

“Lifetime Homes”—English Universal Design

An introduction to Lifetime Homes

In the 1980s, the Joseph Rowntree Foundation became particularly concerned about the quality of British housing and in particular how inaccessible and inconvenient many houses were for large segments of the population - from those with young children through to frail older people and those with temporary or permanent disabilities.

In 1991 the Lifetime Homes concept was developed by a group of housing experts who came together as the Joseph Rowntree Foundation Lifetime Homes Group. Lifetime Homes have sixteen design features that ensure a new house or flat will meet the needs of most households. This does not mean that every family is surrounded by things that they do not need. The accent is on accessibility and design features that make the home flexible enough to meet whatever comes along in life: a teenager with a broken leg, a family member with serious illness, or parents carrying in heavy shopping and dealing with a pushchair.

In the mid 1990s the Government indicated its wish to extend Part M of the building regulations, which deals with accessibility, to cover houses as well as public buildings. After a long period of consultation in which the Foundation was very actively involved, new regulations come into force for all housing built after October 1999. The new Part M regulations cover accessibility and Lifetime Homes features add to this the built-in flexibility that make homes easy to adapt as peoples' lives change. An earlier research report suggested that not only will the occupiers of homes benefit from Lifetime Homes, but so too will tax payers - to the tune of £5.5 billion over sixty years. These savings come from reduced expenditure on adaptations and reduced need to move people to residential care. There would be further savings in health care and re-housing costs. Organizations building homes subsidized with Government money from the Housing Corporation have to meet scheme development standards that cover similar areas to Lifetime Homes.

When designing new homes, it is now therefore 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 section of the web site sets out in simple terms what the Building Regulations and Lifetime Homes standards require. The [summary tables](#) 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.

The section on *Part M and Lifetime Homes Requirements* provides illustrated examples and technical details on meeting Part M regulations and Lifetime Homes standards.

The market for Lifetime Homes

The quality of housing demanded by buyers and tenants is always increasing - Lifetime Homes include a number of attractive features that will differentiate them from existing homes and offer a positive marketing edge.

Lifetime Homes suit all lifestyles, so people moving out will find plenty of people wanting to move in. But people who see their home as a long-term investment, and do not want to move, will be reassured if their home is built to Lifetime Homes standards. A Lifetime Home will not evict you simply because you are less fit and able than when you moved in.

People want attractive homes:

"A common misconception is that Lifetime Homes are all ramps and handrails. Nothing could be further from the truth. Intrusive adaptations become necessary where ease of access was not considered from the very start of the design process. Millions of pounds [dollars] in public subsidy could be saved each year if these adaptations did not need to be made.

"To the untutored eye, a Lifetime Home is unremarkable - much like any other house in the street. But, because there is no flight of steps at the front door, a ramp will never have to be fitted. Because there are built-in facilities at ground-floor level, a rear extension will never be needed. It is only over a longer period that the added convenience and safety engendered by its special design features begin to be appreciated.

"I have seen new housing built to Lifetime Homes standards in France, Denmark and Holland. Nothing special. Just attractive housing in keeping with the style of the area and built with an eye to the future."

Sabrina Aaronovitch

"Because Lifetime Homes look no different but have several practical and marketable benefits, we are currently promoting the concept of Lifetime Homes in our region and extending the idea as part of our continuing housing development programme."

Damian Bullimore

Derek Latham and Co., Derby

"We quickly realized the definite marketing advantage which Lifetime Homes have in terms of making provisions for the various needs of a growing family.

"The company was also pleased to discover that there was very little difference in the cost of building a Lifetime Home in comparison with a traditional design: somewhere in the region of £1.30 [\$2.40] per sq. ft, which we have more than recouped in the market value.

"We firmly believe that prevention is better than cure and that a Lifetime Home not only has a considerable amount to offer, but also provides us with a clear marketing edge."

David Crossland
 Director, Conroy Jones Homes

Meeting Part M regulations and Lifetime Homes accessibility requirements

This 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.

