

Meeting Part M and designing Lifetime Homes

Edited by Caitriona Carroll, Julie Cowans and David Darton

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HOMES

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Contents

Foreword by Nick Raynsford MP	4
Section 1 Introduction	5
Section 2 Part M and Lifetime Homes requirements	13
Section 3 Working plans	25
References and further reading	36
Index	36

Foreword

Building Regulations, for some years, have required new public buildings to be accessible to everyone including those who are frail or disabled, but this did not apply to housing. Now we are extending Part M of the Building Regulations to make all new homes more accessible and convenient.

The new regulations and Approved Document were drawn up following extensive consultation with those involved with housing standards, with organisations representing disabled people, with the house building industry and with many other interested parties.

The revised regulations published in October 1998 allow time for the industry to adjust to the new regulatory requirements. But from October 1999 new homes must meet the new regulations. This guide from the Joseph Rowntree Foundation is therefore very timely. I hope that its clear exposition of the new regulations will be helpful to all those involved in developing Britain's future housing.

The guide also highlights the benefit of a little extra thought and care that needs to go into housing design in order to add the flexibility and adaptability found in Lifetime Homes. A number of local authorities also encourage use of Lifetime Home standards, and house builders may also wish to go beyond Part M, as a minimum regulatory standard, as they strive for excellence.

The implementation of the Part M regulations will improve the accessibility and convenience of new housing for everyone and Lifetime Homes will help to make homes even more adaptable to long-term needs. Homes built to these standards can help to reduce future costs either for adaptations or for residential care. Lifetime Home standards in particular offer clear lifestyle benefits that homes built in earlier decades will not have.

I wish everyone success in creating housing that Britain will be proud of in the years ahead. I am pleased to commend this guide as a very valuable and helpful tool in this endeavour.

Nick Raynsford MP
Construction Minister

Section 1

Introduction

Achieving Part M, Lifetime Homes and Housing Corporation Scheme Development Standards	6
Meeting Part M regulations and Lifetime Homes accessibility requirements	8
The Lifetime Homes standards	12

Achieving Part M, Lifetime Homes and Housing

It is generally accepted that homes should be built to be accessible for all people, including young or old, single or in families, nondisabled or disabled. When designing new homes, it is now often necessary to take account of three sets of requirements. The first is Part M of the Building Regulations that has recently been extended to include all new homes. The second is the Housing Corporation's Scheme Development Standards, which all housing funded with Housing Corporation money must meet. The third is Lifetime Homes standards, which many commissioning clients and local authorities now require.

The design solutions for all three sets of requirements are broadly similar. The Lifetime Homes standards and the Scheme Development Standards go a little further than Building Regulations in their requirements for adaptability and flexibility to be designed into the home. As these additions are minor, it seems sensible to design homes which achieve all of these requirements, and are thus 'universal' in their appeal and application.

This guide sets out in simple terms what the Building Regulations and Lifetime Homes standards require. The summary tables in this introduction also indicate which of the Housing Corporation Scheme Development Standards will be met when designing Lifetime Homes.

Developers and builders may simply wish to ensure that their plans meet Lifetime Homes standards. If they do, then all of the Part M Building Regulations, and relevant parts of the Housing Corporation Scheme Development Standards will have been met.*

But there are other reasons why designing new homes to the Lifetime Homes standards makes sense. Lifetime Homes include a number of attractive features that will differentiate them from the existing housing stock. These will provide the people who live in them with many advantages, and will give private builders of new homes a marketing edge in relation to the second-hand stock with which they compete. Because Lifetime Homes will be suitable for older people (whose numbers are increasing rapidly) and for the vast majority of disabled people, as well as the non-disabled person, they will have a wider market of potential buyers and residents, probably increasing their value and the ease with which they can be re-sold.

* But please note that it is important to meet the Part M dimensions specified to **each** side of the WC bowl in entrance level WCs (diagrams 10a and 10b). The Lifetime Homes standards for houses of three bedrooms or more require full side transfer from at least **one** side of the WC.

Using this document

Following this introduction are two tables that summarise and simplify the various requirements. The first table brings together the information necessary to see at a glance what needs to be achieved to meet the Part M Building Regulations. Alongside this we present some of the (very similar) Lifetime Homes requirements relating to accessibility (which have been revised and clarified after consultation since they were originally published in 1997). The table also shows the relevant Housing Corporation Scheme Development Standards that will be covered by meeting Lifetime Homes requirements, although it is recommended that the latest edition of the Scheme Development Standards is also referred to.

The second table sets out the full Lifetime Homes standards for reference. Homes that meet all the standards are entitled to be designated 'Lifetime Homes'. They will also meet the Part M Building Regulations, the relevant parts of the Housing Corporation Scheme Development Standards as indicated in the table, and the requirements of most local authorities for accessible housing.

Section 2 provides illustrated examples and technical details on meeting Part M regulations and Lifetime Homes standards. Special attention is given to accessible thresholds and to entrance level WCs, which have concerned some housebuilders.

Section 3 includes examples of house plans that not only meet Part M requirements but also meet Lifetime Homes standards. These demonstrate possible solutions for different types of home, but are not blueprints - with a little thought it is easy to incorporate the regulations and standards into many different situations.

Finally, an index is provided for quick reference.

Meeting Part M regulations and Lifetime

Meeting Part M regulations and Lifetime Homes accessibility requirements

Elements of accessibility required by Part M

Part M requirements (by Building Regulations paragraph)

Lifetime Homes standards

Housing Corporation Scheme Development Standards (3rd Edition) met if LTH criterion adopted (E = essential, R = recommended)

The approach to the house should be wide enough for wheelchair users, even when there is a parked car

Paragraphs 6.10 and 6.13

An additional 900mm width must be added to the space for a car

Standard 1

The car parking space must be capable of enlargement to 3300mm width (generally by having a 900mm path or garden strip adjacent to the 2400mm space for a car)

I.3.4. E

(requires actual provision at the outset rather than provision for later enlargement)

The approach should not be too steep, ideally it should be level

Paragraphs 6.6 and 6.13

If the plot gradient is less than 1:20 then no part of the approach must be steeper than 1:20. If the plot gradient is between 1:15 and 1:20, then individual slopes of 5m or less may have gradients up to 1:12 and individual slopes 5 to 10m in length may have gradients up to 1:15.* Paths should be at least 900mm wide.

Standard 2

As for Part M

relevant parts of I.3.1.1 E

An accessible threshold at entrance level should be provided

Paragraph 6.21

Where unavoidable, maximum 15mm upstand is permitted. Detailed guidance is in a separate industry guide available from The Stationery Office

Standard 4b

As for Part M

relevant parts of I.3.1.2. E

Doorways and corridors should be wide enough to allow wheelchair users to manoeuvre into and out of rooms

Paragraph 7.5

The entrance door must always be at least 775mm in width.

Internal doorways and corridors should conform to the following table:

Doorway clear opening width (mm)	Corridor/passageway width (mm)
750 or wider	900 (when approach head-on)
750	1200 (when approach not head-on)
775	1050 (when approach not head-on)
800	900 (when approach not head-on)

Standard 6

The width of the doorways and hallways should conform to the details given in the previous column, except that when the approach is not head-on and the corridor/passageway width is only 900mm, then the doorway clear opening width should be 900mm rather than 800mm. The clear opening width of the front door should be 800mm. There should be 300mm to the side of the leading edge of doors on the entrance level.

I.3.1.3. E

I.3.1.4. E

Communal stairs in blocks of flats should provide ease of access to ambulant disabled people

Paragraph 9.5

Uniform rise not more than 170mm
Uniform going not less than 250mm
Handrails extend 300mm beyond top and bottom step
Handrail height 900mm from nosings

Standard 5a

As for Part M

I.4.1.5. E

Homes accessibility requirements

Elements of accessibility required by Part M	Part M requirements (by Building Regulations paragraph)	Lifetime Homes standards	Housing Corporation Scheme Development Standards (3rd Edition) met if LTH criterion adopted
A stepped change of level within an entrance storey should allow ease of access to ambulant disabled people	<p>Paragraph 7.7 Flight clear width 900mm Suitable continuous handrail on each side where there are more than three rises Rises and goings accord with Part K of the Building Regulations</p>	Changes of level within a storey are not covered under the Lifetime Homes standards	n/a
Wheelchair users should be able to use any lift provided in a block of flats	<p>Paragraph 9.1 Clear landing entrances 1500x1500mm Min. internal lift car dimensions 900x1250mm Lift controls between 900 and 1200mm from the floor and 400mm from the lift's internal front wall. There should be tactile control buttons, and visual and audible storey indicators for blocks of more than three storeys</p>	<p>Standard 5b As for Part M but the minimum internal dimensions for the lift should be 1100x1400mm</p>	I.2.1.44 E I.2.1.45 E
Switches and sockets should be at a convenient height for all	<p>Paragraph 8.2 Switches and socket outlets for lighting and other equipment in habitable rooms between 450 and 1200mm from finished floor level</p>	<p>Standard 16 As for Part M</p>	I.3.1.14. R (switches etc. at 900-1200mm) I.3.1.15. R (sockets at 450-600mm)
All homes should have an entrance level WC which is usable by a wheelchair user	<p>Paragraph 10.3 Clear usable space between front of WC bowl and opposite wall/door 750mm min. Distance from central line of cistern and adjoining wall 450mm min. Where oblique access provided, there should be 250mm min. to side of door</p>	<p>Standard 10a For dwellings with three or more bedrooms, or on one level, the WC must be fully accessible. A wheelchair user should be able to close the door from within the closet and achieve side transfer from a wheelchair to at least one side of the WC. 1100mm clear space is required at the front of the WC bowl**</p> <p>In small two-bedroom dwellings where the design has failed to achieve this fully accessible WC, the Part M standard WC will meet this standard</p>	I.3.1.5 E I.3.1.9 R I.6.3.6 R

* There must be top, bottom and intermediate flat 'landings' of not less than 1.2m excluding the swing of doors and gates. Part M makes provision for a 'stepped' access if plot gradients are steeper than 1:15.
** But please note that it is important to meet the Part M minimum dimensions specified to each side of the WC bowl in entrance level WCs (diagrams 10a and 10b). The Lifetime Homes standards for houses of three bedrooms or more require full side transfer from at least one side of the WC.

