

DRAFT FOR DEVELOPMENT

Design of accessible housing – Lifetime home – Code of practice

ICS 11.180.99; 91.040.01

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Notification of the start of the review period, with a request for the submission of comments from users of this Draft for Development, will be made in an announcement in the appropriate issue of Update Standards.

According to the replies received, the responsible BSI Committee will judge whether the Draft for Development can be converted into a British Standard or what other action should be taken.

Observations which it is felt should receive attention before the official call for comments will be welcomed.

These should be sent to the Secretary of BSI Technical Committee B/559 at British Standards House, 389 Chiswick High Road, London W4 4AL.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 34, an inside back cover and a back cover.

Foreword

Publishing information

This Draft for Development was published by BSI and came into effect on 31 December 2007. It was prepared by Subcommittee B/559/2/-/3, *Accessibility – Housing task group*, under the authority of Technical Committee B/559, *Access to buildings for disabled people*. A list of organizations represented on this committee can be obtained on request to its secretary.

Relationship with other publications

This Draft for Development supplements BS 8300 which, although incorporating certain recommendations on dwellings into the general guidance, does not feature housing as a building type, but is concerned mainly with public, commercial and service buildings.

Use of this document

As a code of practice, this Draft for Development takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this Draft for Development is expected to be able to justify any course of action that deviates from its recommendations.

It has been assumed in the preparation of this publication that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions in this Draft for Development are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

The word “should” is used to express recommendations of this Draft for Development. The word “may” is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word “can” is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this publication. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a Draft for Development cannot confer immunity from legal obligations.

In particular, attention is drawn to the following statutory regulations:

Lifts Regulations 1997 [1]

Supply of Machinery (Safety) (Amendment) Regulations 2005 [2]

Introduction

This Draft for Development explains how, by following the principles of inclusive design, general needs housing (whether newly built or to be converted or refurbished) can be made sufficiently flexible and convenient to meet the existing and changing needs of most households, and so give disabled and older people more choice over where they live.

NOTE Some design features might need to be incorporated when the dwelling is first built; others might only need to have provision made at the outset for their future adaptation. Incorporation of these design features also makes the dwelling convenient for disabled visitors and most resident households, including some (but not all) wheelchair users, without the need to undertake expensive or disruptive alterations or substantial adaptations.

While the majority of people, including people with a physical or sensory impairment (e.g. impaired sight), older people and families with small children, are satisfactorily catered for by the recommendations of this Draft for Development, there are some who, either due to the nature of their impairment or their need for greater space standards or particular room layouts, need purpose-designed wheelchair housing. This Draft for Development is intended neither for use in connection with purpose-designed “wheelchair housing” or “extra-care housing”, which is designed for assistance and care facilities.

This Draft for Development introduces the concept of “accessible housing”, which builds upon and extends the Lifetime Homes 16-point specification, as set out in the Joseph Rowntree report *Meeting Part M and Designing Lifetime Homes* [3], published in 1999. In particular, it extends the criteria to flats and town houses and to other accommodation without ground-level living space. It also updates the technical criteria.

1 Scope

This Draft for Development gives recommendations for the design of new or refurbished general needs housing, whether in the form of flats or individual houses. It covers car parking (both on-plot and communal), access routes to dwellings, and entrances and circulation routes, including lifts. It also includes recommendations on electrical, sanitary, heating and ventilation services, windows, doors and related hardware, and the provision of key rooms and spaces, particularly WC, bathroom, kitchen and storage facilities.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 5900, *Specification for powered domestic lifts with partially enclosed cars and no lift-well enclosures*

BS 8300:2001, *Design of buildings and their approaches to meet the needs of disabled people – Code of practice*

BS EN 81 (all parts), *Safety rules for the construction and installation of lifts*

3 Terms and definitions

For the purposes of this Draft for Development, the following terms and definitions apply.

3.1 inclusive design

concept whose objective is to create (including by removing barriers that incur undue effort, separation or special treatment) an environment where all individuals can independently have access to, and benefit from, the full range of opportunities and activities available to members of society, with choice and dignity

NOTE More detail about this concept is given in the Commission for Architecture and the Built Environment's "The Principles of Inclusive Design" [4].