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 3 feet (900mm) width must be added to the space for a car	Standard 1 The car parking space must be capable of enlargement to 11 feet (3300mm) width (generally by having a 3 foot (900mm) path or garden strip adjacent to the 8 foot (2400mm) space for a car)	1.1.3.4. 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 16½ feet (5m) or less may have gradients up to 1: 12 and individual slopes 16½ to 33 feet (5 to 10m) in length may have gradients up to 1: 15.* Paths should be at least 3 feet (900mm) wide.	Standard 2 As for Part M	relevant parts of 1.3.1.1 E
An accessible threshold at entrance level should be provided	Paragraph 6.21 Where unavoidable, maximum ½ inch (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 1.3.1.2. E

<p>Doorways and corridors should be wide enough to allow wheelchair users to maneuver into and out of rooms</p>	<p>Paragraph 7.5 The entrance door must always be at least 30½ inches (775mm) in width. Internal doorways and corridors should conform to the following table:</p>	<p>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 3 feet (900mm), then the doorway clear opening width should be 3 feet (900mm) rather than 31½ inches (800mm). The clear opening width of the front door should be 31½ inches (800mm). There should be 12 inches (300mm) to the side of the leading edge of doors on the entrance level.</p>	<p>1.3.1.3. E 1.3.1.4. E</p>										
	<table border="1"> <thead> <tr> <th data-bbox="511 378 657 451">Doorway clear opening width (mm)</th> <th data-bbox="657 378 803 451">Corridor/ passageway width (mm)</th> </tr> </thead> <tbody> <tr> <td data-bbox="511 514 657 577">29½ inches (750) or wider</td> <td data-bbox="657 514 803 598">3 feet (900) (when approach head-on)</td> </tr> <tr> <td data-bbox="511 619 657 682">29½ inches (750)</td> <td data-bbox="657 619 803 703">4 feet (1200) (when approach not head-on)</td> </tr> <tr> <td data-bbox="511 724 657 787">30½ inches (775)</td> <td data-bbox="657 724 803 808">3½ feet (1050) (when approach not head on)</td> </tr> <tr> <td data-bbox="511 829 657 892">31½ inches (800)</td> <td data-bbox="657 829 803 913">3 feet (900) (when approach not head- on)</td> </tr> </tbody> </table>	Doorway clear opening width (mm)	Corridor/ passageway width (mm)	29½ inches (750) or wider	3 feet (900) (when approach head-on)	29½ inches (750)	4 feet (1200) (when approach not head-on)	30½ inches (775)	3½ feet (1050) (when approach not head on)	31½ inches (800)	3 feet (900) (when approach not head- on)		
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<p>Communal stairs in blocks of flats should provide ease of access to ambulant disabled people</p>	<p>Paragraph 9.5 Uniform rise not more than 6½ inches (170mm) Uniform going not less than 10 inches (250mm) Handrails extend 12 inches (300mm) beyond top and bottom step Handrail height 3 feet (900mm) from nosings</p>	<p>Standard 5a As for Part M</p>	<p>1.4.1.5. E</p>										
<p>A stepped change of level within an entrance storey should allow ease of access to ambulant disabled people</p>	<p>Paragraph 7.7 Flight clear width 3 feet (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>	<p>Changes of level within a storey are not covered under the Lifetime Homes standards</p>	<p>n/ a</p>										
<p>Wheelchair users should be able to use any lift provided in a block of flats</p>	<p>Paragraph 9.1 Clear landing entrances 5x5 feet (1500x1500mm) Min. internal lift car dimensions 3x4¼ feet (900x1250mm) Lift controls between 3 and 4 feet (900 and 1200mm) from the floor and 15¼ inches (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 stories</p>	<p>Standard 5b As for Part M but the minimum internal dimensions for the lift should be 3½ x4½ feet (1100x1400mm)</p>	<p>1.2.1.44 E 1.2.1.45 E</p>										