Note: Homes built to Lifetime Homes standards meet Part M Building Regulations and relevant parts of the Housing Corporation Scheme Development Standards as indicated in this table

The Lifetime Homes standards

The Lifetime Homes Standards

Lifetime Homes standards

Specifications and dimensions which meet the Lifetime Homes standards

Housing Corporation Scheme Development Standards compliance (E = essential, R = recommended)

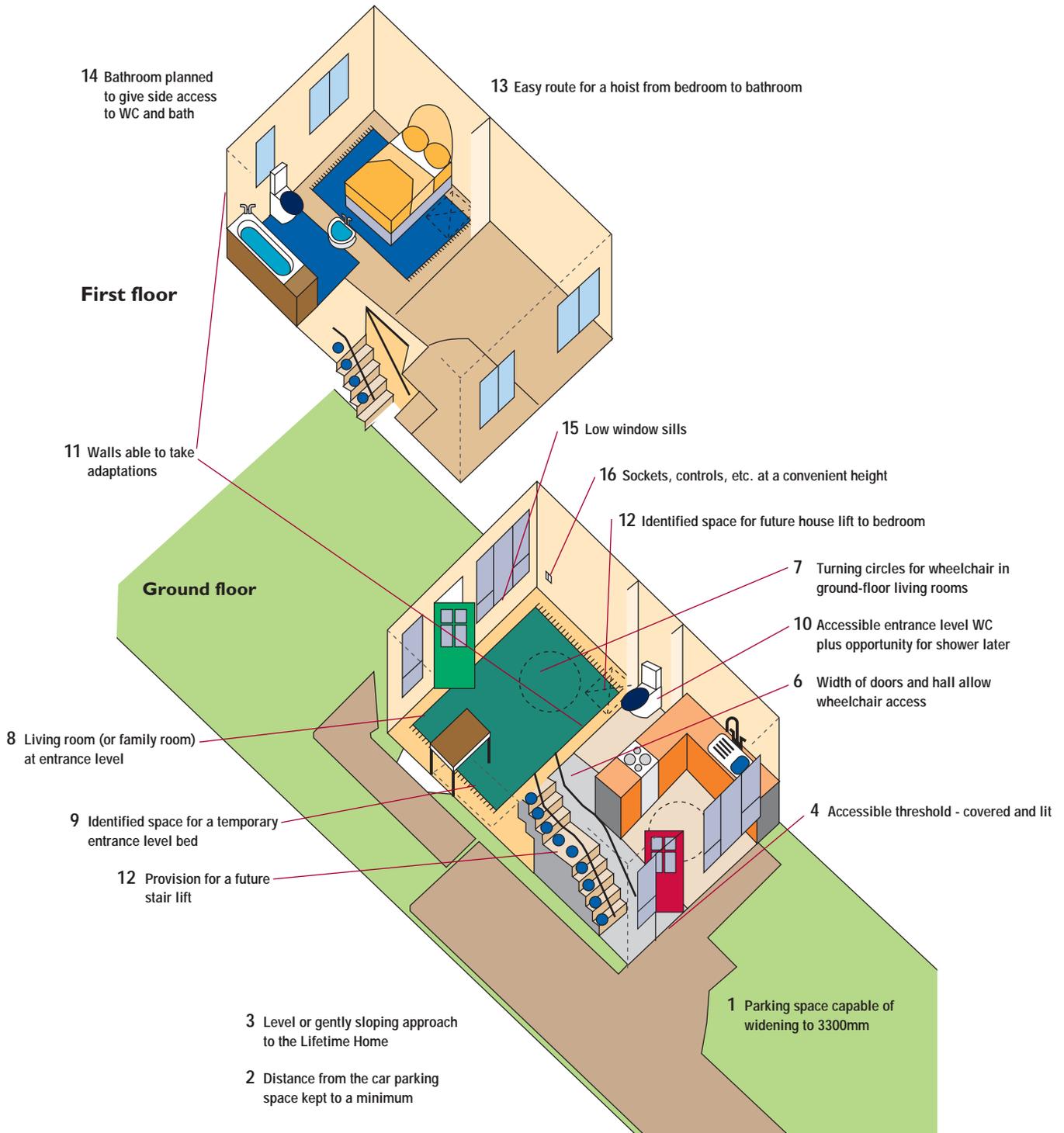
1	Where there is car parking adjacent to the home, it should be capable of enlargement to attain 3300mm width	The general provision for a car parking space is 2400mm width. If an additional 900mm width is not provided at the outset, there must be provision (e.g. a grass verge) for enlarging the overall width to 3300mm at a later date	I.1.3.4 E (requires actual provision at the outset rather than provision for later enlargement)
2	The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping	It is preferable to have a level approach. However, where the topography prevents this, a maximum gradient of 1:12 is permissible on an individual slope of less than 5 metres or 1:15 if it is between 5 and 10m, and 1:20 where it is more than 10m.* Paths should be a minimum of 900mm width	I.1.3.2 E (but covers natural surveillance, not distance)
3	The approach to all entrances should be level or gently sloping	See standard 2. above for the definition of gently sloping	relevant parts of I.3.1.1 E
4	All entrances should: a) be illuminated b) have level access over the threshold and c) have a covered main entrance	The threshold upstand should not exceed 15mm (see detailed examples on pages 16-17)	I.1.1.12 E relevant parts of I.3.1.2 E
5	a) Communal stairs should provide easy access and b) where homes are reached by a lift, it should be fully wheelchair accessible	<i>Minimum dimensions for communal stairs</i> Uniform rise not more than 170mm Uniform going not less than 250mm Handrails extend 300mm beyond top and bottom step Handrail height 900mm from each nosing <i>Minimum dimensions for lifts</i> Clear landing entrances 1500x1500mm Min. internal dimensions 1100x1400mm Lift controls between 900 and 1200mm from the floor and 400mm from the lift's internal front wall	I.4.1.5 E I.2.1.44 E I.2.1.45 E
6	The width of the doorways and hallways should conform to the specifications in the next column	Doorway clear opening width (mm) 750 or wider 750 775 900 The clear opening width of the front door should be 800mm. There should be 300mm to the side of the leading edge of doors on the entrance level. Corridor/passageway width (mm) 900 (when approach is head-on) 1200 (when approach is not head-on) 1050 (when approach is not head-on) 900 (when approach is not head-on)	I.3.1.2 E I.3.1.3 E I.3.1.4 E
7	There should be space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchair users elsewhere	A turning circle of 1500mm diameter or a 1700x1400mm ellipse is required	I.3.1.12 R
8	The living room should be at entrance level		I.3.1.10 R

Lifetime Homes standards	Specifications and dimensions which meet the Lifetime Homes standards	Housing Corporation Scheme Development Standards compliance
9	In houses of two or more storeys, there should be space on the entrance level that could be used as a convenient bed-space	I.6.3.6 R I.3.1.1 R
10	There should be: a) a wheelchair accessible entrance level WC, with b) drainage provision enabling a shower to be fitted in the future	I.3.1.5 E I.3.1.9 R I.6.3.6 R
	<p>The drainage provision for a future shower should be provided in all dwellings</p> <p><i>Dwellings of three or more bedrooms</i></p> <p>For dwellings with three or more bedrooms, or on one level, the WC must be fully accessible.</p> <p>A wheelchair user should be able to close the door from within the closet and achieve side transfer from a wheelchair to at least one side of the WC. There must be at least 1100mm clear space from the front of the WC bowl. The shower provision must be within the closet or adjacent to the closet (the WC could be an integral part of the bathroom in a flat or bungalow)**</p> <p><i>Dwellings of two or fewer bedrooms</i></p> <p>In small two-bedroom dwellings where the design has failed to achieve this fully accessible WC, the Part M standard WC will meet this standard</p>	
11	Walls in bathrooms and toilets should be capable of taking adaptations such as handrails	I.6.3.1 E
12	The design should incorporate: a) provision for a future stair lift b) a suitably identified space for a through-the-floor lift from the ground to the first floor, for example to a bedroom next to a bathroom	I.3.1.6 E I.6.3.6 R
	There must be a minimum of 900mm clear distance between the stair wall (on which the lift would normally be located) and the edge of the opposite handrail/balustrade. Unobstructed 'landings' are needed at top and bottom of stairs	
13	The design should provide for a reasonable route for a potential hoist from a main bedroom to the bathroom	I.6.3.2 E I.2.1.31 R
	Most timber trusses today are capable of taking a hoist and tracking. Technological advances in hoist design mean that a straight run is no longer a requirement	
14	The bathroom should be designed to incorporate ease of access to the bath, WC and wash basin	
	Although there is not a requirement for a turning circle in bathrooms, sufficient space should be provided so that a wheelchair user could use the bathroom	
15	Living room window glazing should begin at 800mm or lower and windows should be easy to open/operate	I.4.1.1 E I.2.1.32 R
	People should be able to see out of the window whilst seated. Wheelchair users should be able to operate at least one window in each room	
16	Switches, sockets, ventilation and service controls should be at a height usable by all (i.e. between 450 and 1200mm from the floor)	I.3.1.14 R (switches door handles and thermostats at 900-1200mm) I.3.1.15 R (sockets at 450-600mm)
	This applies to all rooms including the kitchen and bathroom	

* Providing there are top, bottom and intermediate landings of not less than 1.2m excluding the swing of doors and gates.
 ** But please note that it is important to meet the Part M dimensions specified to each side of the WC bowl in entrance level WCs (diagrams 10a and 10b). The Lifetime Homes standards for houses of three bedrooms or more require full side transfer from at least one side of the WC.

Note: Homes built to Lifetime Homes standards meet Part M and relevant parts of the Housing Corporation Scheme Development Standards as indicated

Lifetime Homes standards



Edwin Trotter Associates

Note: Standard 5 on lifts and communal stairs applies only to flats

Section 2

Part M and Lifetime Homes Requirements

Approach	14
Entrance and thresholds	16
Circulation	18
Internal layout	19
Entrance level WCs	20
Adaptability	22
Bathrooms	23
Glazing	24
Controls	24

Approach

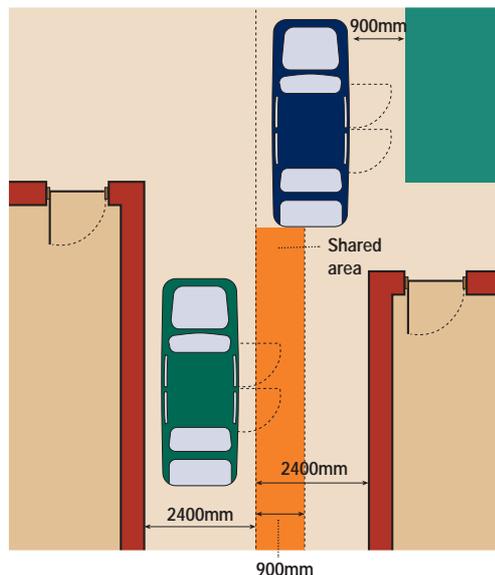
Diagram 1

Part M standard

The width of the approach, excluding space for a parked car, should take account of the needs of a wheelchair, stick or crutch user. Excluding the car parking space, the path should not be less than 900mm wide.

The width normally assumed for a car parking space is 2400mm, which means that meeting the Part M requirement is likely to lead to an overall width of 3300mm (including the 900mm path that the Part M regulations require).

