user
 Twin beds (or double bed)
 Glasgow Standard 14.82m²

14.82m²



14.5m²

Double bedroom
 Wheelchair user
 Twin beds (or double bed)
 Glasgow Standard 14.5m²

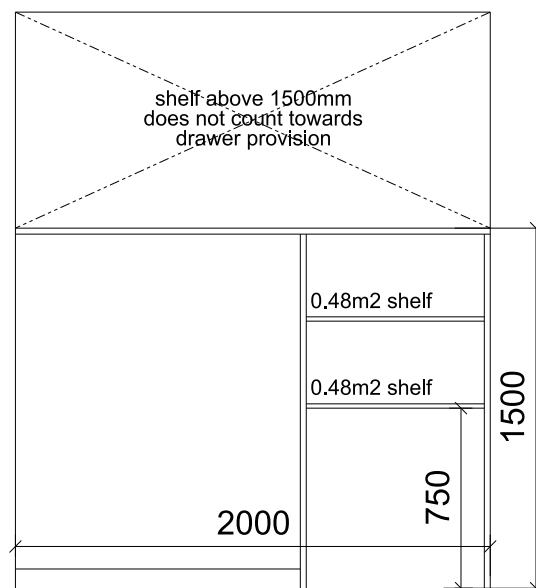
17.3 Accessible built-in wardrobes with shelves (enclosed) in Wheelchair adaptable units

Built-in wardrobes are mandatory in Wheelchair adaptable units, to ensure adequate accessible provision for clothes storage. The incorporation of built-in wardrobes can sometimes affect the flexibility of notional furniture room layouts, particularly when a double bedroom is configured to accommodate two single beds. Where required, built-in wardrobes can therefore include integrated shelving in lieu of some of the requirement for drawer units; but the suitability of such layouts will be at the discretion of Housing and Regeneration Services, on a case-by-case basis.

Accessible built-in wardrobes should:

- Comply with the general requirements as per Section 8 (with the exception of clear access space, which should be greater) plus:
- Be easily accessible with a minimum clear width of 800mm.
- Have a minimum clear depth of 600mm.
- Built-in shelves must be a minimum height of 750mm from the floor level to the underside of the first shelf.
- A hanging rail set at a height of 1400mm – 1500mm from the floor.
- 1200mm clear access area.
- Built-in shelves at a height between 750mm and 1350mm above floor level, to the side of the hanging space are acceptable.

Figure 19: Shelving design



800mm x 600mm

0.48m² shelf x 2no.

= 0.96m² drawer equivalence

**Built-in
Double wardrobe and
single drawer part-provision only
Wheelchair user**

17.4 Storage for Wheelchair Adaptable

Wheelchair adaptable dwellings should include an increased area of usable storage space, capable of containing wheelchairs and specialist equipment along with general/utility storage items, such as vacuum cleaners, ironing boards etc.

Storage within a wheelchair adaptable dwelling must comply with the minimum aggregate general storage capacity in **table 11** plus the additional requirements as detailed below.

- Comply with the general requirements as per Section 13 (with the exception of clear access space).
- In addition to the usual storage requirements, provision must be made for the storage of a wheelchair and other specialist equipment.
- The minimum size of a wheelchair cupboard is 1200mm x 1200mm, with double doors.
- There should be provision to store the external-use wheelchair in, or adjacent to, the hall or lobby; plus further storage space in, or adjacent to, the bedroom for the internal-use wheelchair.
- Storage should be easily accessible and of suitable depth to enable someone in a wheelchair or with impaired mobility to use it; and/or include a walk-in sized cupboard, to take larger items.
- Cupboards should have full width doors (min 840mm clear opening)
- There must be a clear space of 1200mm in front of the doors to allow wheelchair access and maneuvering.
- The floor to the storage area must be continuous with the main floor without a threshold plate.
- Cupboards which include water cylinders or tanks, meters, or ventilation equipment, will be required to achieve the minimum space requirements in full, i.e. without causing any obstructions or reduction in the net available space.
- Wardrobes used for the provision of additional storage will be considered suitable only after the full provision of adequate wardrobe and general storage has been demonstrated.

17.5 Kitchen for Wheelchair adaptable units

Second to the bathroom, the design of the kitchen has the greatest impact on whether a wheelchair user can live independently at home. Individual requirements in the kitchen vary greatly but the key requirement for an adaptable kitchen is that it is large enough, and provides sufficient space between the units, to enable a wheelchair user to manoeuvre freely and safely.

The layout of the kitchen should ensure that, from a wheelchair, a person can easily approach and use: the sink; worktops; equipment; all appliances, switches and controls; and all storage, essential to kitchen operations.

- Comply with the general requirements as per Section 13 (with the exception of clear access space) plus:
- In all situations the kitchen must be of such dimensions that, with the notional furniture in place, a clear space of 1500mm is maintained in front of fittings and appliances, to allow a wheelchair user adequate space to manoeuvre.

- The controls for windows must not be obstructed by kitchen units or appliances, unless there is separate provision for the remote/automatic control of ventilation.
- Where a tenant has been identified, the dwelling should be designed to Housing for Varying Needs Part 1 wheelchair standard, and take into account the tenant's needs and occupational therapist's requirements; whilst being designed flexibly to accommodate different wheelchair users with other requirements in the future. A copy of the occupational therapist's report and amended layouts must be passed to Housing and Regeneration Services for assessment and sign-off.
- If a tenant has not been identified, the kitchen will be fitted for general needs but must be designed to a readily adaptable standard, complying with **Section 13** and the above.
- In such event, kitchen appliances should be positioned in such a manner to minimize future adaptation costs.
- Splayed corners to kitchen worktops are only required if the unit has a designated tenant with particular needs.

17.5.1 Dedicated spaces for appliances

Kitchens for wheelchair adaptable units should be designed to provide space for the following appliances:

- Separate hob and oven
- A fridge
- A separate freezer from the fridge
- Washing machine
- Tumble drier with vent
- A dishwasher, in dwellings designed for more than 4 people
- There should be space on the worktop for a microwave
- Consideration should be given to locating laundry activities out with the fitted kitchen, to assist its future adaptation.

17.6 Bathroom for Wheelchair adaptable units

The effective design of the bathroom is key to allowing independence and dignity for disabled people. The ability to manage most, if not all, toileting and bathing functions without assistance is essential and is the foundation of 'independent living'.

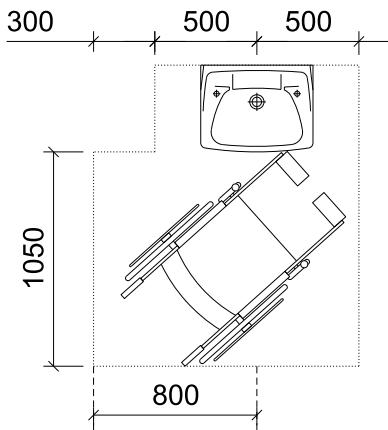
The layout of the bathroom must ensure independent approach and safe transfer to all bathroom fittings, and for independent use of them.