3.2 accessible housing

accommodation based on the Lifetime Homes specification, updated to take account of the design features common in high density flats, and incorporating some of the easily achievable key features of wheelchair housing

3.3 Lifetime Homes specification

16-point specification developed by the Joseph Rowntree Foundation [3] for general needs housing, designed to provide accessible and convenient accommodation for a large segment of the population, from young children to older people and individuals with temporary or permanent physical or sensory impairment

3.4 wheelchair housing

accommodation built to standards that are designed specifically to meet the diverse and changing needs of wheelchair users and the multiplicity of impairments that some wheelchair users experience

NOTE 1 Such accommodation is designed to accommodate features such as additional storage for equipment (including additional powered and manual wheelchairs), space for charging scooters and powered chairs, as well as manoeuvring space to operate hoists and other lifting equipment.

NOTE 2 Typical examples of these standards are set out in the second edition of Habinteg Housing Association's "Wheelchair Housing Design Guide" [5].

3.5 extra-care housing

form of self-contained accommodation in a location where care and communal facilities (that may include bathing, leisure activity and a meals or dining service) are available, and where residents are protected by an assured tenancy or a lease and have a high degree of choice over everyday living

3.6 designated accessible parking

standing place for a private car that is suitable for, and designated for use by, Blue Badge holders under the national Blue Badge Parking Scheme for disabled people, whether residents or visitors

3.7 accessible threshold

sill to a doorway that is level or, if unavoidable, slightly raised in a way that still allows convenient and safe access for wheelchair users and which avoids entrapment hazards for walking sticks and other mobility aids

NOTE 1 If raised, the threshold is to be no higher than 15 mm and is to have as few upstands and slopes as practicable; any upstand in excess of 5 mm in height is to be chamfered.

NOTE 2 Upstands and gradients impede access. Small variations from any point taken as level can make a threshold inaccessible and potentially dangerous. Individuals pushing wheelchairs also find sharp upstands difficult to manage.

3.8 Types of lift**3.8.1 stairlift**

type of lift that travels from one level to another along a line parallel with the pitch line of the stair

3.8.2 chair stairlift

stairlift with a seat, which may be fixed or folding

3.8.3 wheelchair stairlift

stairlift with a horizontal platform that accommodates a wheelchair user

3.8.4 platform lift (vertical lifting platform)

lifting device, operating with or without a liftway enclosure, with a platform that travels vertically between storeys and is intended for use by persons standing up or seated on a chair or in a wheelchair

3.8.5 homelift

powered lift, also known as a through-floor lift, designed for use by persons with impaired mobility travelling between two floors of an individual house

NOTE It has a partially enclosed car without a liftway enclosure and incorporates a guarded trap door on the upper floor that opens to allow the lift to pass through the floor.

3.9 accessible WC (water closet)

toilet facility designed so that it is possible for a wheelchair user to close the door from within the WC cubicle or bathroom and achieve frontal, oblique or side transfer from a wheelchair to the WC pan

NOTE Side transfer is achievable on at least one side from a clear space that extends for the full depth of the WC pan and cistern (or equivalent, if concealed) to the wall.

3.10 ease-of-access WC

toilet facility, usually situated in a bathroom, designed so that a wheelchair user can close the door from within the room and achieve frontal or oblique transfer from a wheelchair to the WC pan

NOTE The clear space for oblique transfer only extends for the depth of the WC pan, and excludes the cistern or any duct concealing the cistern.

3.11 accessible bathroom

room for bathing and washing, whether separate or en-suite, designed with sufficient circulation space to allow the potential entry of a person using a wheelchair to an accessible WC (and private use thereof) and, where not provided elsewhere in the dwelling, a floor-level shower

3.12 ease-of-access bathroom

room for bathing and washing, whether separate or en-suite, designed with sufficient circulation space to allow the potential entry of a person using a wheelchair to an ease-of-access WC (and private use thereof) and, where not provided elsewhere in the dwelling, a floor-level shower

3.13 effective clear width (of a door opening)

opening measured in the same plane as the wall in which a door is situated from the outside of the door stop on the door closing side to a line on the hinge side, perpendicular to the wall, which touches the nearest obstruction when the door is open, whether this be projecting door-opening furniture, a weather board, the door or the door stop

NOTE This principle can also be applied to gates.