Switches and sockets should be at a convenient height for all	Paragraph 8.2 Switches and socket outlets for lighting and other equipment in habitable rooms between 1½ and 4 feet (450 and 1200mm) from finished floor level	Standard 16 As for Part M	1.3.1.14. R (switches etc. at 3-4 feet (900-1200mm) 1.3.1.15. R (sockets at 1½ -2 feet (450- 600mm)
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All homes should have an entrance level WC which is usable by a wheelchair user	Paragraph 10.3 Clear usable space between front of WC bowl and opposite wall/ door 29½ inches (750mm) min. Distance from central line of cistern and adjoining wall 1½ feet (450mm) min. Where oblique access provided, there should be 10 inches (250mm) min. to side of door	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. 3½ feet (1100mm) clear space is required at the front of the WC bowl**	1.3.1.5 E 1.3.1.9 R 1.6.3.6 R
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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

* There must be top, bottom and intermediate flat 'landings' of not less than 4 feet (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.

The approach to the home

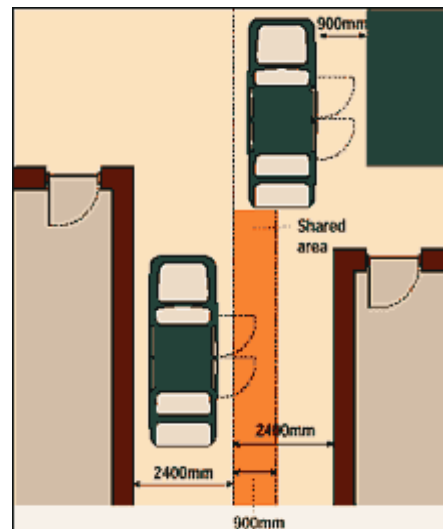
Part M standard

The width of the approach, excluding space for a parked car, should take account of the needs of a wheelchair, stick or crutch. Excluding the car parking space, the path should not be less than 3 feet (900mm) wide.

The width normally assumed for a car parking space is 8 feet (2400mm), which means that meeting the Part M requirement is likely to lead to an overall width of 11 feet (3300mm) (including the 3 foot (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 3 feet (900mm) by the side of the car by using the shared area, while the right-hand house has 3 feet (900mm) to the side of the car between the car and the flower bed/lawn.

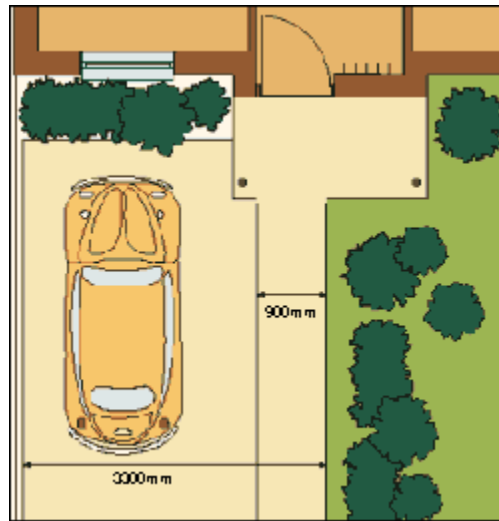
Diagram 1



Lifetime Homes standard 1

Where there is car parking adjacent to the home, it should be capable of enlargement to attain 11 feet (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 16½ feet (5m) or less may have gradients up to 1:12 and individual slopes 16½ to 33 feet (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 4 feet (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 3 feet (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 16½ feet (5 meters) or 1:15 if it is between 16½ and 33 feet (5 and 10m), and 1:20 where it is more than 33 feet (10m) (providing there are top, bottom and intermediate landings of not less than 4 feet (1.2m) excluding the swing of doors and gates). Paths should be a minimum of 3 feet (900mm) width.