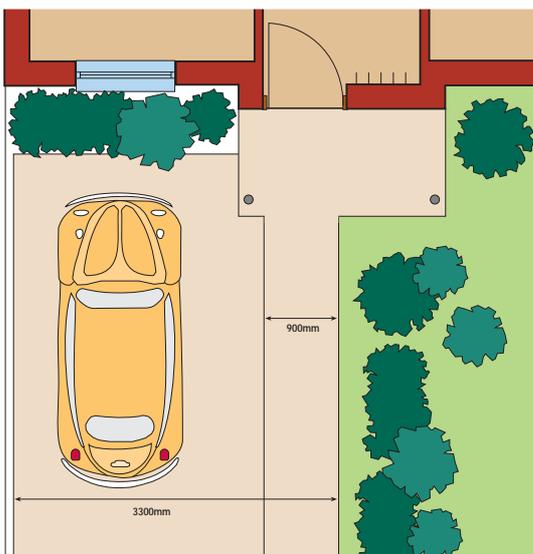
Imaginative design can reduce the impact of this requirement on the space between houses. For example, in diagram 1 the left-hand house has 900mm by the side of the car by using the shared area, while the right-hand house has 900mm to the side of the car between the car and the flower bed/lawn.



Lifetime Homes standard 1

Where there is car parking adjacent to the home, it should be capable of enlargement to attain 3300mm width.

Diagram 2



Imaginative solutions for car parking include shared areas, or making provisions for the requirement when setting out the front garden area.

Part M standard

The approach should be as safe and as convenient for disabled people as is reasonable, and, ideally, be level or gently sloping. If the plot gradient is less than 1:20 then no part of the approach must be steeper than 1:20. If the plot gradient is between 1:15 and 1:20, then individual slopes of 5m or less may have gradients up to 1:12 and individual slopes 5 to 10m in length may have gradients up to 1:15 (there must be top, bottom and intermediate flat 'landings' of not less than 1.2m excluding the swing of doors and gates. Part M makes provision for a 'stepped' access if plot gradients are steeper than 1:15). Paths should be at least 900mm wide.

Lifetime Homes standard 2

The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping.

It is preferable to have a level approach. However, where the topography prevents this, a maximum gradient of 1:12 is permissible on an individual slope of less than 5 metres or 1:15 if it is between 5 and 10m, and 1:20 where it is more than 10m (providing there are top, bottom and intermediate landings of not less than 1.2m excluding the swing of doors and gates). Paths should be a minimum of 900mm width.

Approach

Part M standard

The approach to the principal entrance must be accessible. In exceptional circumstances where the gradient of the plot exceeds 1:15, a stepped approach is permissible.

Lifetime Homes standard 3

The approach to all entrances should be level or gently sloping.

Diagram 3a

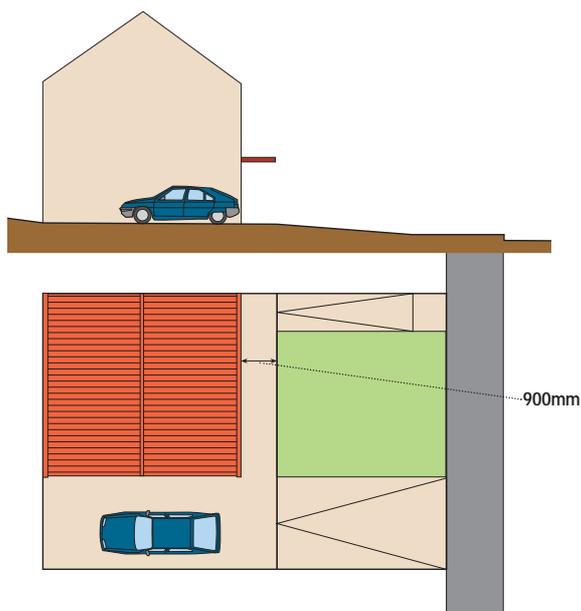
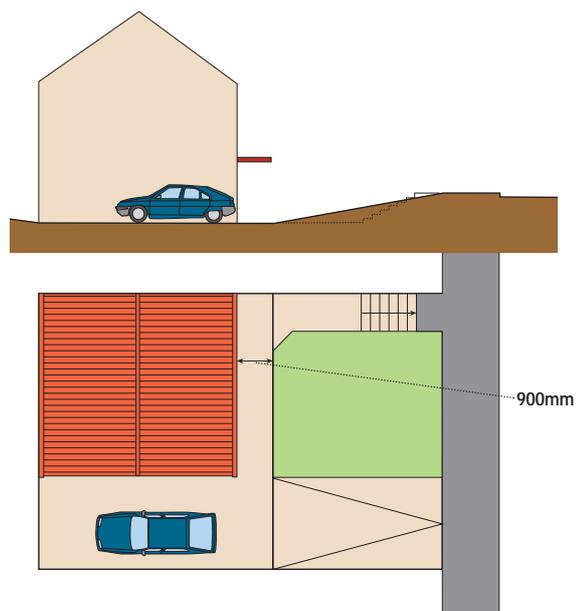


Diagram 3b



Ideally the level or gently sloping approach should be achieved as, for example, shown in diagram 3a. If the site is so steep that some steps are unavoidable, as allowed by Part M, level access can still be achieved from the car parking space. An example is given in diagram 3b.

Entrance and thresholds

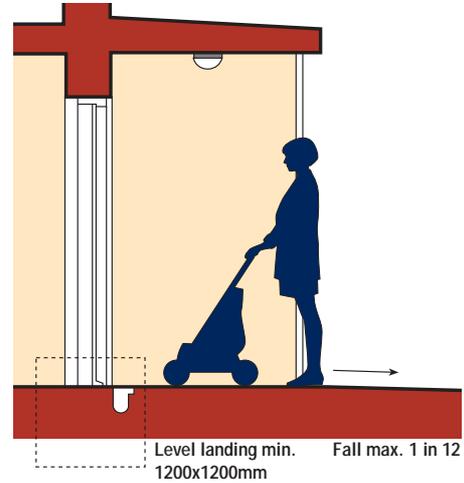
Diagram 4a

Lifetime Homes standard 4

All entrances should be illuminated and have accessible level access over the threshold level and the main entrance should be covered.

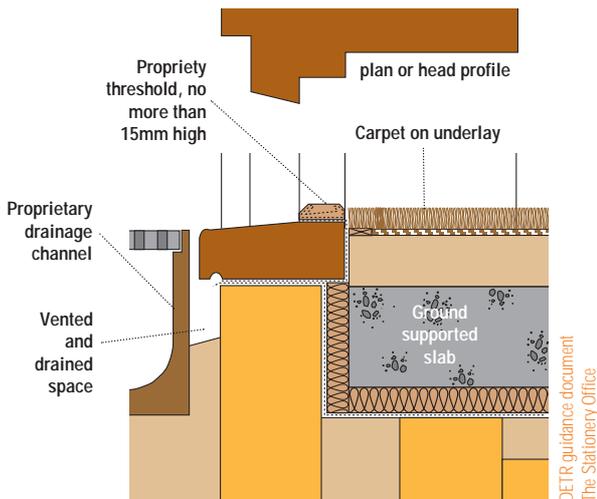
Part M standard

An accessible threshold at the entrance should be provided. Where unavoidable, a maximum 15mm upstand may be incorporated.



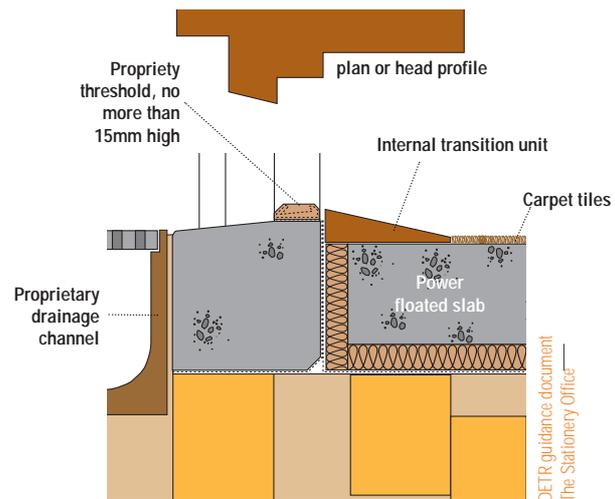
Under Part M of the building regulations the responsibility for the successful design of an accessible threshold lies with the builder/architect. This is often perceived as a challenge. However, there are many working examples of successful solutions to draw on. Set out below in diagrams 4b to 4f are suggested solutions incorporated in the industry guidance documents on accessible thresholds, published by The Stationery Office. While these examples are not exhaustive and many proprietary thresholds will continue to develop, most design situations are catered for. It should be noted that a covered entrance as required by Lifetime Homes standards can also contribute to weather-proofing.

Diagram 4b



Here the frame is set back 30mm from the face of the external wall and a timber sill is used.

Diagram 4c

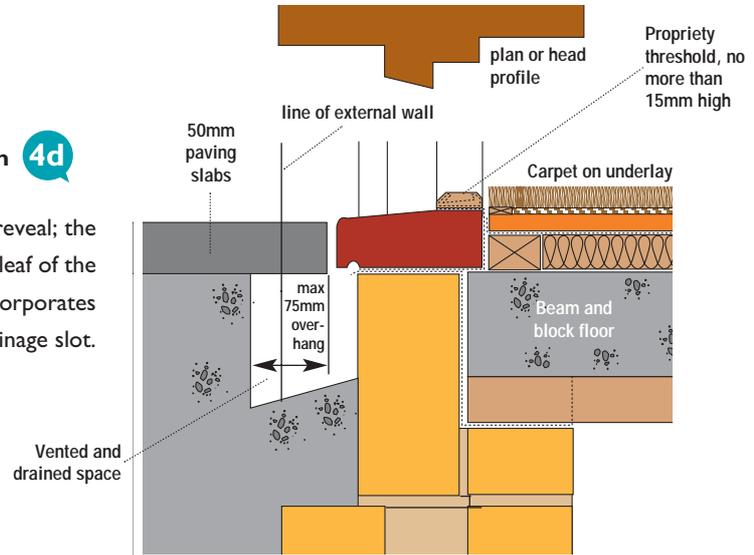


The frame is set back 55mm from the face of the external wall and a concrete sill is used. Because of the threshold / floor level differential, an internal transition unit is introduced to facilitate access.