4 Approaching the building

4.1 Car parking and setting down points**COMMENTARY ON 4.1**

The key issue for car parking, particularly when associated with dwellings in blocks of flats where parking is not on individual plots, is flexibility. As people with different needs move in and out of a neighbourhood, it is important that the parking arrangements are sufficiently flexible to allow the provision to vary over time. Accessible parking is needed by residents or visitors who are Blue Badge holders, and by carers.

4.1.1 Individual houses with on-plot parking

For individual houses where there is car parking on the plot, the potential width of the car parking bay should be 3.6 m (part of which could be shared with a hard-surfaced path) to allow convenient access in and out of the vehicle. The length of the parking bay should have the potential to be 6.0 m long to allow space to access the boot.

4.1.2 Dwellings without on-plot parking

4.1.2.1 Provision of communal car parking

Where parking is provided, designated accessible parking bays for blocks of flats or other dwellings without on-plot parking should be provided on the basis of at least one such bay in each parking location and lift core associated with that development, plus additional bays distributed across the available parking locations.

NOTE 1 Provision is to be determined in conjunction with the local planning authority (see Annex A).

Where the parking location is a large basement served by a number of lift cores, one designated accessible parking bay should be located adjacent to each lift core.

NOTE 2 In this context, a parking location might be an enclosed car park (e.g. in a basement, undercroft or podium), an off-street parking court or an on-street bank of parking, whether in a parallel, angled or right-angled formation. Guidance on car parking design and location is given in “Car Parking – What works where” [6] and “Manual for Streets” [7].

4.1.2.2 Provision for wheelchair housing

Where some dwellings in a development are designated as “wheelchair housing”, any specific parking provision for such dwellings should be in addition to the recommendation described in 4.1.2.1.

4.1.2.3 Design flexibility

The design should allow some on-street and off-street parking bays to be increased in size to become accessible bays in the future, according to demand.

NOTE In basement car parking areas, the constraints imposed by structural columns might preclude the provision of larger bays at a later date unless the flexibility of layout is considered within the initial design.

4.1.2.4 Parking bay dimensions

Designated accessible parking bays should be at least 3.6 m wide × 6.6 m long (as described in BS 8300:2001, Figure 1) for parallel on-street parking and at least 3.6 m wide × 6.0 m long for enclosed car parks, off-street parking courts and angled or right-angled on-street parking facilities.

NOTE Parallel, angled and right-angled parking refers to the configuration of the longer dimension of the bays relative to the kerb and direction of the carriageway.

4.1.2.5 Parking bay markings

Markings for designated accessible parking bays should conform to the following figures in BS 8300:2001:

- a) on-street parking bays (see Figure 1);
- b) off-street parking bays (see Figure 3).

4.1.2.6 Vertical clearance to enclosed communal parking

Any enclosed communal parking should provide a vertical clearance of at least 2.6 m from the carriageway to allow the passage of a high-top conversion vehicle. This clearance should be maintained from the entrance to all designated accessible parking bays and exits from those bays.

4.1.2.7 Barrier access and security

Barrier control systems and the controls and vertical clearances of any vehicle height barriers should conform to the recommendations of BS 8300:2001, 4.1.4.2 and 4.1.4.3.

4.2 Access routes within housing sites

COMMENTARY ON 4.2

An accessible route is essential both from facilities within a development, such as car parking and setting down points, and also from the site boundary where there are existing pedestrian routes that might give access to the site.

When designing an approach to a building, it is important to recognize that changes in level are difficult for many people to negotiate, including wheelchair users, people who need to use walking aids and individuals with impaired sight. It is important to reduce the risk of injury to people, particularly individuals with impaired sight, when approaching and passing around the perimeter of a building under all lighting conditions.

4.2.1 Access routes from car parking spaces

The distance from accessible visitor spaces, unallocated spaces or street parking, and from any allocated parking spaces, to the entrance of an individual house or common entrance of a block of flats (or to the lift if basement parking) should be as short as practicable, but in no case more than 50 m (or, if more than 50 m, with resting places provided not more than 50 m apart).

The danger of inadvertently walking into a vehicular access route should be minimized by providing a separate pedestrian route and, where there is an uncontrolled crossing point across the vehicular route, this should be identified by a buff-coloured blister surface.

Access routes from car parking spaces to all entrances should conform to 4.2.3 to 4.2.10.