In a wheelchair accessible dwelling the extra space in the bathroom will benefit all household residents. An accessible bathroom should be attractive as well as functional.

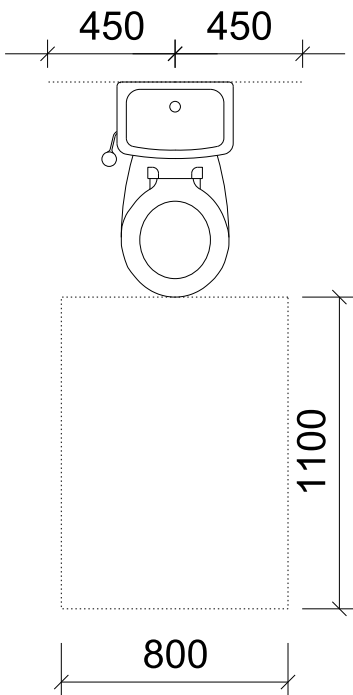
- Comply with the general requirements as per Section 8 plus:
- The layout should include an unobstructed maneuvering circular space of at least 1500mm diameter or an ellipse of 1400mm x 1800mm.
- In all wheelchair adaptable dwellings the bathroom must accommodate a WC, basin, bath and a floor drain; with the provision to install a level-access or wet-floor shower if needed, with flexible or easily adapted services.
- Ensure provision for direct access from the main bedroom to the bathroom. A knock out section of partition is useful for future use. This should be a minimum of 1200mm in width; set-out a minimum of 400mm from the back wall.
- The ceiling structure must be strong enough to allow for the fitting of an overhead hoist capable of carrying an appropriate load.
- The wash hand basin should be approximately 600mm wide and be positioned at least 500mm from any wall.
- The WC should be positioned at least of 450mm from the centre line of the WC and have a clear space, on one side, of 1050mm from the centre line.
- The location of the window needs careful consideration as the wheelchair user should be able to access, reach and operate it. The immediate vicinity of the shower area should be free from windows.
- Any dwelling with four or more bed spaces must provide access to an additional WC in a separate bathroom or WC / cloakroom. This additional bathroom / WC should not be accessed through a bedroom unless the additional bathroom is designed to meet the needs of the wheelchair user (as stated above).
- If a tenant has not been identified, the bathroom will be fitted for general needs but must be designed to a readily adaptable standard, complying with Section 9 and the above.
- Where a tenant has been identified, the dwelling should be designed to Housing for Varying Needs Part 1 wheelchair standard, and take into account the tenant's needs and occupational therapist's requirements; whilst being designed flexibly to accommodate different wheelchair users with other requirements in the future. A copy of the occupational therapist's report and amended layouts must be passed to Housing and Regeneration Services for assessment and sign-off.

Glasgow Standard

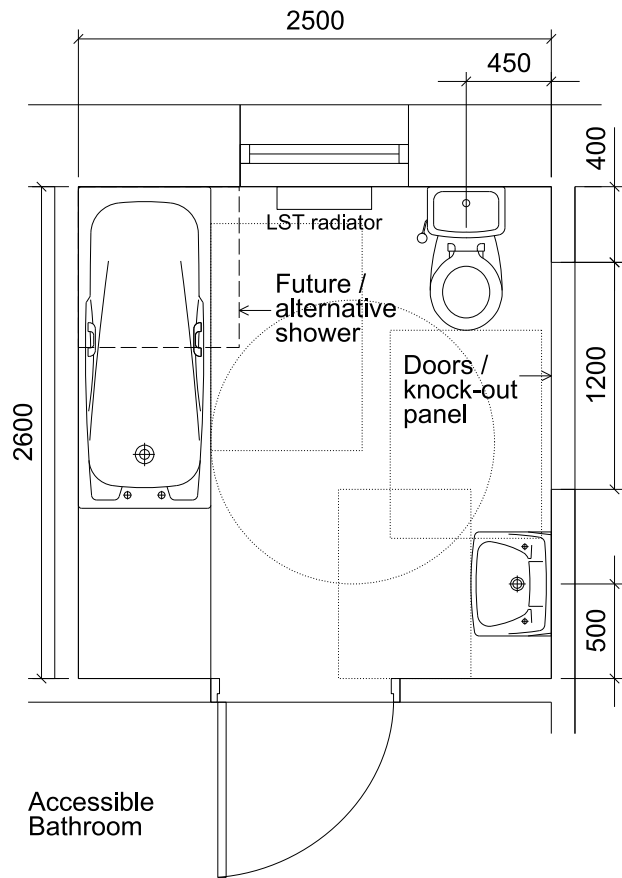
Figure 20: Bathroom layout designs



Washbasin position and activity space



Accessible WC



Accessible Bathroom

radiator *	LST radiator
radiator *	LST radiator

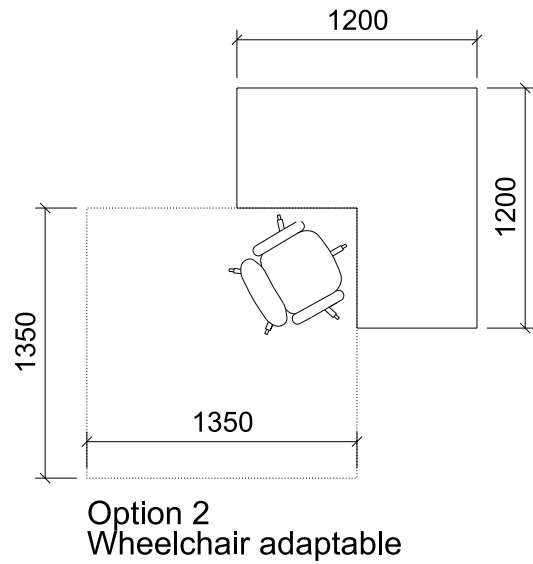
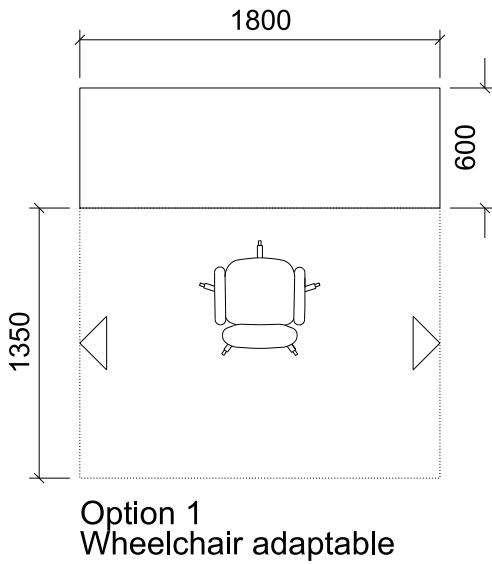
Radiators and LST radiators

* In accommodation serving older or vulnerable people, or in Wheelchair adaptable accommodation, Low Surface Temperature radiators are necessary. LST radiators tend to have greater dimensions than other radiators and therefore all room layouts must demonstrate incorporation of radiators of suitable type and size for the use intended; and ensure that the locations shown are appropriate without compromising clear paths.