Entrance and thresholds

Diagram 4d

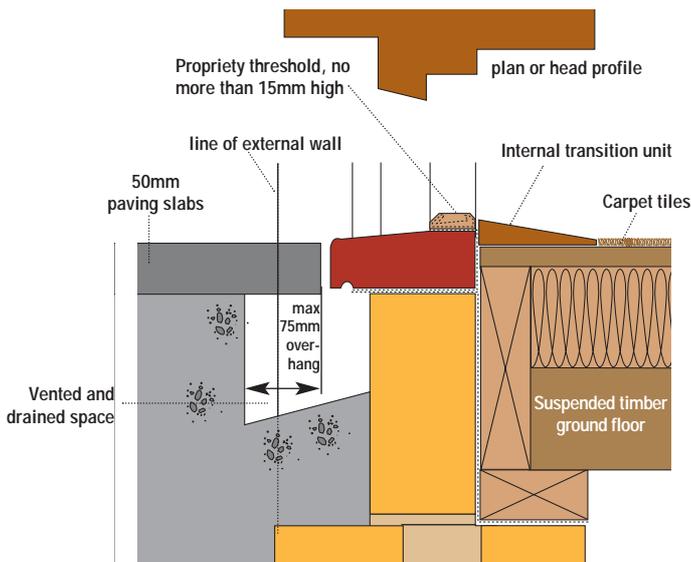
The door is in a 'check' reveal; the frame is set behind the outer leaf of the external wall. This design incorporates a site-formed drainage slot.



DETR guidance document
The Stationery Office

Diagram 4e

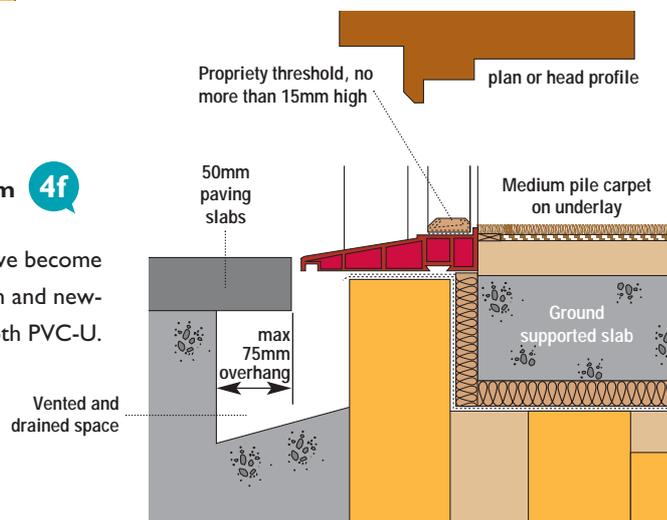
Timber is used for both the sill and the internal floor. Once again because of differential levels, a transition unit is incorporated in this design.



DETR guidance document
The Stationery Office

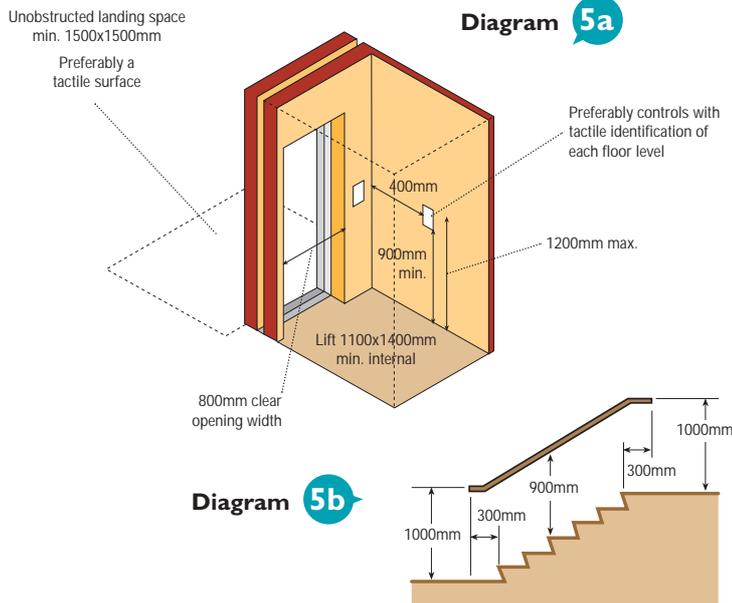
Diagram 4f

This design uses materials that have become increasingly popular in both renovation and new-build. The sill and door-frame are both PVC-U.



DETR guidance document
The Stationery Office

Circulation



Communal stairs which are well-designed from the outset will facilitate the addition of a future stair-lift.

Part M standard

Where a lift is provided, it should be suitable for an unaccompanied wheelchair user. There should be a clear landing entrance to the lift of 1500x1500mm, and the minimum internal dimensions of the lift should be 900x1250mm. The lift controls should be between 900 and 1200mm from the floor and 400mm from the lift's internal front wall. There should be tactile control buttons and visual and audible storey indicators in blocks of more than three storeys

Lifetime Homes standard 5

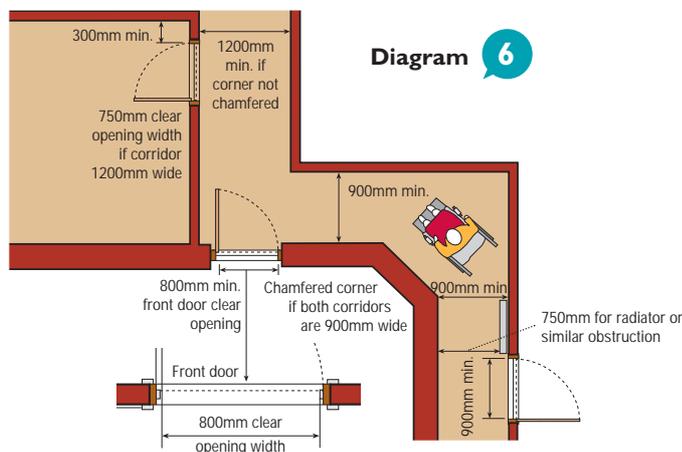
Communal stairs should provide easy access, and where homes are reached by a lift it should be fully wheelchair accessible. The minimum dimensions and control positioning / specification should be as described in the Part M standard, above, except that the internal dimensions of the lift should be 1100x1400mm

Part M standard

Doors and corridors should be wide enough to allow wheelchair users to manoeuvre into and out of rooms (including one that contains a WC). The entrance door must always be at least 775mm in width. The internal doorways and corridor widths should conform to the following:

Doorway clear opening width (mm)	Corridor/passageway width (mm)
750 or wider	900 (when approach is head-on)
750	1200 (when approach is not head-on)
775	1050 (when approach is not head-on)
800	900 (when approach is not head-on)

The width of corridors and doors can make or break the accessibility of a home. Careful thought from the outset can mean that a property is very accessible for all.



Lifetime Homes standard 6

The width of the internal doorways and hallways should conform to the Part M standard shown to the left, except that when the approach is not head-on and the corridor / passageway width is only 900mm, the doorway clear opening width should be 900mm rather than 800mm. The front door should have a minimum 800mm clear opening width.

There should be 300mm to the side of the leading edge of the doors on the entrance level (this would usually only apply to the front door, as other doors open into the room).

Internal layout

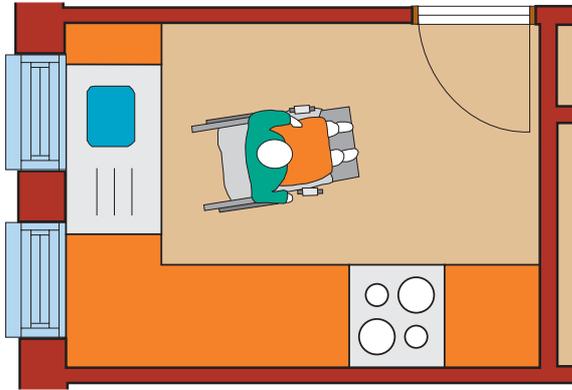


Diagram 7

Lifetime Homes standard 7

There should be space for turning a wheelchair in dining areas and sitting rooms, and adequate circulation space for wheelchair users elsewhere.

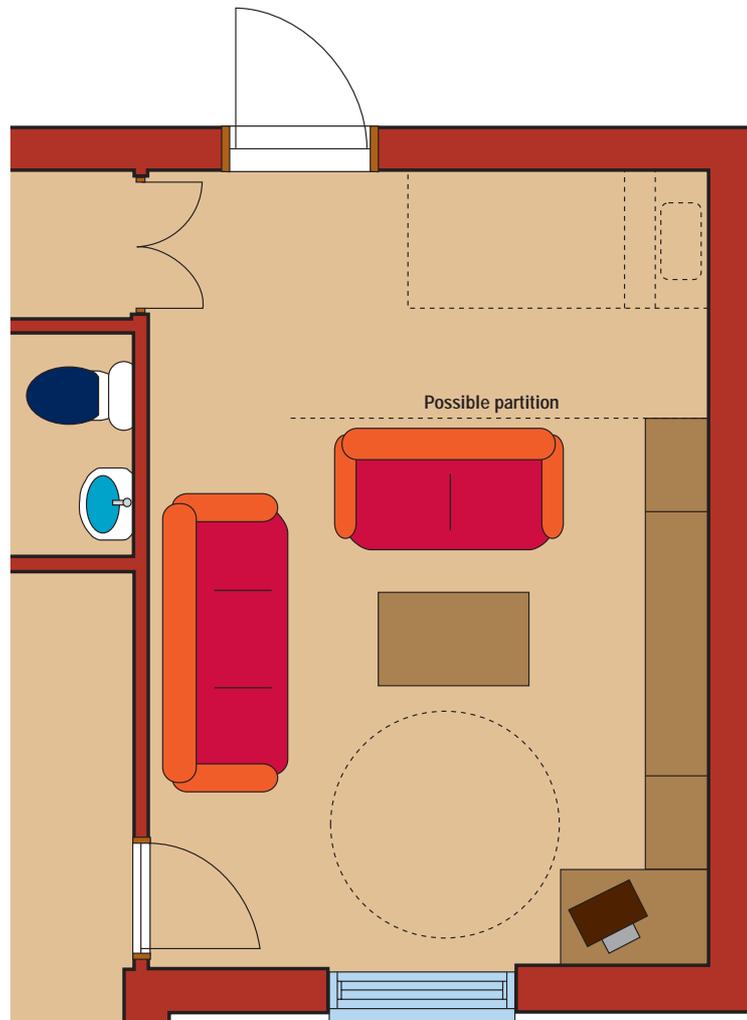
Diagram 8/9

Lifetime Homes standard 8

The living room should be at entrance level.