Lifetime Homes standard 3

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

Diagram 3a

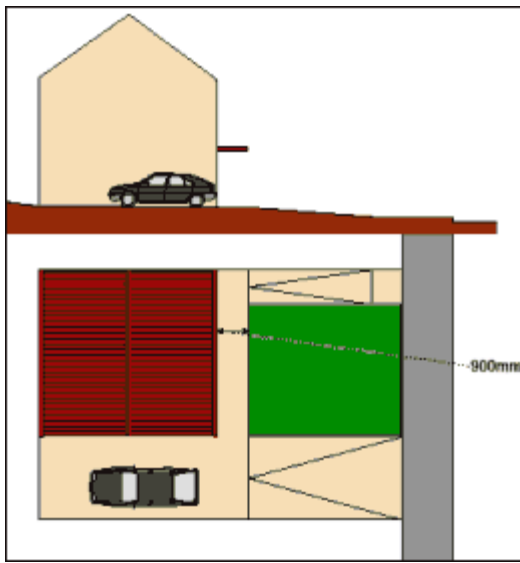
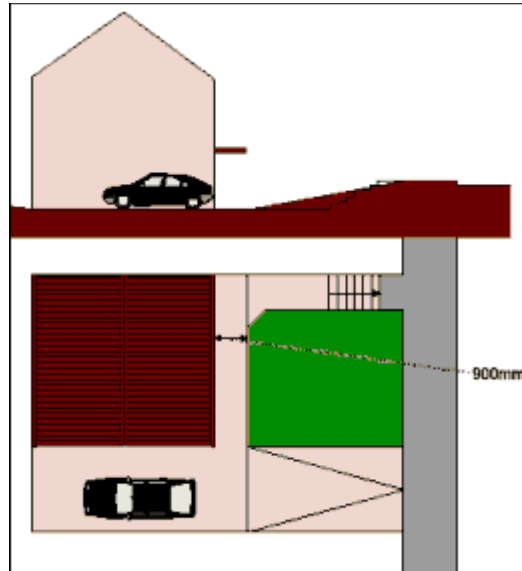


Diagram 3b



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 diagram 3b.

Entrances and thresholds

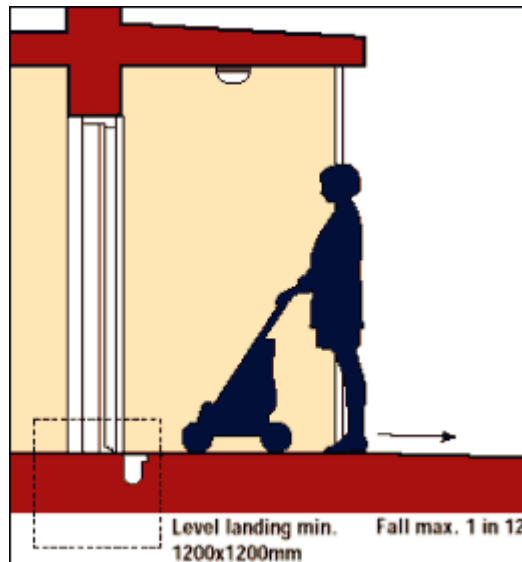
Diagram 4a

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

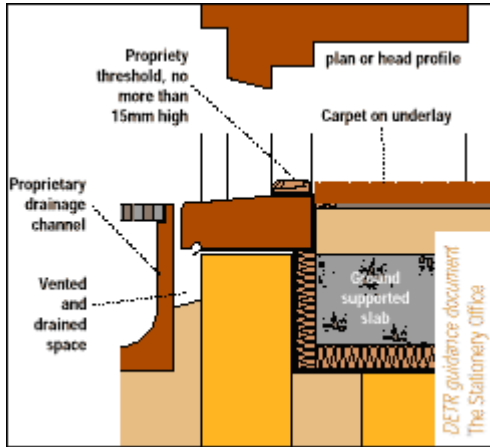
Part M standard

An accessible threshold at the entrance should be provided. Where unavoidable, a maximum ½ inch (15mm) upstand may be incorporated.



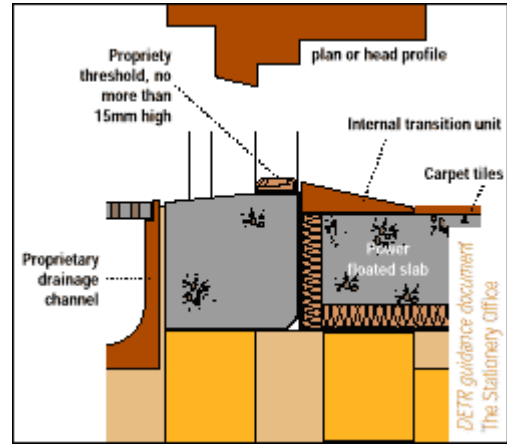
Under Part M of the building regulations the responsibility for the successful design of an accessible threshold lies with the builder/architect. This is often perceived as a challenge. However, there are many working examples of successful solutions to draw on. Set out below in diagrams 4b to 4f are 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