17.7 Workspace for Wheelchair adaptable units

- Comply with the general requirements as per Section 13 plus:
- The layout must include an unobstructed activity space of at least 1350mm.

Figure 21: Silver Standard Aspect 6 Work Space



17.8 Wheelchair Adaptable Design Criteria

The table on the next page has been adapted from the Housing for Varying Needs standards for housing design for wheelchair adaptable users. The asterisks indicate where features are required to be designed into the dwelling, or are for future adaptable provision.

Table 13: Wheelchair Adaptable Design Criteria Summary

REQUIREMENTS FOR HOUSES READILY ADAPTABLE FOR WHEELCHAIR USE				
Feature	Design Criteria	Reference (Housing for Varying Needs part 1 or Technical Handbook).	Mandatory	Future Provision required
Access to Individual Dwellings	Step-free access from road, pavement and parking space to dwelling entrance	7.3	*	
	Access paths at least 1200mm wide	7.3	*	
	All other paths within curtilage 900mm wide with widening to 1200mm at turns	7.3	*	
	Gates of sufficient width	7.4	*	
	Step-free entrance	7.5	*	
	Ramps	Building Standards (Technical Handbook 2017 Domestic)		
	Platform of suitable size of 1500mm x 1500mm	7.5	*	
	Clear space beyond the handle edge of the door of 300mm for inward opening doors	7.5	*	
	Clear space beyond the handle edge of the door of 550mm for outwards opening doors	7.5	*	
	Doorbell/entry system at suitable height	7.11	*	
	External light at entrance	7.11	*	
	Canopy or porch at entrance	7.12	*	
	Future car space (with proposed carport) in-curtilage or within 15 metres of entrance and of a minimum size 3600mm x 5700mm long	7.13	*	
	Charging points for electric wheelchair/scooter (spur points provided)	7.14	*	

REQUIREMENTS FOR HOUSES READILY ADAPTABLE FOR WHEELCHAIR USE

Feature	Design Criteria	Reference (Housing for Varying Needs part 1 or Technical Handbook).	Mandatory	Future Provision required
Access to Blocks or Flats	Step-free access from road pavement and parking space to a communal entrance	7.3	*	
	Access paths	Technical Handbook	*	
	Step-free entrance	7.6	*	
	Platform of suitable size of 1500mm x 1500mm	7.6	*	
	Platform of suitable size of 1500mm x 1800mm where door opens outwards	7.6	*	
	Clear space of at least 550mm beyond the handle edge of the door	7.6	*	
	Ramp and/or steps of suitable design	Technical Handbook	*	
	Doorbell/entry phone at suitable height and position	7.11	*	
	External light at entrance	7.11	*	
	Canopy or porch at entrance	7.12	*	
	Car space within 15m of entrance	7.13	*	
	Provisional covered car space in-curtilage or within 15 metres of entrance and of a minimum size 3600mm x 5700mm long	7.13	*	
Communal Access Areas, Stairs and Lifts	All doors with clear opening width at least 840mm	8.2	*	
	Accessible threshold	Technical Handbook	*	
	Area inside the door and circulation areas should have a minimum dimension of 1500mm x 1800mm to allow for wheelchair turning and manoeuvre	8.4	*	
	Area inside the door and circulation areas should have a minimum dimension of 1500mm x 1500mm if door opens outwards	8.4	*	

	Entrance door positioned with space of at least 550mm beyond the handle edge	8.4	*	
	Passenger lift / stairs and handrails	Technical Handbook	*	
	Circulation Routes	8.4.7	*	

REQUIREMENTS FOR HOUSES READILY ADAPTABLE FOR WHEELCHAIR USE

Feature	Design Criteria	Reference (Housing for Varying Needs part 1 or Technical Handbook).	Mandatory	Desirable / Future Provision required
Entrance Doors to Individual Houses or Flats	All entrance doors with clear opening width of at least 840 mm	9.2/9.6	*	
	Accessible threshold	Technical Handbook	*	
	Allowance is made for recessed doormat	9.3	*	
	All main entrance doors must open into a circulation area and not a room.	9.6	*	
	Circulation space immediately inside the door should allow for a person in a wheelchair adaptable unit to turn through 180°. It must therefore have a minimum width of 1500mm extending at least 1500mm back from the face of the door.	9.6	*	
	Entrance door positioned with a return of at least 300mm beyond the handle edge	9.6	*	
	Storage space for an outdoor wheelchair and space alongside this for transferring to and from an indoor chair. This will require an area 1100mm x 1700mm, with adjacent circulation space.	9.6	*	
	Entrance door positioned with a return of at least 550mm beyond the door edge	9.6		*
	Any lobby is of sufficient size, 1600mm x 1600mm or 1300mm x 2100mm	9.7	*	

Circulation Spaces and Internal Doors	Passages should be a minimum of 1200mm wide, however a width of 1000mm is acceptable for lengths up to 900mm	10.2	*	
	Doors positioned with a return of at least 300mm beyond the handle edge	10.4	*	
	Pass doors at right angles to each other should both be at least 400mm from the corner to the opening.	10.4	*	
	Pass doors with a minimum clear opening width of 800mm	10.5	*	
	Pass doors without threshold plate	10.5	*	
	Doors opening beyond 90 degrees	10.5	*	

REQUIREMENTS FOR HOUSES READILY ADAPTABLE FOR WHEELCHAIR USE

Feature	Design Criteria	Reference (Housing for Varying Needs part 1 or Technical Handbook).	Mandatory	Desirable / Future Provision required
Living and Sleeping Areas	Space for wheelchair turning in all apartments	11.1	*	
	Living room and dining space of a size that allows for notional furniture and circulation "path" must be a minimum of 800mm	11.2/11.3	*	
	Bedroom(s) of a size that allows for notional furniture and circulation "path" must be a minimum of 800mm	11.4	*	
	Beds for wheelchair users can be accessed on three sides	11.4	*	
	Double bedrooms allow for twin beds	11.4	*	
	Built-in clothes hanging space	11.4	*	
	Other bedrooms should be accessible in a wheelchair and allow access alongside a bed.	11.4	*	