Lifetime Homes standard 9

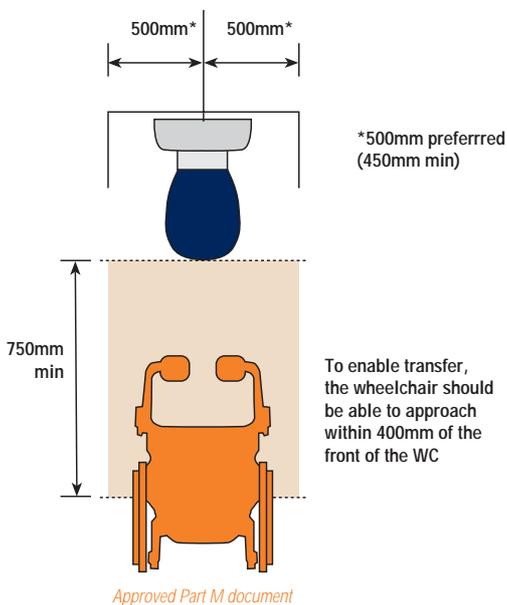
In houses of two or more storeys, there should be space on the entrance level that could be used as a convenient bed-space.



The entrance level bed-space can be used as a temporary measure, and is particularly useful if a person has a temporary impairment. At least one entrance level room will generally have this capacity. All that is generally required is careful thought about the siting of switches and sockets.

Entrance level WCs

Diagram 10a

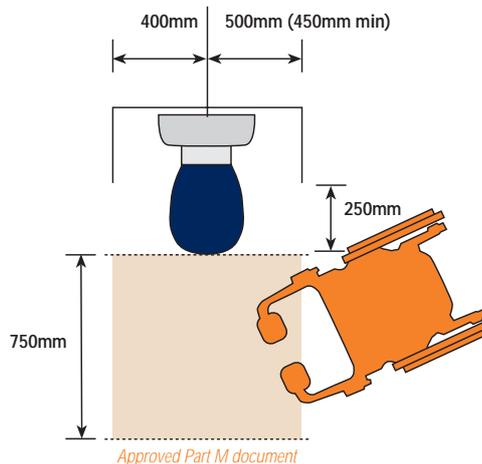


Part M standard

A WC should be provided in the entrance storey of the dwelling and should be located so that there is no need to negotiate a stair to reach it from the habitable rooms in that storey. The WC compartment should provide a clear space for wheelchair users to access the WC. The washbasin should be positioned so that it does not impede this access.

The clear usable space between the front of the WC bowl and the opposite wall/door should be a minimum of 750mm. The distance from the central line of the cistern and the adjoining wall should be a minimum of 450mm (as shown in diagram 10a). Where oblique access is provided, there should be a minimum of 250mm to the side of the door (as shown in diagram 10b). The WC door will need to open outward.

Diagram 10b



Entrance level WCs

Diagram 10c

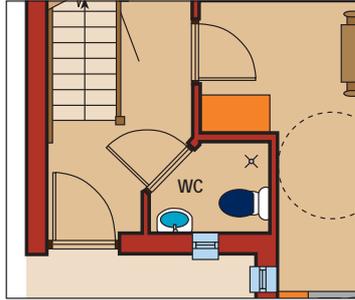
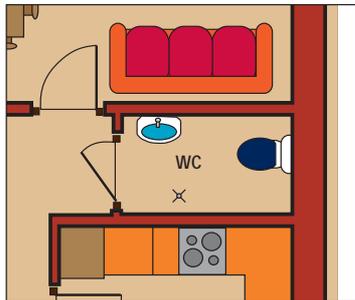


Diagram 10d



Edwin Trotter Associates

Diagram 10e

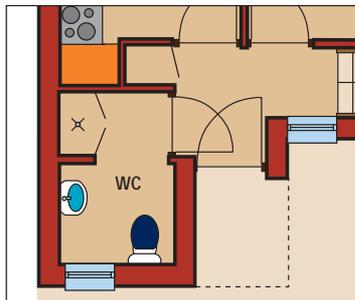


Diagram 10f

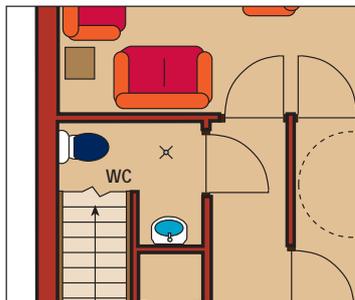
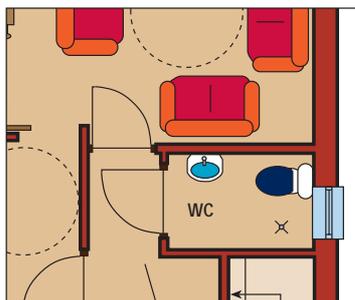


Diagram 10g



Lifetime Homes standard 10

There should be a) a wheelchair accessible entrance level WC, with b) drainage provision enabling a shower to be fitted in the future.

In dwellings of three bedrooms or more, a wheelchair user should be able to close the door from within the closet and achieve side transfer from a wheelchair to at least one side of the WC. There must be at least 1100mm clear space from the front of the WC bowl. The door of the WC will often need to open outward to allow this accessibility.

In small two-bedroom dwellings where the design has failed to achieve this fully accessible WC, the Part M standard WC will meet this standard.

The Part M standard WC is acceptable in two-bedroom Lifetime Homes or smaller. However, as outlined on page 11, for three-bedroom houses and larger a fully accessible WC is required. In both cases, where possible, an individual's privacy and dignity should be respected whether or not one uses mobility or other equipment.

Given the current width of most wheelchairs, a minimum distance of 700mm from the edge of the WC bowl to the wall is generally required to allow reasonable side transfer from a wheelchair. Diagrams 10c to 10g illustrate WCs that meet this Lifetime Home standard and are taken from the plans in section 3 of the guide (but developers must ensure that the Part M measurements in diagrams 10a and 10b are also adhered to).

Ideally, the drainage provision for a future shower should be located within the WC. The space at the side of the WC bowl required to allow side transfer from a wheelchair can be used for this. Where it is impossible to locate the drainage within the WC, provision could be located in an alternative, convenient position (e.g. diagram 10g).

In the diagrams on this page the shower drainage is shown with an 'X'.

Adaptability

Lifetime Homes standard 11

Walls in bathrooms and WCs should be capable of taking adaptations such as handrails.

Reinforcements should be located between 300 and 1500mm from the floor.

These provisions in the WC and bathroom mean that adaptations can be introduced with a minimum of inconvenience. A well-used method to reinforce the walls is to provide plywood reinforcements on 25x50mm noggins on (typically) 100x50mm studs (Diagram 11b).

Diagram 11a

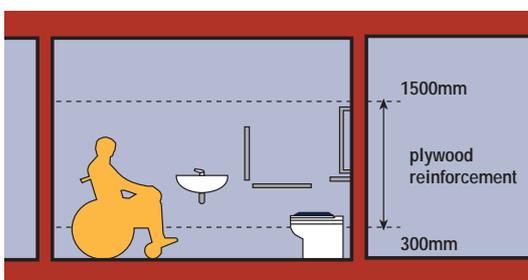
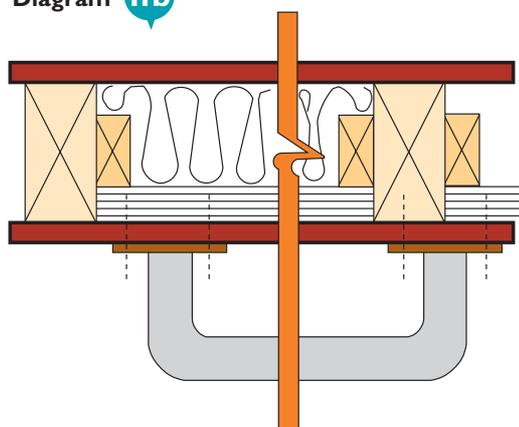


Diagram 11b



Lifetime Homes standard 12

The design should incorporate:
 a) provision for a future stair lift (diagrams 12a and 12b).
 b) an identified space for a potential through-the-floor lift from the entrance level to first floor, for example to a bedroom next to a bathroom (diagram 12c).

There should be a minimum of 900mm clear distance between the stair wall (on which the lift would normally be located) and the edge of the opposite handrail/balustrade. Unobstructed 'landings' are needed at the top and bottom of stairs.

Diagram 12a

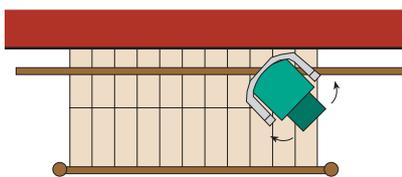
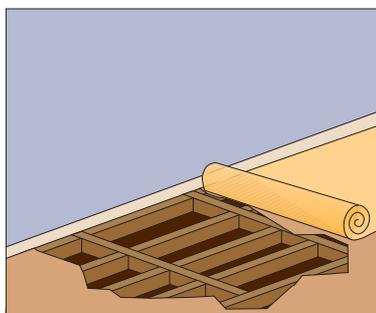
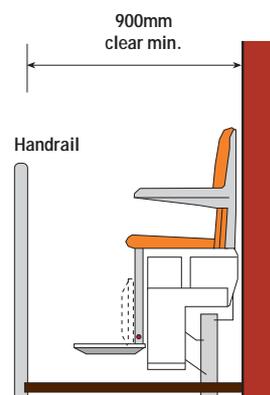


Diagram 12c



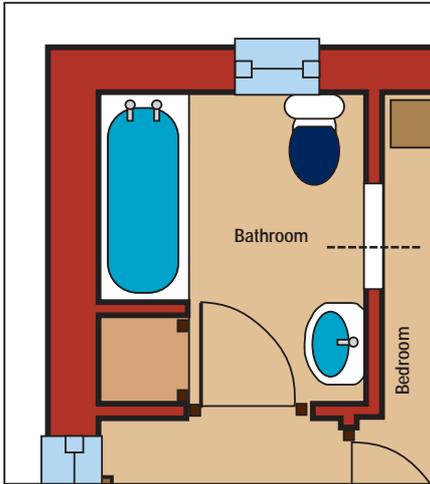
David Bonnett

Diagram 12b



Through-the-floor lifts are made to a range of different specifications. Lift retailers can be contacted for the most up-to-date specifications and dimensions.

Diagram 13



Lifetime Homes standard 13

The design should provide for a reasonable route for a potential hoist from a main bedroom to the bathroom.

Well thought-out design (such as that in diagram 13) provides for a future track and hoist through a removable floor-to-ceiling panel. Technological advances mean that tracks no longer have to go in a straight line and a second best solution would be a route for a hoist via the landing.

Diagram 14a



Diagram 14b



Lifetime Homes standard 14

The bathroom should be designed to incorporate ease of access to the bath, WC and wash basin.

A well laid-out bathroom is appreciated by all. Although there is no requirement for a turning circle in bathrooms, sufficient space should be provided so that a wheelchair user could conveniently use the bathroom and gain side access to bath and WC.