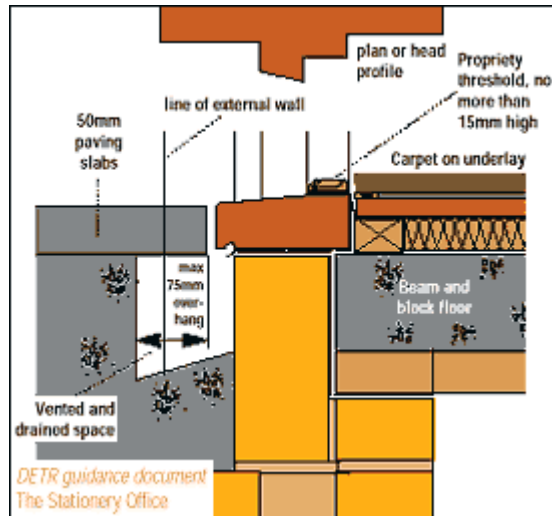
Here the frame is set back 1¼ inch (30mm) from the face of the external wall and a timber sill is used.

Diagram 4c



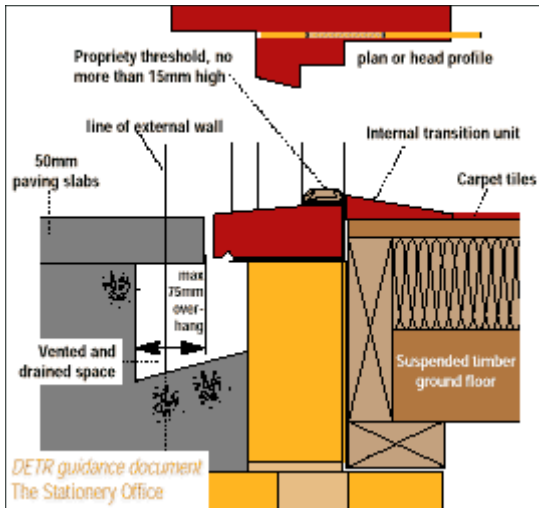
The frame is set back 2¼ inches (55mm) from the face of the external wall and a concrete sill is used. Because of the threshold/floor level differential, an internal transition unit is introduced to facilitate access.