Storage	Storage Provision is made for adequate and accessible general storage. Wheelchair store is a minimum of 1200mm x 1200mm additional to the general storage requirements.	12.2	*	
	Storage space is allowed for special equipment	12.2	*	
Kitchen	All layouts should include an unobstructed manoeuvring square space of at least 1500mm diameter or an ellipse of 1400mm x 1800mm.	Technical Handbook 3.11.3	*	
	In all situations the kitchen must be of a size that allows a clear space of 1500mm in front of fittings and appliances to allow a wheelchair user space to manoeuvre.	13.5	*	
	In kitchens there should be window controls that are not reached over a worktop or sink, although some users will be able to reach controls positioned at a height of no more than 1050mm where there is knee-space below	16.3	*	

REQUIREMENTS FOR HOUSES READILY ADAPTABLE FOR WHEELCHAIR USE

Feature	Design Criteria	Reference (Housing for Varying Needs part 1 or Technical Handbook).	Mandatory	Future Provision required
Bathroom	All layouts should include an unobstructed manoeuvring circular space of at least 1500mm diameter or an ellipse of 1400mm by 1800mm.	14.9	*	
	Layouts must be able to accommodate a bath or a shower so that the occupant can have whichever best suits their needs	14.9	*	
	A minimum of 2100mm between walls to allow for a 400mm space or shelf	14.9	*	
	One bedroom is next to an accessible bathroom suitable for a wheelchair user with the option of a knock out panel.	14.10	*	
	Position of WC should allow frontal or side transfer with a clear space of 1050mm on one side.	14.11	*	
	WC should be a minimum of 450mm from the centre line to the wall	14.11	*	
	Allowance for a ceiling mounted hoist	14.10	*	
	Floor gulley	14.14	*	
	Allowance for fixing grab and support rails to walls - robust wall construction	Technical Handbook 3.12	*	
	Outward opening door	14.9	*	
	The position of the WC and WHB should allow access to window controls and the bath should not be positioned below the window	16.3	*	

Additional WC	Provided in dwellings for four or more people	14.17	*	
	Accessible in a wheelchair	14.17	*	
	Transfer space to front or side of WC	Technical Handbook HfVN 14.11	*	
Windows	Design allows view from seated position	16.2		*
	Controls easily and safely accessed, reached, and operated (minimum of 800mm access required)	16.3	*	
Electrical	Sockets, switches and controls of suitable design and at suitable location and height and allow for future adaptation	18.2	*	
Heating and Water Services	Heating, radiators and ventilation controls easily accessed, reached and operated	11.1/17.1 & 17.2	*	
	Crosshead or lever type taps	17.5	*	
Power and Communications	Allowance for additional future wiring	18.1	*	
	Sockets, switches and controls of suitable design and at suitable location and height	18.2	*	



18.0 Design Requirements Conversions / Refurbishments

18.1 Conversions / Refurbishment

When existing houses and flats are being refurbished or converted, opportunities should be sought to provide accommodation that reflects the minimum requirements set out to the Glasgow Standard and Housing for Varying Needs Part 1 (general needs and wheelchair standard). The design criteria and considerations may have to be compromised, and the minimum rather than preferred requirements adopted, due to the limitations imposed by the existing structure or available space.

Wheelchair adaptable units within conversions/ refurbishments should fully comply with The Glasgow Standard as otherwise the design / layout would not be suitable for a wheelchair user.

19.0 Design Requirements Supported Accommodation

19.1 Housing for Varying Needs Part 2: Houses with Integral Support

In order to meet the support needs and preferences of some service users, there will be a need for shared accommodation, group homes or housing with associated communal facilities, staff accommodation or other specialist features. Procedures on the design criteria for these forms of provision are contained in 'Housing for Varying Needs – a design guide, Part 2: Housing with Integral Support'.

These criteria are intended to ensure that forms of housing provision with integral support:

- are fit for their purpose
- are flexible in use
- accommodate a range of needs
- represent good value for money over their lifetime
- Incorporate the barrier free criteria from 'Part 1: Houses and Flats'.

What is considered to be the most appropriate design will depend on the preferences and needs of the clients for whom it is intended, the type of support and its delivery, including staffing issues. The criteria should be followed by any applicant seeking funding for this type of provision. Glasgow City Council intends to use it as the basis for required standards in relation to funding.

20.0 Design Requirements Partnership Support for Regeneration

20.1 Partnership Support for Regeneration (PSR)

Partnership Support for Regeneration Grants (PSR) are provided to eligible applicants, to build houses for sale in areas with little or no private housing and to help meet local shortages. PSR is part of the Affordable Housing Supply Programme and, as a condition of grant funding, all developments must comply with The Glasgow Standard and Housing for Varying Needs (HfVN) Part 1 General Needs and the Wheelchair Adaptable Standard.

PSR developments must also include the 10% provision for wheelchair adaptable units and should be designed in accordance with Sections 9 – 13 inclusive & 14 – 17 inclusive of the Glasgow Standard.

21.0 Design Requirements Secure by Design

21.1 Secured by Design (SbD)

Security considerations must be taken into account from a scheme's earliest stages and developments are therefore required to meet **Secured by Design (Gold Standard)**. Consultation should take place with Police Scotland's Designing-out Crime Officer at the pre-application stage.

National Architectural Liaison Support and Development Officer

- Phone: **01592 418461**
- Email: architectural.liaison@scotland.pnn.police.uk
- Area Served: Scotland
- Force: Police Scotland

The Secured by Design requirements are in 3 sections:

Section 1 is the development layout and design.

This section provides guidance on all aspects of design and layout that impact on the creation of a safe and secure environment; including road layout, footpath design, communal areas, dwelling boundaries, car parking and lighting.

Section 2 provides the 'Police Preferred Specification' for all physical security requirements for new or refurbished homes.

Section 3 addresses the requirements for a range of additional or optional residential features; such as enhanced glazing, bicycle storage, drying rooms, external bin stores, etc. If a development contains any of the features within Section 3, the physical security requirements within this section should be adhered to in order to achieve full SBD Gold Standard compliance.

Note: Please note that the items detailed in section 3 are optional, i.e. intruder alarms, cycle storage, undercroft parking etc. If these items are included within the development then they must comply with Secured by Design. If you meet the requirements of section 1 and 2a then Gold Standard will be awarded.

22.0 Design Requirements Sustainability

22.1 Sustainability

The Council is committed to improving energy efficiency and to reduce CO2 emissions through its Energy and Carbon Masterplan; and further is committed to ensure that all new homes are future-proof, with high sustainability considerations that will protect residents from rising energy costs and help to contribute to the Council's carbon emissions reduction targets.

The City Development Plan, which was introduced in 29 March 2017, sets out specific actions designed to improve the sustainability of buildings; along with targets to reduce CO2 emissions, to be achieved through low carbon technology, including renewable sources. These targets were informed as the best available methodology when the City Development Plan was under preparation. However since the Adoption of the Plan, strong evidence emerged that the specific actions to improve sustainability set out in the Plan were extremely challenging from a technical perspective and are disproportionately expensive to deliver. Following discussion with representatives from the development sector, it has now been recognised that implementing Section 7, Gold Level, Aspects 1-8 inclusive, was not currently viable in its entirety and raised fundamental issues for the development industry.