Glazing

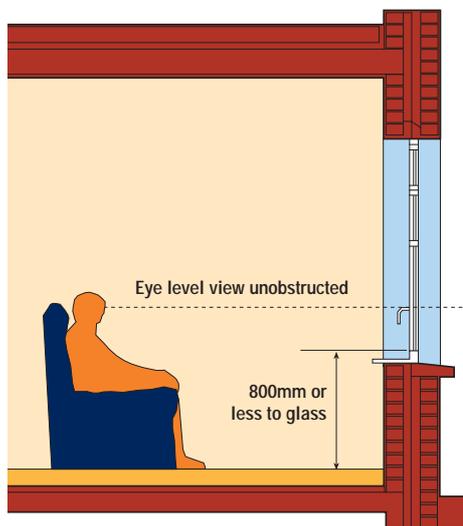
Diagram 15

Lifetime Homes standard 15

Living room window glazing should begin at 800mm or lower and windows should be easy to open/operate.

With glazing at an appropriate level, people can enjoy the views through the window whilst seated.

Wheelchair users should be able to open at least one window in each room.



Controls

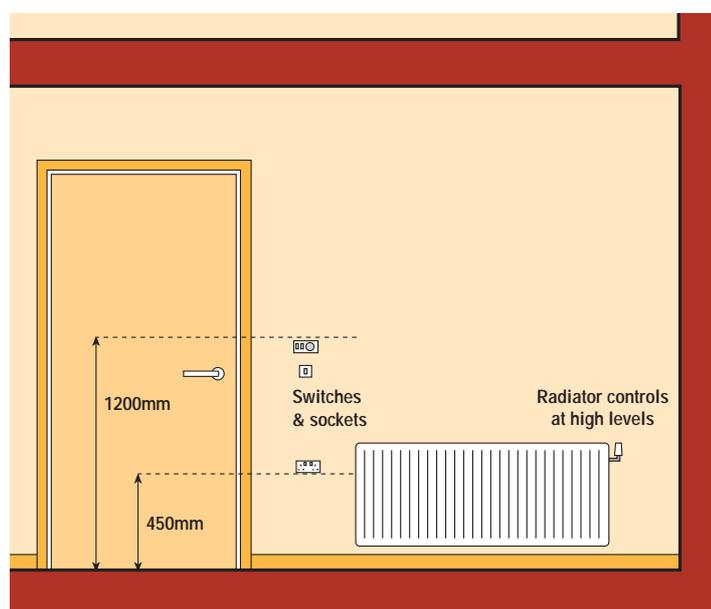
Diagram 16

Part M standard

Switches and socket outlets for lighting and other equipment should be located so that they are easily reachable (i.e. between 450 and 1200mm from the floor).

Lifetime Homes standard 16

Switches, sockets, ventilation and service controls should be at a height usable by all (i.e. between 450 and 1200mm from the floor).



Section 3

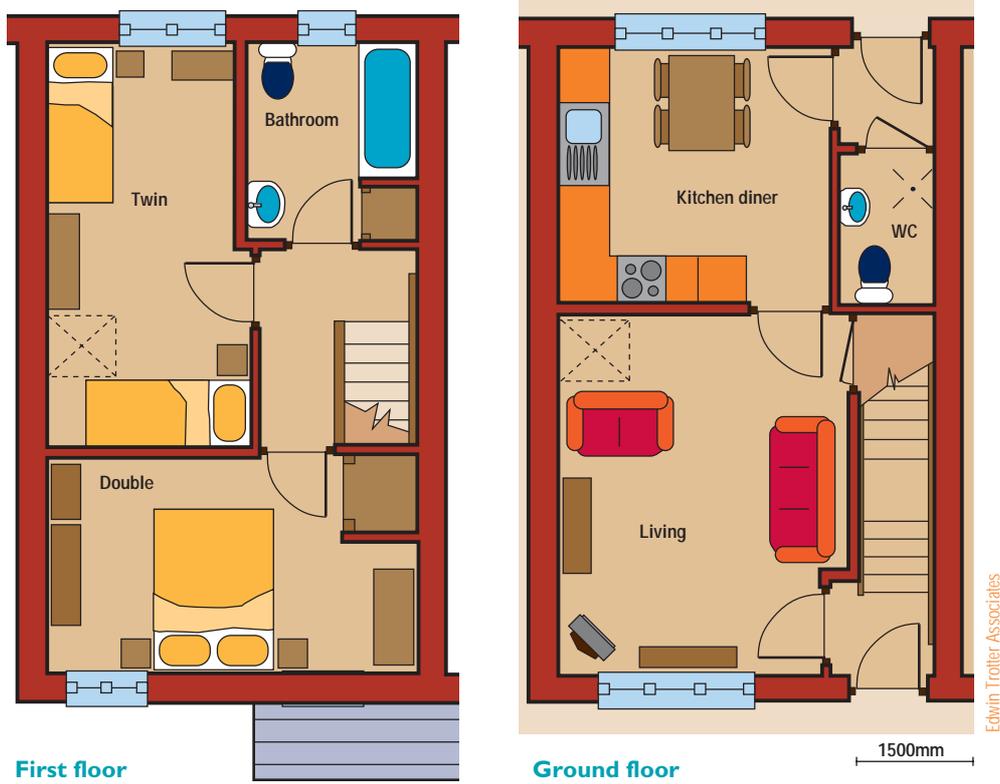
Working plans

		Page	Diagram
2 bedroom, 71.76m ² (767.8sq.ft)	internal frontage 4.9m	26	17
2 bedroom, 76m ² (813.2sq.ft)	internal frontage 4.35m	27	18
3 bedroom, 74m ² (796sq.ft)	internal frontage 5.4m	28	19
3 bedroom, 74m ² (796sq.ft)	internal frontage 5.35m	29	20
3 bedroom, 76.8m ² (826sq.ft)	internal frontage 5.5m	30	21
3 bedroom, 81.8m ² (880sq.ft)	internal frontage 5.55m	31	22
3 bedroom, 82m ² (882sq.ft)	internal frontage 6m	32	23
3 bedroom, 82m ² (882sq.ft)	internal frontage 5.5m	33	24
4 bedroom, 3 storey, 118.9m ² (1279sq.ft)	internal frontage 9.7m (approx)	34	25
4 bedroom, 3 storey, 120m ² (1291sq.ft)	internal frontage 5.6m (approx)	35	26

This section contains plans that meet not only Part M requirements, but also full Lifetime Homes standards. They illustrate that with a little thought these can be incorporated in a wide variety of situations. The examples are not exhaustive, and neither are they intended to be blueprints. The standards can be built into virtually any style of house or on any site. Some of these examples were designed specifically for clients, while some have been created for this guide. We have included different (sometimes difficult) frontages, sizes, and internal layouts, as well as some three-storey properties similar to those commonly found in inner-city sites.

2 bedroom, 71.76m² (767.8sq.ft) internal frontage 4.9m

Diagram 17



Developers are sometimes under the mistaken impression that Lifetime Homes standards are more difficult to achieve in small dwellings. This plan shows a well-proportioned smaller house which meets the standards.

The thoughtful design makes the most of all available space. Here, the shower provision is in the WC. The simple layout coupled with the lobby provision creates a spacious feeling to the main rooms.

2 bedroom, 76m² (813.2sq.ft) internal frontage 4.35m

This house also meets Lifetime Homes standards. It has a partition wall between the WC and the living room cupboard which contains the shower provision. If the need arises, the partition could be removed and the cupboard entrance blocked up, to create a ground-floor shower in the WC.

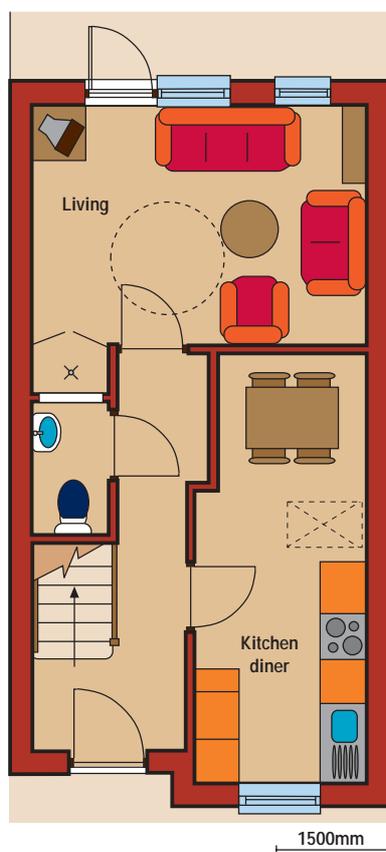
Diagram 18

Today's smaller households have increasingly higher aspirations. The potential for a downstairs shower room in addition to a bathroom upstairs could be a major selling point for this house.

First floor



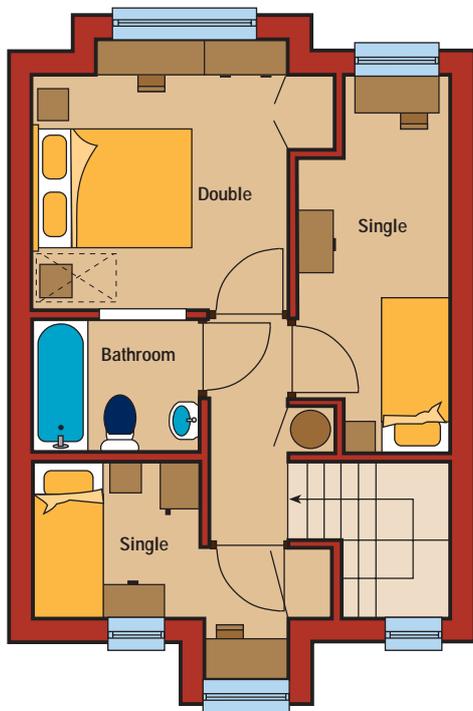
Ground floor



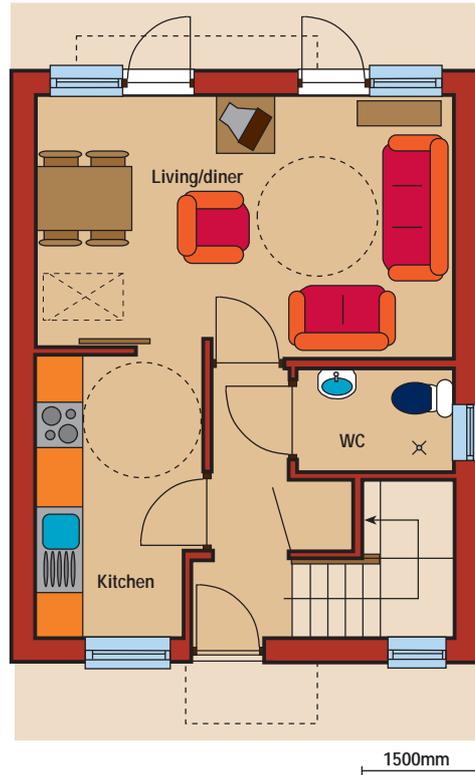
3 bedroom, 74m² (796sq.ft) internal frontage 5.4m

Diagram 19

First floor



Ground floor



In this design, the under-stairs storage space (where the shower provision is located) could be used in a variety of ways.