4.2.2 Setting down points

A setting down point should be provided on firm and level ground immediately in front of an entrance to a block of flats, with a dropped kerb to allow easy wheelchair access from the road to the entrance door.

NOTE For further details about setting down points, see BS 8300:2001, 4.2.

A kerbed section of footway should also be provided at the entrance, or as near as possible to it, to facilitate the use of a ramp to enter into, and exit from, a taxi.

4.2.3 Access routes to all entrances

4.2.3.1 Access route gradients

The access route, whether to individual houses, blocks of flats or gated developments, should be level or (where the topography of the land prevents this) should either be gently sloping or ramped in accordance with 4.2.8.

NOTE It is assumed that a gradient of 1:60 or less steep is level, steeper than 1:60 (but less steep than 1:20) is gently sloping, and 1:20 or steeper is a ramp.

Buildings should be located, and slab levels decided, to allow unstepped access to all dwelling entrances from the street or communal parking, and from any accessible parking space on the plot.

4.2.3.2 Surface of access routes

Access route surfaces should consist of hard landscaping, should be firm, slip-resistant and reasonably smooth, and should contrast visually against adjacent surfaces. Cobbles and loose gravel should not be used.

The difference in level at joints between paving units should be no greater than 5 mm, with joints filled flush or, if recessed, no deeper than 5 mm and no wider than 10 mm or, if unfilled, no wider than 5 mm.

4.2.4 Access routes to blocks of flats

The route to the main entrance (or alternative accessible entrance) of a block of flats should be clearly identified, e.g. by signposting.

Paths to communal entrances of multi-storey flats from the boundary or any parking areas should be at least 1.8 m wide.

NOTE A width of 2 m is preferable.

Where site restrictions dictate, and a narrower width can be justified, the path should have a minimum width of 1.2 m, provided passing places are made available at changes of direction and, in any situation, at a distance no greater than 50 m from the start of the path or from each other.

Gates across communal paths should have an effective clear width of 1 m when fully open, hinges that self-close without a spring, and a light action latch no higher than 1.2 m that is easily released from either side.

4.2.5 Access routes on individual house plots

Paths within individual house plots should be at least 900 mm wide along their entire length, when separate from the drive.

Any gate to an individual house plot should have an effective clear width of at least 800 mm where the approach to the gate is straight on, or where the footway at right angles to the gate is at least 1 500 mm wide. The effective clear width should be at least 825 mm where a footway at right angles is 1 200 mm wide and at least 900 mm when the width is only 900 mm.

4.2.6 Hazards on access routes

No elements of landscaping or external works that could present a hazard, e.g. flower tubs, litter bins and signposts, should be located within an access route.

Windows and doors should not swing across an access route and thus create a hazard for visually impaired pedestrians.

Any recess or setback zone, within which such windows or doors might project, should be protected by guarding, e.g. by a kerb or other barrier that can be detected by a cane.

No external door should swing across a stair or ramp landing.

4.2.7 Steps on access routes

4.2.7.1 Stepped access to blocks of flats and individual houses

Steps on access routes to blocks of flats and individual houses (which are in addition to the unstepped access routes of 4.2.3.1) should have a going of 280 mm to 300 mm and a maximum rise of 170 mm.

NOTE 1 A going of 300 mm is preferred.

The rise and going should be uniform within a flight and there should be a handrail on both sides. There should be no single steps.

NOTE 2 For further information on the design of steps, refer to BS 8300.

All nosings should be made apparent by means of a permanently contrasting material on both the tread and the riser.

4.2.7.2 Stepped access to blocks of flats

If a level change is required on an access route to a multi-storey building with a communal entrance, steps with handrails each side should be provided, in addition to a ramp.

To give advance warning of a change in level, a “corduroy” hazard warning surface should be provided at top and bottom landings of a flight of steps or a series of flights. Where there is a side access onto an intermediate landing, a “corduroy” hazard warning surface should be provided across the intermediate landing at the bottom of the upper flight and at the top of the lower flight, if sufficient space is available. Alternatively, the hazard warning should be located across the side access route where it meets the intermediate landing, provided there is a continuous handrail down the staircase on the opposite side (see Figure 1).

NOTE A “corduroy” hazard warning surface has raised ribs to warn people with a visual impairment of a potential hazard ahead. Further information on hazard warning surfaces can be found in the publication “Guidance on the Use of Tactile Paving Surfaces” [8].