In response to this context, and to continue to fulfil our statutory requirement whilst achieving the essential outcome of delivering lower carbon development, DRS Housing & Regeneration Services and DRS Planning & Building Control have developed alternative options for compliance with the policy at Gold level. A key element of these alternative options has been that they will still achieve the statutory and corporate objectives to lower carbon and increase sustainability, but will also reduce the technical and financial viability obstacles currently presented.

From 1st September 2018, it will be a mandatory planning requirement that all new-build developments will meet the three options set out for Glasgow's Sustainability Levels. The three options are feasible from a development viability perspective; but will also still satisfy, or in some cases exceed, the Plan's targeted reductions in CO2 emissions, as detailed in **table 14**.

Housing and Regeneration Services encourages housing associations to be ambitious in trying to exceed current energy efficiency and sustainability targets and to develop housing which will be exemplary across the country, making Glasgow one of the most sustainable cities in Europe.

Table 14 sets out the levels of sustainability which are appropriate as at 1st September 2018.

Table 14: Glasgow Standard Plus

Alternative Gold level Options: Domestic		
Option 1 Gold Hybrid	Option 2 Nearly Zero Emissions	Option 3 Net-Zero Carbon
Section 7 Aspect Gold Level 1	Passivhaus Energy Performance Requirements	Section 7 Aspect Platinum Level 1
Section 7 Aspect Silver Levels 2- 8 Inclusive	Section 7 Aspect Silver Levels 4- 8 Inclusive	Section 7 Aspect Silver Levels 2- 8 Inclusive
Independent Approved Certifiers of Design	Passivhaus Certified (design and completed Buildings)	Independent Approved Certifiers of Design
<p>PLUS: All will be required to include a minimum 20% carbon dioxide emission abatement through the use of low and zero carbon generating technologies, except certified Passivhaus developments which are exempt.</p>		

All Associations must ensure that all drawings submitted to Building Control are marked-up to indicate the level of sustainability for each type of Unit. Developers will be required to demonstrate compliance with one of these options: **Options A and C** will require an Independent Assessor to be appointed for each project while **Option B** will require a Passivhaus Certifier to be appointed for each project, to verify compliance with the requirements that are set out in these options. The costs associated with their appointment will be grant eligible.



Option 1: Gold Hybrid

Building Standards (Technical Handbook 2017: Domestic), Section 7 Sustainability Gold Level (aspect 1 only), Silver Level (Aspects 2-8 Inclusive), are noted below:

Aspect	Minimum Requirements
Gold Level 1: Carbon dioxide emissions	Under the guidance of Standard 6.1, the carbon dioxide emission (Dwellin Emission Rate) is to be 27% lower than the Target Emission Rate set by th 2015 Standards.
Silver Level 2: Energy for space heating	The maximum annual demand for useful energy for space heating should be: <ul style="list-style-type: none"> • 40kWh/m² for houses, or • 30kWh/m² for flats or maisonettes
Silver Level 3: Energy for Water heating	At least 5% of the dwelling or domestic building's annual energy demand for water heating should be from: heat recovery and/or renewable sources; with little or no associated fuel costs (e.g. solar thermal water heating and associated storage or heat recovery from grey water) that are allocated for water heating.
Silver Level 4: Water use Efficiency	Enhanced or additional products should be provided as follows: <ul style="list-style-type: none"> • WCs of average flush volume not more than 4.5 litres • Wash hand basin taps with a flow rate not more than 6 litres per minute (l/m) • Shower heads with a flow rate not more than 8 l/m, and • 1 water butt (with a min. capacity of 200 litres) for outdoor use, per dwelling. Dwellings without a private garden or landscaped area, or if there is no access to rainwater collection (for example if there is no external rainwater pipe within the curtilage), are excluded.
Silver Level 5: Optimising Performance	<ul style="list-style-type: none"> • Quick start guide: Developers should provide guidance to new occupants on the ways in which their new home is intended to function and how to optimise its performance on the scope, format and contents of the guide for occupants. Supplementary guidance, including a performance specification and a link to an example completed quick start guide, is in Annex B. • Resource use display: Developers should install a real-time resource use monitor that displays electricity use, located in an easily accessible and readable position.
Silver Level 6: Flexibility and Adaptability (Home Office Space)	Developers should provide a home office space dedicated for home working/study to include: <ul style="list-style-type: none"> • A clear space, against a wall or partition, where a desk of 1800mm long x 600mm deep could be placed. Alternatively, the desk space could be 'L' shaped in plan as long as each leg of the 'L' is a minimum length of 1200mm. • Two switched electrical sockets in addition to those that should be provided under Section 4.

<p>Silver Level 6: Flexibility and Adaptability (Home Office Space)</p>	<ul style="list-style-type: none"> • A connection to allow direct access to internet services (unless such a provision is made elsewhere in the dwelling). • For natural daylight there should be a line of sight to a window, glazed external door or roof light. • Generally ventilation, accessibility, safety and escape should meet all the other standards however, see paragraphs below. • In any dwelling, the home office space can be in a circulation space but should not be located in a protected enclosure. The desk space and/or its activity space can locally reduce a corridor width to 800mm and should not interfere with door swings. • In any dwelling, the home office space can occupy a room by itself even if this room is too small to be an apartment. In this case, this small room should be ventilated as if it were an apartment. • In any dwelling, the home office space can occupy a part of the enhanced apartment but the desk space and its activity space should be additional to the defined spaces and access of the enhanced apartment. • In any dwelling the home office space can be in a room that includes the kitchen but the desk space and or its activity space should not interfere with kitchen worktops, appliances or manoeuvring spaces. • To allow some more flexibility in smaller dwellings (those of not more than 2 apartments) the home office space can be in any apartment. But in this case, the desk space and its activity space should not overlap with the minimum furniture provision or associated activity spaces. • The height of the home office should be not less than 1.8m over the activity space and 1.5m over the desk space. • For dwellings over 150m² floor area, two home office spaces should be provided.
<p>Silver Level 7: Well-being and Security</p>	<ul style="list-style-type: none"> • Noise separation: Design performance levels for separating walls and separating floors associated with attached dwellings should be: • Minimum airborne sound insulation: 58 dB D_{nT,w} • Maximum impact sound transmission: 54 dB L'_{nT,w} • Performance levels for noise isolation for separating walls and separating floors should be verified by carrying out a sound test as indicated in the Building Standards (Technical Handbook 2017: Domestic) 2016 guidance (Section 5) • Noise reduction between rooms: Design performance level for a minimum airborne sound insulation should be 44 dB R_w. This refers to all internal partitions in all dwellings and intermediate floors within houses and maisonettes excluding storage cupboards and should be substantiated by manufacturer's laboratory test certificates. • Enhanced natural lighting: The enhanced apartment should be provided with a glazed area of not less than 1/8th of the floor area of the apartment. • Security: Install a 13 amp fused spur, suitable for an intruder alarm system, located within 2m of the main entrance door.