A turning circle in the kitchen is desirable and increases the sense of spaciousness.

In this plan provision has been made for a removable panel between the bedroom and bathroom to allow direct access (via a hoist if necessary). For privacy a door would have to be added at the time this access was created.

3 bedroom, 74m² (796sq.ft) internal frontage 5.35m

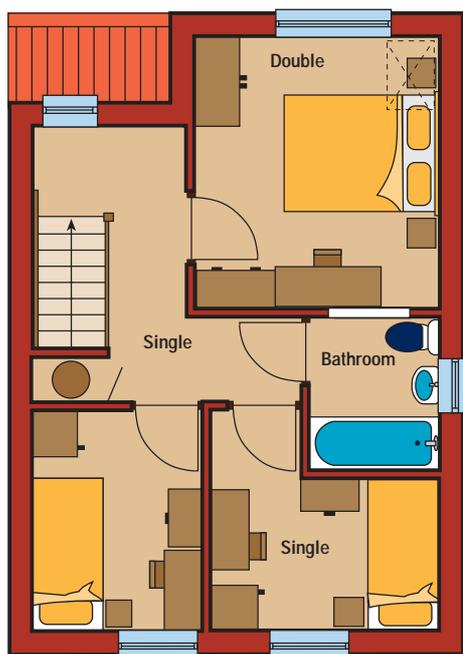
Many clients ask for a window above the kitchen sink. However, this quite often means that the window is inaccessible to people with restricted mobility.

Here, a second smaller but accessible window is added to the kitchen, and artificial ventilation controls are fully accessible.

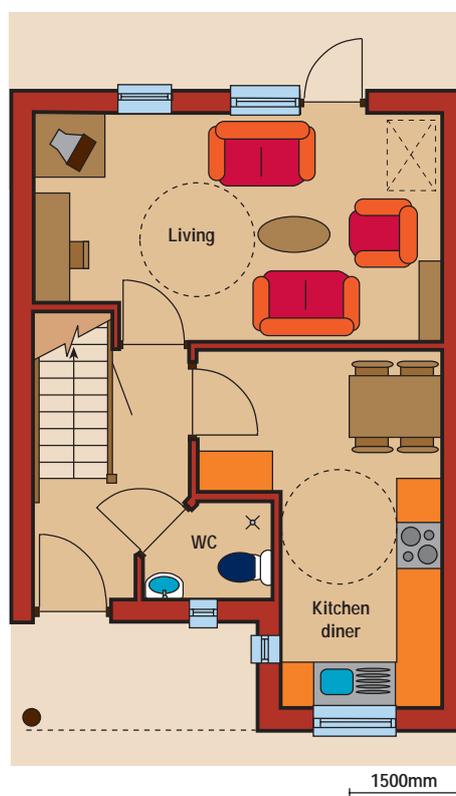
Most of the other windows in the home are also easily accessible.

Diagram 20

First floor



Ground floor



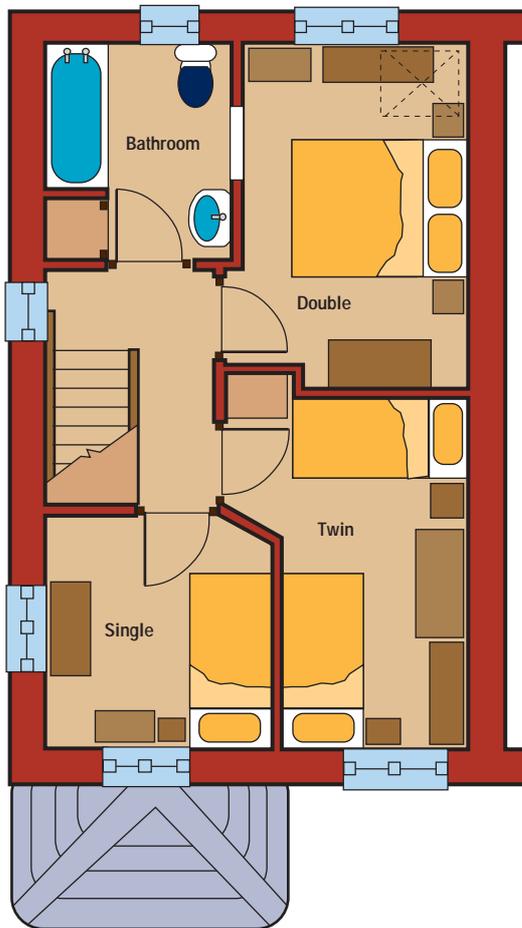
3 bedroom, 76.8m² (826sq.ft) internal frontage 5.5m

Diagram 21

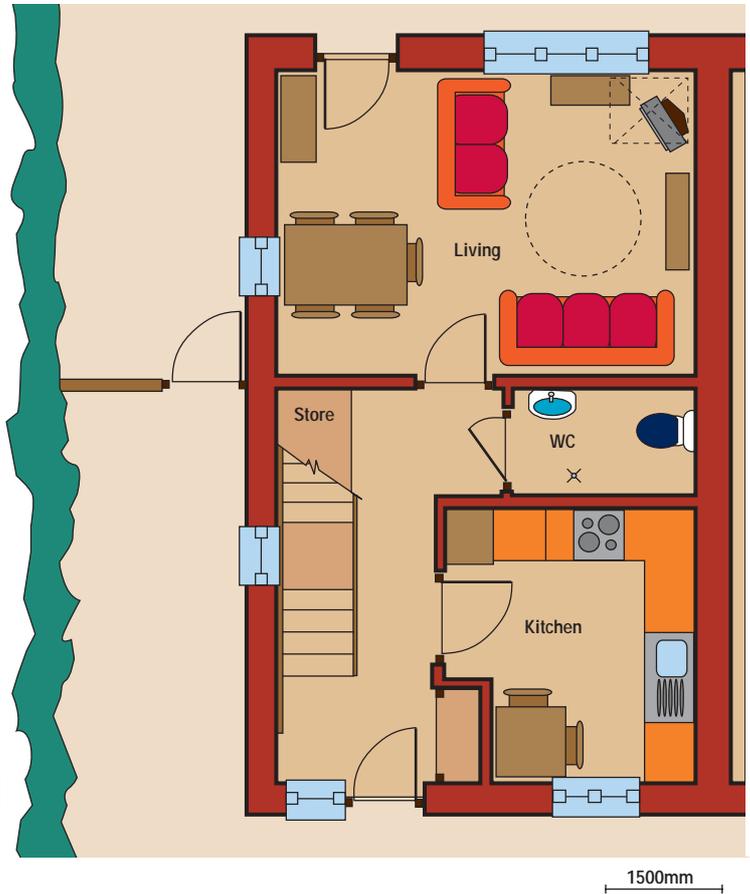
This design shows one solution to providing a future hoist - a removable panel has been created in the wall between the main bedroom and the bathroom.

Although not part of the standards, the straight flight of stairs has a resting point mid-way which, with its small window, adds to the spacious feel of the hallway. (If the through-the-floor lift were provided and direct access to the bathroom were required, the bed would need to be moved, possibly with the loss of a bedside table.)

First floor



Ground floor



3 bedroom, 81.8m² (880sq.ft) internal frontage 5.55m

Diagram 22

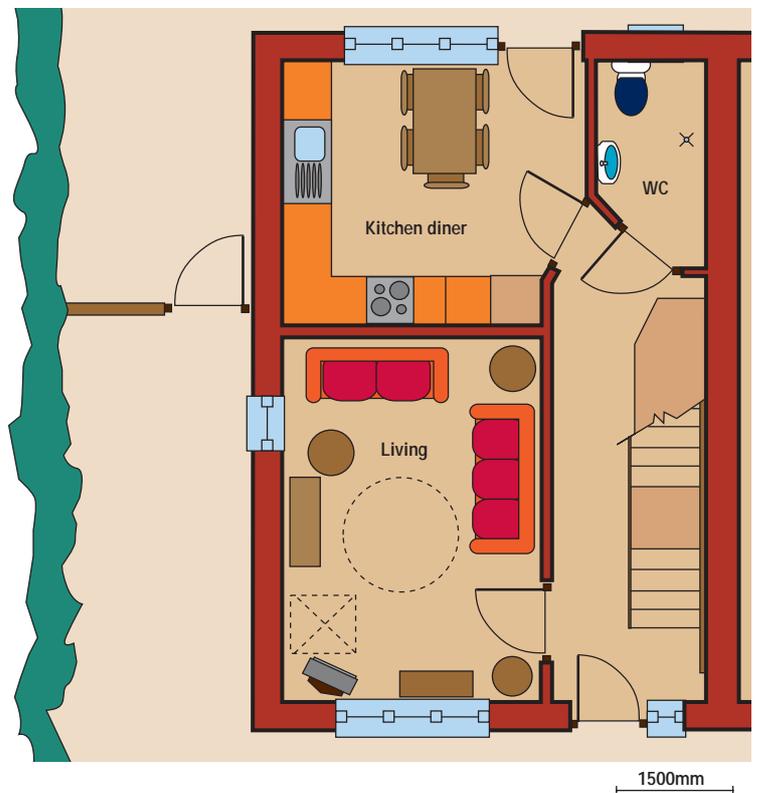
The clear route between each bedroom and the bathroom allows for a hoist to be fitted in future.

The through-the-floor lift provision is in the twin bedroom, as opposed to the conventional provision in the main bedroom. This allows for a rear kitchen and a rear main bedroom, both frequently requested by clients.

First floor



Ground floor



Edwin Trotter Associates

3 bedroom, 82m² (882sq.ft) internal frontage 6m

Diagram 23

First floor



There are many different models of through-the-floor lifts. For the most up-to-date information on dimensions, contact a local supplier.

In this plan, provision was made for a larger lift. This has little or no impact on the overall design or use of the house initially. Of course, if the lift was installed the household would have to adapt by repositioning furniture or by doing without some furniture. Such flexibility is normal in all housing when disability occurs.

A sliding door between the dining area and the living room, coupled with French doors leading to the garden, make this a very successful semi-open design.