Diagram 4d



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

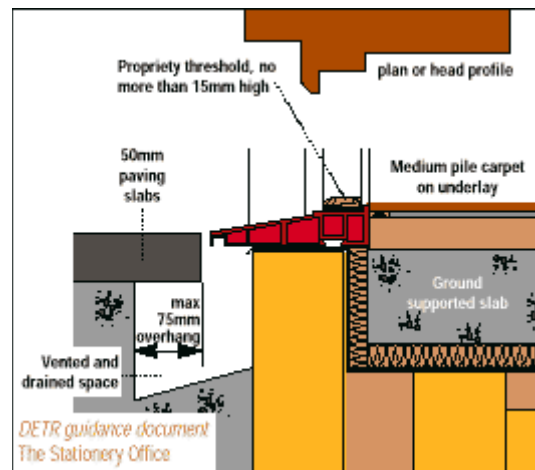
Diagram 4e



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

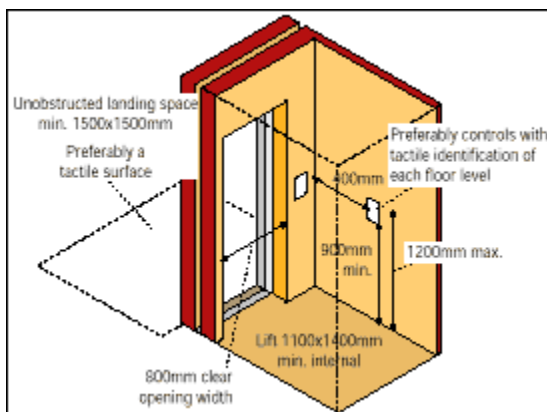
Diagram 4f

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



Circulation within the home

Diagram 5a

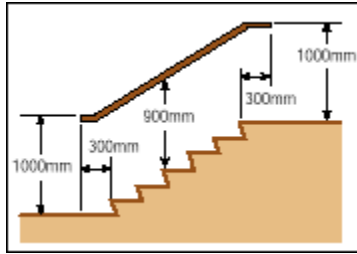


Part M standard

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 5x5 feet (1500x1500mm), and the minimum internal dimensions of the lift should be 3x4¼ feet (900x1250mm). The lift controls should be between 3 and 4 feet (900 and 1200mm) from the floor and 15¾ inches (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 stories.

Diagram 5b

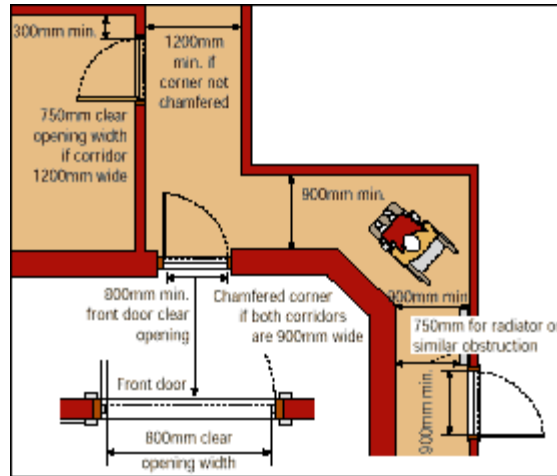


Communal stairs which are well-designed from the outset will facilitate the addition of a future stair-lift.

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 3½ x 4½ feet (1100 x 1400mm)

Diagram 6



Part M standard

Doors and corridors should be wide enough to allow wheelchair users to maneuver into and out of rooms (including one that contains a WC). The entrance door must always be at least 30½ inches (775mm) in width. The internal doorways and corridor widths should conform to the following:

Doorway clear opening width (mm)	Corridor/passageway width (mm)
29½ inches (750)	3 feet (900) (when approach is head on)
29½ inches (750)	4 feet (1200) (when approach is not head on)
30½ inches (775)	3½ feet (1050) (when approach is not head on)
31½ inches (800)	3 feet (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.

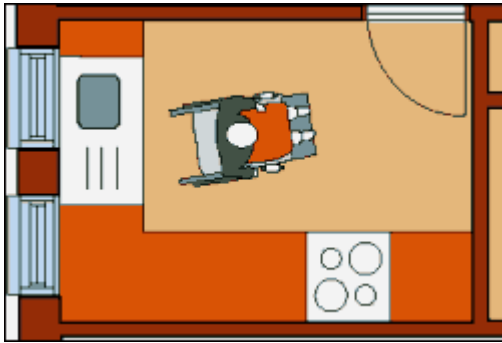
Lifetime Homes standard 6

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 3 feet (900mm), the doorway clear opening width should be 3 feet (900mm) rather than 31½ inches (800mm). The front door should have a minimum 31½ inches (800mm) clear opening width.

There should be 12 inches (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

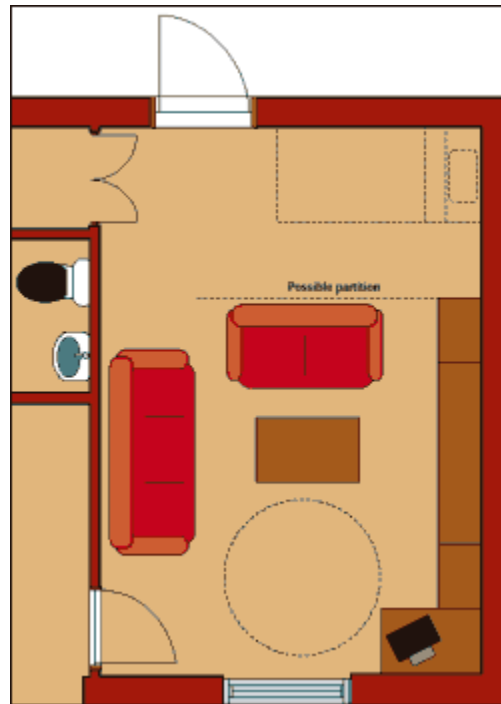
Lifetime Homes standard 8

The living room should be at entrance level.