Silver level 8:
Material Use
and Waste

- Recycling of solid waste: Provide a dedicated internal space with a volume of at least 0.12m³ (120 litres) and no dimension less than 450mm, for storing recyclable material. The storage space should:
- be able to store small amounts of recyclable material (e.g. metal, glass, plastic, cardboard and/or paper)
- be easily cleanable
- be additional to the general 1m³ kitchen storage in **Section 13**, and
- facilitate temporary storage before transfer to a main storage point or a collection point, whether for the dwelling or for a group of dwellings.

Option 2: Nearly Zero Emissions

This level is a mix of the Passivhaus requirements and the Technical Standard, Domestic, 2017, Section 7 Sustainability Gold Level (aspect 1 only) Silver Level (Aspects 4-8 Inclusive) are noted below:

Aspect	Minimum Requirements	
Gold Level 1: Carbon dioxide emissions	<ul style="list-style-type: none"> Under the guidance of Standard 6.1, the carbon dioxide emission (Dwelling Emission Rate) is to be 27% lower than the Target Emission Rate set by the 2015 Standards. 	
Passivhaus Standard Energy	Primary Energy Demand	≤ 120 kWh/m ² . yr
	Space Heating Demand	≤ 15 kWh/m ² . yr
	Space Cooling Demand	≤ 15 kWh/m ² . yr
	Specific Cooling Load	≤ 10 W/m ²
	Airtightness	≤ 0.6 air changes/ hr @ n50
Silver Level 5: Optimising Performance	<ul style="list-style-type: none"> Quick start guide: Developers should provide guidance to new occupants on the ways in which their new home is intended to function and how to optimise its performance on the scope, format and contents of the guide for occupants. Supplementary guidance, including a performance specification and a link to an example completed quick start guide, is in Annex B. Resource use display: Developers should install a real-time resource use monitor that displays electricity use, located in an easily accessible and readable position. 	
Silver Level 6: Flexibility and Adaptability (Home Office Space)	<p>Developers should provide a home office space dedicated for home working/study to include:</p> <ul style="list-style-type: none"> A clear space, against a wall or partition, where a desk of 1800mm long x 600mm deep could be placed. Alternatively, the desk space could be 'L' shaped in plan as long as each leg of the 'L' is a minimum length of 1200mm. Two switched electrical sockets in addition to those that should be provided under Section 4. A connection to allow direct access to internet services (unless such a provision is made elsewhere in the dwelling). For natural daylight there should be a line of sight to a window, glazed external door or roof light. Generally ventilation, accessibility, safety and escape should meet all the other standards however, see paragraphs below. In any dwelling, the home office space can be in a circulation space but should not be located in a protected enclosure. The desk space and/or its activity space can locally reduce a corridor width to 800mm and should not interfere with door swings. 	

	<ul style="list-style-type: none"> • In any dwelling, the home office space can occupy a room by itself even if this room is too small to be an apartment. In this case, this small room should be ventilated as if it were an apartment. • In any dwelling, the home office space can occupy a part of the enhanced apartment but the desk space and its activity space should be additional to the defined spaces and access of the enhanced apartment. • In any dwelling the home office space can be in a room that includes the kitchen but the desk space and or its activity space should not interfere with kitchen worktops, appliances or manoeuvring spaces. • To allow some more flexibility in smaller dwellings (those of not more than 2 apartments) the home office space can be in any apartment. But in this case, the desk space and its activity space should not overlap with the minimum furniture provision or associated activity spaces. • The height of the home office should be not less than 1.8m over the activity space and 1.5m over the desk space. • For dwellings over 150m² floor area, two home office spaces should be provided.
<p>Silver Level 7: Well-being and Security</p>	<ul style="list-style-type: none"> • Noise separation: Design performance levels for separating walls and separating floors associated with attached dwellings should be: • Minimum airborne sound insulation: 58 dB DnT,w • Maximum impact sound transmission: 54 dB L'nT,w • Performance levels for noise isolation for separating walls and separating floors should be verified by carrying out a sound test as indicated in the Building Standards (Technical Handbook 2017: Domestic) 2016 guidance (Section 5) • Noise reduction between rooms: Design performance level for a minimum airborne sound insulation should be 44 dB Rw. This refers to all internal partitions in all dwellings and intermediate floors within houses and maisonettes excluding storage cupboards and should be substantiated by manufacturer's laboratory test certificates. • Enhanced natural lighting: The enhanced apartment should be provided with a glazed area of not less than 1/8th of the floor area of the apartment. • Security: Install a 13 amp fused spur, suitable for an intruder alarm system, located within 2m of the main entrance door.
<p>Silver level 8: Material Use and Waste</p>	<ul style="list-style-type: none"> • Recycling of solid waste: Provide a dedicated internal space with a volume of at least 0.12m³ (120 litres) and no dimension less than 450mm, for storing recyclable material. The storage space should: • be able to store small amounts of recyclable material (e.g. metal, glass, plastic, cardboard and/or paper) • be easily cleanable • be additional to the general 1m³ kitchen storage in Section 13, and • facilitate temporary storage before transfer to a main storage point or a collection point, whether for the dwelling or for a group of dwellings.

Option 3: Net – Zero carbon

Technical Standard, Domestic, 2017, Section 7 Sustainability Platinum Level (aspect 1 only) Silver Level (Aspects 2-8 Inclusive) are noted below:

Aspect	Minimum Requirements
Platinum Level 1: Carbon diox-	Under the guidance to Standard 6.1, the carbon dioxide emission Dwelling Emission Rate (DER) is to be 100% lower than the Target Emission Rate (TER) set by the 2010 Standards.
Silver Level 2: Energy for	The maximum annual demand for useful energy for space heating should be: • 40kWh/m ² for houses, or • 30kWh/m ² for flats or maisonettes
Silver Level 3: Energy for Water heating	At least 5% of the dwelling or domestic building's annual energy demand for water heating should be from: heat recovery and/or renewable sources; with little or no associated fuel costs (e.g. solar thermal water heating and associated storage or heat recovery from grey water) that are allocated for water heating.
Silver Level 4: Water use Efficiency	<p>Enhanced or additional products should be provided as follows:</p> <ul style="list-style-type: none"> • WCs of average flush volume not more than 4.5 litres • Wash hand basin taps with a flow rate not more than 6 litres per minute (l/m) • Shower heads with a flow rate not more than 8 l/m, and, 1 water butt (with a min. capacity of 200 litres) for outdoor use, per dwelling. • Dwellings without a private garden or landscaped area, or if there is no access to rainwater collection (for example if there is no external rainwater pipe within the curtilage), are excluded minute (l/m).
Silver Level 5: Optimising Performance	<ul style="list-style-type: none"> • Quick start guide: Developers should provide guidance to new occupants on the ways in which their new home is intended to function and how to optimise its performance on the scope, format and contents of the guide for occupants. Supplementary guidance, including a performance specification and a link to an example completed quick start guide, is in Annex B. • Resource use display: Developers should install a real-time resource use monitor that displays electricity use, located in an easily accessible and readable position.
Silver Level 6: Flexibility and Adaptability (Home Office Space)	<p>Developers should provide a home office space dedicated for home working/ study to include:</p> <ul style="list-style-type: none"> • A clear space, against a wall or partition, where a desk of 1800mm long x 600mm deep could be placed. Alternatively, the desk space could be 'L' shaped in plan as long as each leg of the 'L' is a minimum length of 1200mm. • Two switched electrical sockets in addition to those that should be provided under Section 4. • A connection to allow direct access to internet services (unless such a provision is made elsewhere in the dwelling). • For natural daylight there should be a line of sight to a window, glazed external door or roof light.

	<ul style="list-style-type: none"> • Generally ventilation, accessibility, safety and escape should meet all the other standards however, see paragraphs below. • In any dwelling, the home office space can be in a circulation space but should not be located in a protected enclosure. The desk space and/or its activity space can locally reduce a corridor width to 800mm and should not interfere with door swings. • In any dwelling, the home office space can occupy a room by itself even if this room is too small to be an apartment. In this case, this small room should be ventilated as if it were an apartment. • In any dwelling, the home office space can occupy a part of the enhanced apartment but the desk space and its activity space should be additional to the defined spaces and access of the enhanced apartment. • In any dwelling the home office space can be in a room that includes the kitchen but the desk space and or its activity space should not interfere with kitchen worktops, appliances or manoeuvring spaces. • To allow some more flexibility in smaller dwellings (those of not more than 2 apartments) the home office space can be in any apartment. But in this case, the desk space and its activity space should not overlap with the minimum furniture provision or associated activity spaces. • The height of the home office should be not less than 1.8m over the activity space and 1.5m over the desk space. • For dwellings over 150m² floor area, two home office spaces should be provided.
<p>Silver Level 7: Well-being and Security</p>	<ul style="list-style-type: none"> • Noise separation: Design performance levels for separating walls and separating floors associated with attached dwellings should be: • Minimum airborne sound insulation: 58 dB DnT,w • Maximum impact sound transmission: 54 dB L'nT,w • Performance levels for noise isolation for separating walls and separating floors should be verified by carrying out a sound test as indicated in the Building Standards (Technical Handbook 2017: Domestic) 2016 guidance (Section 5) • Noise reduction between rooms: Design performance level for a minimum airborne sound insulation should be 44 dB Rw. This refers to all internal partitions in all dwellings and intermediate floors within houses and maisonettes excluding storage cupboards and should be substantiated by manufacturer's laboratory test certificates. • Enhanced natural lighting: The enhanced apartment should be provided with a glazed area of not less than 1/8th of the floor area of the apartment. • Security: Install a 13 amp fused spur, suitable for an intruder alarm system, located within 2m of the main entrance door.
<p>Silver level 8: Material Use and Waste</p>	<ul style="list-style-type: none"> • Recycling of solid waste: Provide a dedicated internal space with a volume of at least 0.12m³ (120 litres) and no dimension less than 450mm, for storing recyclable material. The storage space should: • be able to store small amounts of recyclable material (e.g. metal, glass, plastic, cardboard and/or paper) • be easily cleanable • be additional to the general 1m³ kitchen storage in Section 3, and • facilitate temporary storage before transfer to a main storage point or a collection point, whether for the dwelling or for a group of dwellings.

23.0 Design Requirements Considerate Constructors Scheme (CCS)

23.1 Considerate Constructors Scheme (CCS)

The developer / contractor must be a member of the Considerate Constructors Scheme for all projects funded by the AHSP <https://www.ccscheme.org.uk/>

The Considerate Constructors Scheme code of practice outlines five areas that contractors should adhere to:-

- Care about appearance
- Respect the Community
- Protect the Environment
- Secure everyone's safety
- Value their workforce

The HA must confirm and provide evidence that their appointed developer / contractors are a member of the Considerate Constructors Scheme as per their tender submissions for each project. This evidence must be uploaded as supporting documents to HARP.

At Post Completion Reviews, housing associations should provide a copy of their Certificate of Compliance awarded by the Considerate Constructors Scheme. This requires a score of 5 or more points in each of the five sections of the site monitoring report.

A Certificate of Compliance is the minimum acceptable standard and Performance Beyond Compliance certification is desirable.




24.0 Appendices

Appendix 1 Pre –Tender Tick List

In support of your application for AHSP Grant Funding, we must receive specific documents / information with your submission prior to passing for evaluation by our Technical Section. These must be in the correct format including this form (excel).

Please see the tables below which must be completed with all information requested. If a document is not submitted (light pink boxes to be completed), a valid reason must be provided in the comments box.



Glasgow City Council Tick List for Pre-tender Submissions

Development Details	
1	Name of Association
2	Project Name
3	Contact Name:
4	Email Address:
5	Contact Number:
6	Date of submission:

Mandatory information required for a technical appraisal at pre tender stage

		Submitted	Comments (if information is not emailed to project officer please explain why)
7	Drawings: - Floor plans for each house type (Scale 1:50 at A3) - Block Plans for flatted blocks (Scale 1:100 at A3) - Elevations and Sections (Scale 1:100 at A3) - Site Plan (Scale to Fit at A3)		
8	Schedule of Accommodation: house / flat type name, bedspaces, Number of Apartments, NET floor areas, GIFA, tenure, clear indication of wheelchair adaptable units		
9	Sustainability levels	Silver Aspect 1-8 incl. plus Active	
		Gold Hybrid (Gold Aspect 1 only and Silver aspects 2-8 incl.)	
		Gold	
		Passive	
		Net Zero carbon	
The layout drawings must include the following information:			
10	Sustainability: Silver Aspects to be identified on all drawings(i.e. home office, spur point, water butt, recycling, smart meter location etc.)		
11	Net floor areas for each house/ flat type		
12	Gross Internal Area (GIA) for each house/ flat type		
13	Furniture and activity space, external openings, boilers, MVHR, radiators and meters		
14	Room areas and dimensions		
15	Storage space (m2), kitchen storage (m3), clear worktop length (m)		
16	Wheelchair turning circles		
17	Overall GIFA for the development		
18	Specification		
19	Confirmation that the development meets the Glasgow Standard		
20	Confirmation that the development will provide 10% wheelchair adaptable units		
21	Secure by Design (Gold Standard) – Verification that the standard will be achieved at completion		
22	Alternative layout for all double bedrooms to show two single beds, all notional furniture and activity space etc		

All mandatory documents / information as detailed above must be submitted. The pre -tender submission will be returned to the Housing Associations if any of the above information is not submitted.