Ground floor



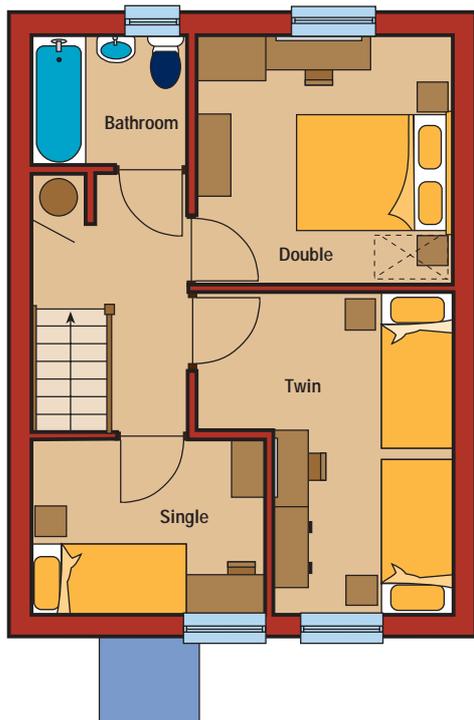
3 bedroom, 82m² (882sq.ft) internal frontage 5.5m

Diagram 24

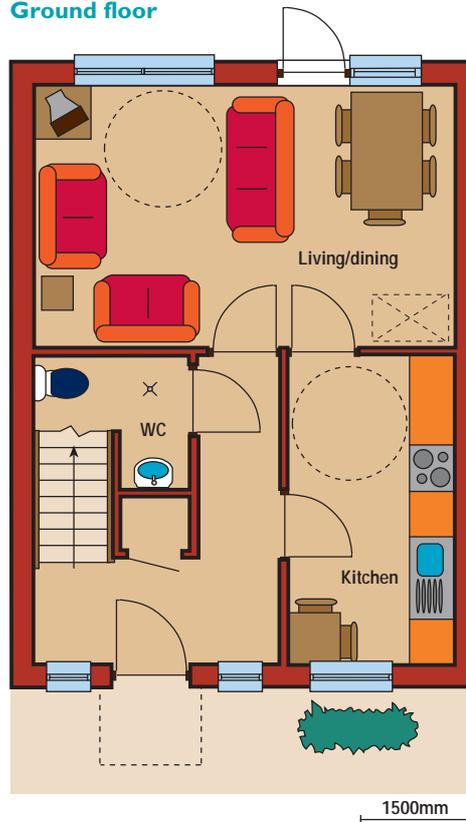
The primary selling point of this design is the spacious layout - the entrance hall, the generous living/dining room and the large WC would all prove popular with clients.

A turning circle in the kitchen is desirable and there is also space for casual dining in the kitchen. Additional units could be installed to replace the area left for the table and chairs.

First floor

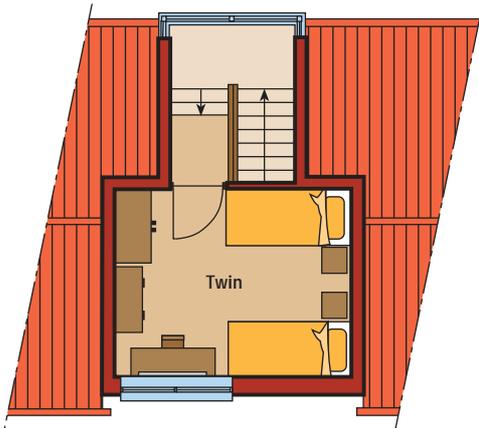


Ground floor

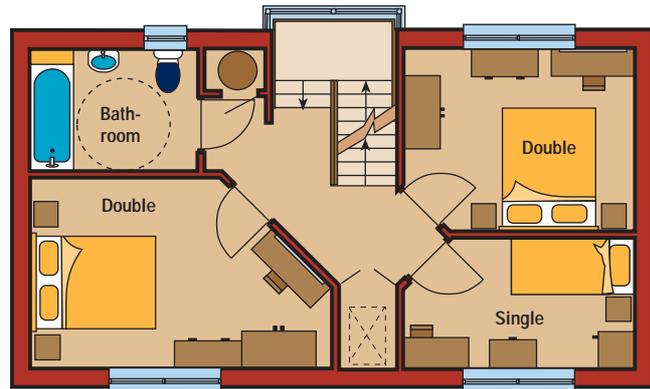


4 bedroom, 3 storey, 118.9m² (1279sq.ft) internal frontage 9.7m (approx)

Diagram 25



Second floor

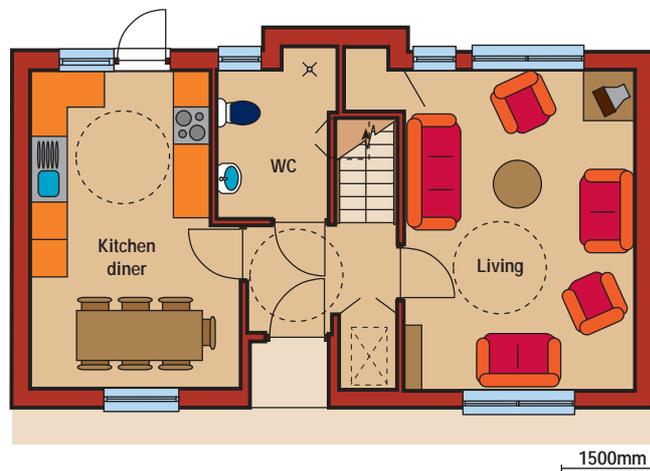


First floor

Although the ground and first floor have potential for a through-the-floor lift, there is no provision (nor is there a requirement) for a lift through to the second floor.

Should a designer wish to include a lift to the second floor, a house lift as opposed to a through-the-floor lift might be a better option.

Ground floor

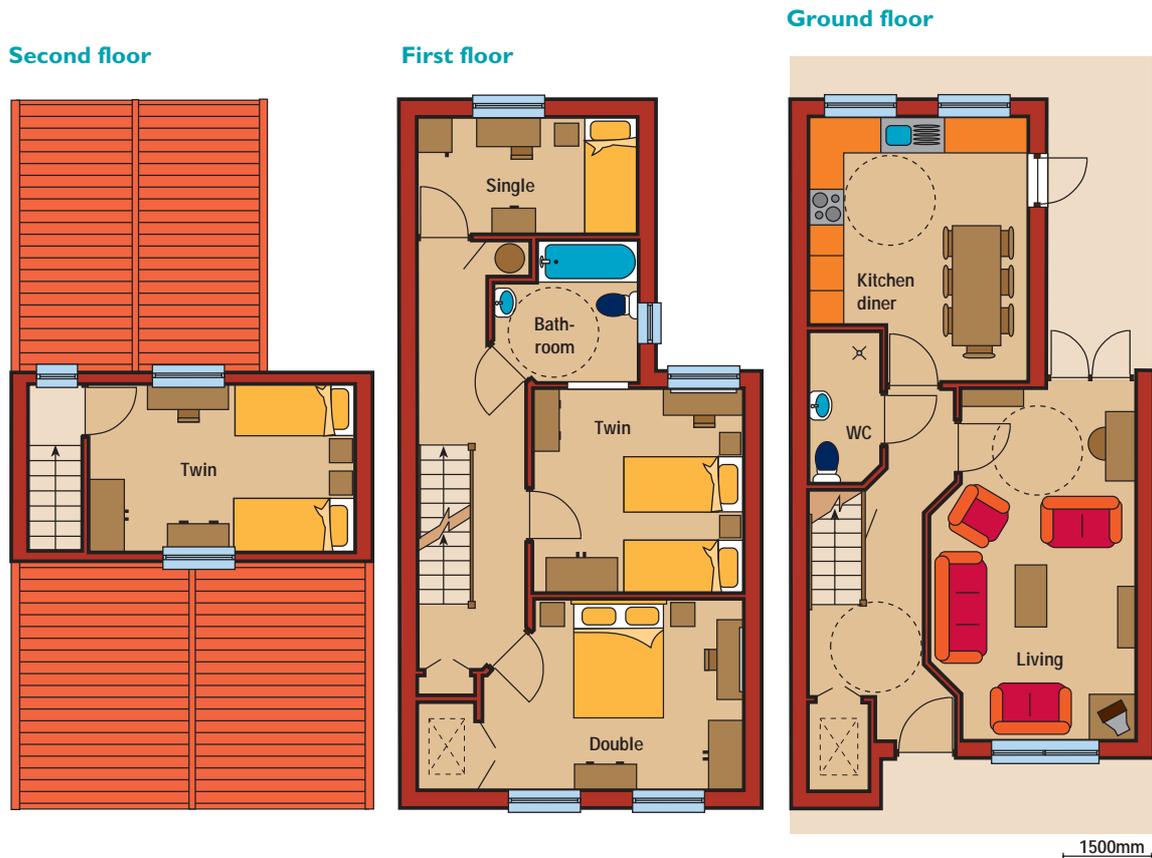


4 bedroom, 3 storey, 120m² (1291sq.ft) internal frontage 5.6m (approx)

Diagram 26

As in all Lifetime Homes, the corridors and clear door opening widths ensure all areas of the house are accessible.

Turning circles in bathrooms and kitchens are desirable in larger houses (although not part of the standards). A larger bathroom is always a selling point, particularly where there may be several children in a household.



References and further reading

Index

References and further reading

Approved Document M (The Stationery Office 1998)

Accessible Thresholds in New Housing: Guidance for housebuilders and designers (The Stationery Office 1999) ISBN 0 11 702 333 7

Scheme Development Standards 3rd edition (Housing Corporation 1998) ISBN 1 84111 021 3

Shared Ownership Lifetime Homes: Making it work. D. Bonnett and N. King (The Shared Ownership Lifetime Homes Group 1998) ISBN 0 9533516 0 2

Index

- adaptations 11, 22
- approaches 8, 10, 14, 15
- bathrooms 11, 23, 30, 31, 35
- bedrooms 11, 23, 30, 31
- car parking 8, 10, 14, 15
- controls 9, 11, 24
- corridors 8, 10, 18
- dimensions
 - minimum Lifetime Homes 10-11
 - minimum Part M 8-9
- dining areas 10, 19
- doors
 - opening widths 8, 10, 18
- glazing 11, 24, 29
- grab-rails 11, 22
- gradient 8, 10, 14, 15
- hoists 11, 23, 30, 31
- illumination 10, 16
- kitchens 11, 29, 31, 33
- Lifetime Homes standards 10-12
- lifts
 - house 34
 - passenger 9, 10, 18, 32, 34
 - provision for 11, 12, 22, 34
 - stair 11, 22
 - through-the-floor 11, 22, 31, 32
- Living rooms 10, 19
- Part M requirements 8-9
- passageways 8, 10, 18
- Scheme Development Standards (SDS) 8-9, 10-11
- service controls 9, 11, 24
- showers
 - location of 11, 20, 21
 - provision for 11, 20, 21, 26, 27, 28
- sockets 10, 24
- stairs
 - communal 8, 10, 18
 - internal 10, 30
 - mezzanine 8
- switches 9, 10, 24
- threshold
 - level 8, 10, 16, 17
- turning circle 10, 19, 35
- ventilation 11, 24, 29
- wash basins 11, 20
- WC
 - dimensions of 9, 11, 20, 21
 - provision for 11