Lifetime Homes standard 9

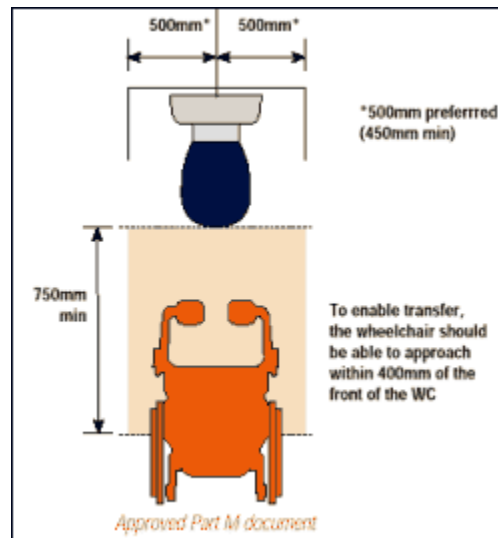
In houses of two or more stories, there should be space on the entrance level that could be used as a convenient bed space.

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 29½ inches (750mm). The distance from the central line of the cistern and the adjoining wall should be a minimum of 1½ feet (450mm) (as shown in diagram 10a). Where oblique access is provided, there should be a minimum of 10 inches (250mm) to the side of the door (as shown in diagram 10b). The WC door will need to open outward.

Diagram 10b

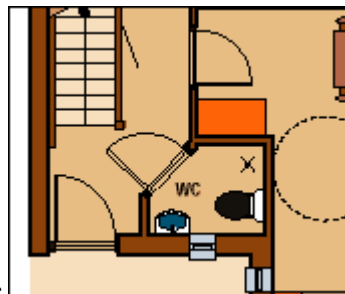
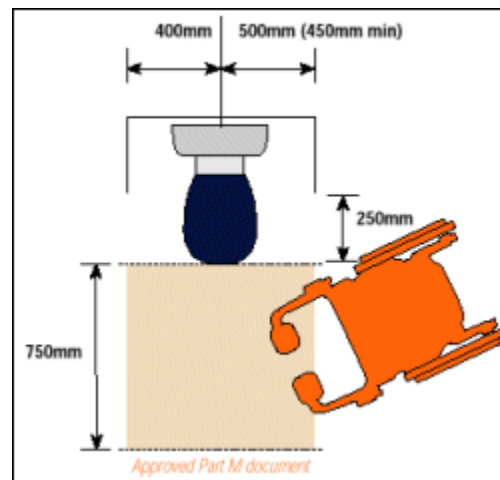


Diagram 10c

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.



Diagram 10d

There must be at least 3½ feet (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.

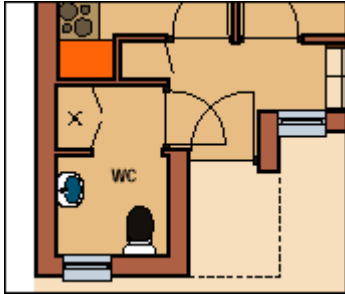


Diagram 10e

The Part M standard WC is acceptable in two-bedroom Lifetime Homes or smaller. However 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 27½ inches (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 (but developers must ensure that the Part M measurements in diagrams 10a and 10b are also adhered to).



Diagram 10f

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.



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 11 4/5 inches and 5 feet (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 1x2 inch (25x50mm) noggins on (typically) 4x2 inches (100x50mm) studs (Diagram 11b).