GCC Technical require this information to help to speed up the appraisal process.

Please confirm that you have included all the necessary documentation by signing below

Signature (PRINT NAME)	
Date	

Appendix 2 Pre –Tender Tick List

In support of your application for AHSP Grant Funding, we must receive specific documents / information with your submission prior to passing for evaluation by our Technical Section. These must be in the correct format including this form (excel).



Please see the tables below which must be completed with all information requested (light blue boxes must be completed). If a document is not submitted, a valid reason must be provided in the comments box.

Glasgow City Council Tick List for Tender Submissions

Development Details	
1	Name of Association
2	Project Name
3	Contact Name:
4	Email Address:
5	Contact Number:
6	Date of submission:
7	Meet Benchmark:

Mandatory information required at tender stage (please ensure that all information required at pre-tender stage has also been submitted). All information below should be uploaded to HARP.

	Submitted	Comments (if information is not uploaded to HARP please explain why)
8		Confirmation of approval of drawings by technical team
9		Technical Requirements as per Pre tender stage (if any information / design has changed since pre-tender please provide updated information)
10		Works cost (if project over benchmark please refer to cost requirements below)
11		Development costs (if project over benchmark please refer to cost requirements below)
12		Scottish Social Housing Tender Price Index (SSHTPI) Comply with SG parameters of 25% Ad-Hocs and 15% Design Excess
13		Confirmation that the development meets the Glasgow Standard
14		QS Report on tenders
15		Overall GIFA for the development
16		Secure by Design (Gold Standard)
17		Independent Certifier - confirmation that the consultant has been appointed
18		CO2 emissions
19		SAP Ratings
20		Heating and Hot Water costs per annum

Additional mandatory information required at tender stage if projects are over BENCHMARK

	Submitted (/ leas ✓)	Comments (if information is not uploaded to HARP please explain why)
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Breakdown of Costs including the following:


21	Detailed submitted works and development costs (split by tenure)	
22	Contract Sum Analysis	
23	Priced Bill of Quantities	
24	Breakdown of Professional fees + VAT	
25	Breakdown of Other costs, fees + VAT	
26	Breakdown of Abnormal / Ad hocs costs	
27	Breakdown of Sustainability costs (i.e. Technical standards including Section 7, Ecohomes if applicable and any other additional costs etc.)	
28	Extra over costs for any additional planning and building warrant requirements	
29	Energy Performance Certificates (EPC) Costs	
30	Third Party Warranties Costs (if applicable)	

All mandatory documents must be submitted. The tender submission will be returned to the Housing Associations if any of the above information is not submitted.

GCC Technical require this information to help to speed up the appraisal process.

Please confirm that you have included all the necessary documentation by signing below

Signature (PRINT NAME)	
Date	



GLASGOW STANDARD HOUSING SCHEDULE

Dwelling Type Number/Name	House Type	Tenancy	Tenure	Rent at Completion (to be completed by HA)	Number of Storeys	Number of Units	Bedspaces	Number of Apartments	GFA (m ²)		Net Project Area (m ²)		Glasgow Standard Net Area Guideline (m ²)		Difference		Aggregate of Living Area (m ²)	Single Bedroom Area (m ²)	Double/Twin Bedroom Area (m ²)	Kitchen Storage (m ³)	General Storage (m ²)	Clear worktop length (m)	
									Floor Area	Total Area	Floor Area	Total Area	Space Standard	Total Area	Unit	Total							
Flat Type 1	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Cottage Flat	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
End Terrace	Flat	Wheelchair Adaptable	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 4	Flat	Wheelchair Adaptable	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 5	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 6	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 7	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 8	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 9	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 10	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 11	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 12	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 13	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Flat Type 14	Flat	Mainstream	Social Rent						0.00	0.00	0.00	0.00	0.00	0.00	+0.00	+0.00							
Sub-Total Communal Areas							0		0.00	0.00	0.00	0.00	0.00	0.00		+0.00							
TOTAL									0.00	0.00	0.00	0.00	0.00	0.00									

Comments:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Appendix 4 Notional Furniture

Notional Furniture			Number of bed spaces/furniture items							
Space	Min. furniture Required	Furniture dimensions	1p	2p	3p	4p	5p	6p	7p	8p
Living Room	Sofa seats: Easy seating must be allowed for the number of bed spaces plus two	- Armchairs size 850mm x 850mm - 2 seat sofa size 1350mm x 850mm - 3 seat sofa size 1850mm x 850mm - 4 seat sofa size 2350mm x 850mm - 5 seat sofa size 2850mm x 850mm	3	4	5	6	7	8	9	10
	Bookcase/ Storage fittings (s)	Total length of 2000mm x 500mm (d) x1500mm (h)	1							
	Television	Total length of 1000mm x 70mm depth	1							
	Occasional table	800mm x 600mm	1							
Dining Space	Dining Table	length shown x 800mm	1000	1200	1500	1500	1800	1800	2400	2400
	Dining Chair: number of bed spaces plus two	450mm x 450mm	3	4	5	6	7	8	9	10
	Sideboard (if separate dining room)	Total length of 1200-1500mm x 450mm	1							
All rooms	Wheelchair turning to all Wheelchair/ adaptable units	1500mm diameter or an ellipse of 1.4m by 1.8m.	1							
Kitchen	Wheelchair turning circle / ellipse	1500mm diameter or an ellipse of 1.4m by 1.8m.	1							
Bedroom	Min. Furniture	Furniture dimensions	Number of furniture items required							
Single Bedroom	Single Bed	2000mm x 900mm	1							
	Bedside Table	400mm x 400mm	1							
	Chest of Drawers	Total of 1200mm x 450mm (1000mm high)	1							
	Wardrobe	600mm x 600mm	1							
Twin Bedroom	Single Bed	2000mm x 900mm	2							
	Bedside Table	400mm x 400mm	2							
	Chest of Drawers	Total of 1200mm x 450mm (1000mm high)	2							
	Wardrobe	600mm x 600mm	2							
Double Bedroom	Double Bed	2000mm x 1500mm	1							
	Bedside Table	400mm x 400mm	2							
	Chest of Drawers	Total of 1200mm x 450mm (1000mm high)	2							
	Wardrobe	600mm x 600mm	2							
Family Bedroom	Double Bed	2000mm x 1500mm	1							
	Single Bed	2000mm x 900mm	1							
	Bedside Table	400mm x 400mm	3							
	Chest of Drawers	Total of 1200mm x 450mm (1000mm high)	3							
	Wardrobe	600mm x 600mm	3							