Diagram 11a

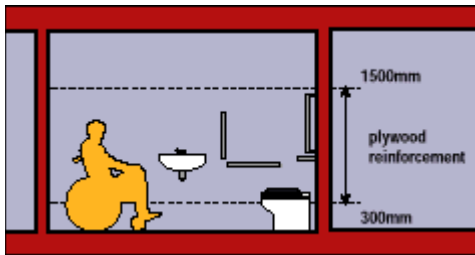


Diagram 11b

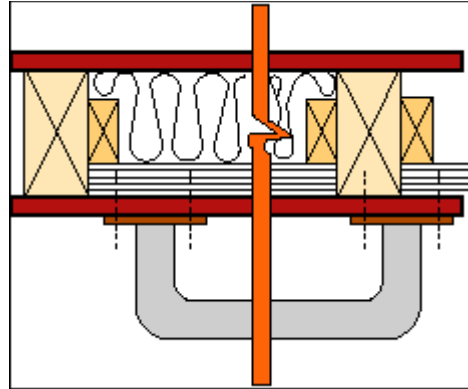
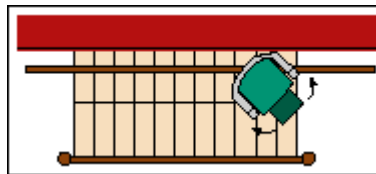


Diagram 12a



Lifetime Homes standard 12

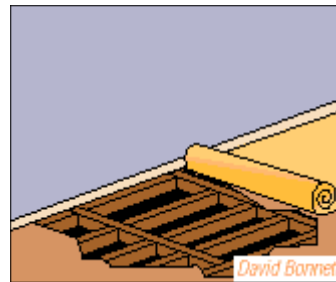
The design should incorporate:
a) provision for a future stair lift (diagrams 12a and 12b). b) an identified space for a potential through the floor lift from the entrance level to first floor, for example to a bedroom next to a bathroom (diagram 12c).

There should be a minimum of 3 feet (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 12b



Diagram 12c



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

Bathrooms

Diagram 13

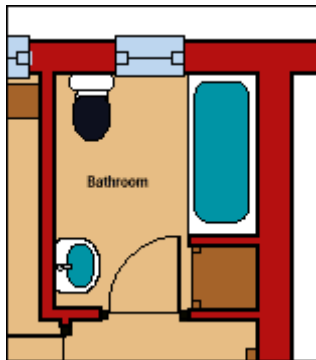


Lifetime Homes standard 13

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.

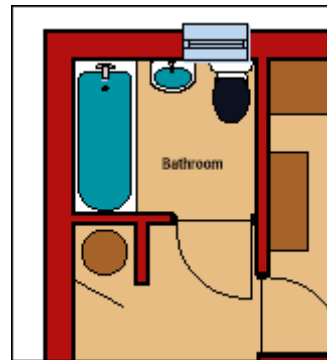
Diagram 14a



Lifetime Homes standard 14

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

Diagram 14b



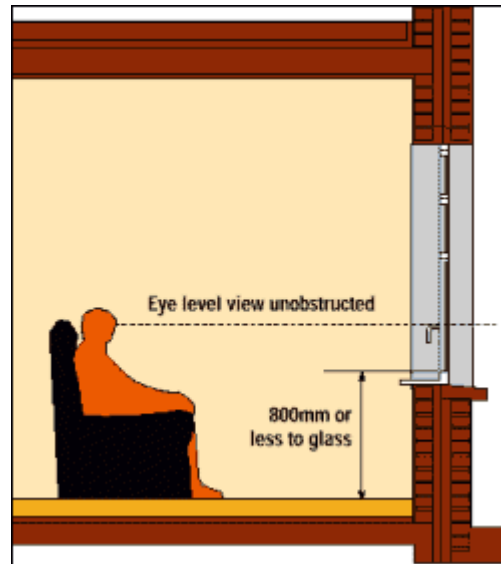
A well laid-out bathroom is appreciated by all. Although there is no requirement for a turning circle in bathrooms, sufficient space should be provided so that a wheelchair user could conveniently use the bathroom and gain side access to bath and WC.

Glazing

Lifetime Homes standard 15
Living room window glazing should begin at 31½ inches (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.

Diagram 15



Controls

Part M Standard
Switches and socket outlets for lighting and other equipment should be located so that they are easily reachable (i.e. between 1½ and 4 feet (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 1½ and 4 feet (450 and 1200mm) from the floor).

Diagram 16

