



**Design Details**  
**Internal Design Details**  
**V.1**

## Content

### Design Detail Section

#### 1. Architectural Details

- Building form
- Modelling
- Dormers
- Placing of openings
- Solid and void
- Balance
- Windows
- Appropriate use of materials
- Appropriate detailing for the materials used
- Chimneys
- Porches
- Other details
- Protection from noise sources
- Indicative house types
- Daylight and sunlight
- Garden size
- Rear privacy
- Private sitting-out areas

#### 2. Internal Design Details

- Accessibility for disabled people to dwellings
- Internal space provision
- Extendable houses
- Sound insulation
- Nationally described space standards

#### 3. Layout Details

- Permeability and legibility of the layout
- Legibility
- Criteria for layout at densities
- Below 20 dwellings per hectare
- Criteria for the creation of urban space at densities over 20 dwellings per hectare
- Criteria for placing buildings at densities over 20 dwellings per hectare
- Criteria for development types over 50 dwellings per hectare
- Housing layout and design – plots and internal spaces
- Urban grain
- Movement
- Mixed uses
- Private space

- Densities for sustainable development
- Influences upon sustainability
- Renewable energy for developments
- Electric vehicles

#### 4. Parking Design

- Accommodating the car
- Types of parking
- Visitor parking
- Residents parking
- Underground parking
- Under-deck parking
- Multi-storey parking
- Under-croft parking
- On-street parking
- Parking for electric cars, cycles, autonomous vehicles and mobility aids
- Car-sharing and car clubs
- Cycle facilities

#### 5. Street and Roads

- Services
- Post boxes
- Television and radio aerials and satellite dishes
- Street name-plates and markers
- Refuse collection
- Pedestrian and cycle movement
- Designing streets in support of buses
- Vehicular movement in residential areas
- Character and speed
- Street design
- Access to non-residential uses
- Speed restraint
- Surface materials
- Gateways
- Shared surfaces
- Smart technology
- Car-free zones
- Adoption criteria
- Street trees
- Public art

## 6. Highways Technical Manual

- Street type table
- Street type description
- Parking square
- Pedestrian and cycle movement
- Bus stops, routes and termini
- One-way street
- Speed restraint within a 20mph zone
- Junction types and design
- Junction spacing
- Visibility
- Planting in sight-splays
- Turning heads
- Vertical clearance under structures
- Driveways to individual dwellings
- Bollards
- Kerbs
- Street lighting
- Access for fire tenders
- Commuted sums
- Adoption and maintenance of roads, footpaths and open spaces

Recommended plant species

Urban public space

Mental health

Successful criteria for public open spaces

Ecology and Biodiversity

## 7. Flooding

- What are Sustainable Drainage Systems?
- Sustainable development
- Design criteria
- Local principles
- Local standards
- What are watercourses?
- Consulting the Lead Local Flood Authority

## 8. Landscape and Greenspaces

- The benefits of Green Infrastructure and Biodiversity
- Landscape - key requirements
- The key principles of public open space
- Allocating space for green areas
- Community space for growing food
- Public space for growing food in developments
- Technical and practical considerations of food growing
- Use of landscape in urban spaces
- Public open space

## 2. Internal Design Details

The importance of achieving appropriate internal design and space standards is set out in this section. Along with the National Space Standards and accessibility for disabled people this section includes reference to how to appropriately design extensions to the home

### Accessibility for Disabled People to Dwellings

- 2.1 It is good practice to design disabled access into all new dwellings, allowing disabled people to visit as far as the entrance without any assistance. Developers may draw their attention to the recommendations of the Joseph Rowntree Foundation's 'Lifetime Homes' concept, but it is recognisably unrealistic that all new houses should cater for occupation by people with impaired mobility. Lifetime Homes has been superseded by Building Regulations Part M4 Category 2 (Accessible and Adaptable Dwellings).
- 2.2 Planning authorities state that a flat area of at least 900mm x 900mm outside the entrance to each dwelling on the same level as the threshold is sufficient. This flat area may be approached by steps or a ramp with a maximum gradient of 1 in 12. A handrail with a minimum length of 900mm should also be incorporated where appropriate. The entrance door and any gates should be a minimum width of 800mm.
- 2.3 It is not always practical to accommodate this flat area and its approach outside the front door – for example, if the front door opens straight off the footway and its threshold is above the footway level. In such cases it is suitable for access to be provided to an entrance at the side or rear of the dwelling.

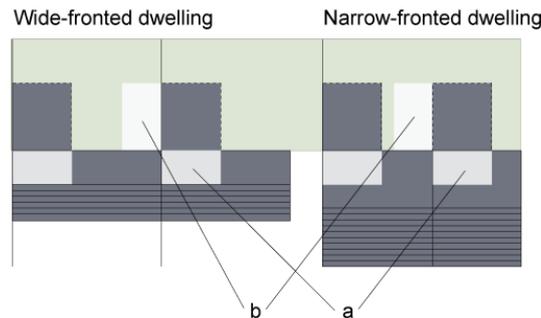
### Internal Space Provision

- 2.4 It is important that new houses do not become obsolete before their constructional life expires, and this should inform the size and layout of their internal spaces from the outset. While the market at the time of initial sale will clearly be the main determinant of the acceptability of space provision, it is prudent nonetheless to refer to other, relevant guidelines.
- 2.5 The document 'Technical housing standards – nationally described space standard' stipulates that developers must show on plans that bedroom furniture can be accommodated within the design. This standard deals with internal space within new dwellings and is suitable for application across all tenures. It sets out requirements for the Gross Internal (floor) Area of new dwellings at a defined level of occupancy as well as floor areas and dimensions for key parts of the home – notably bedrooms, storage and floor-to-ceiling heights.

### Extendable Houses

- 2.6 While the owners of any size of house may wish to extend at any time for a variety of reasons, planning authorities are particularly concerned about providing for the possibility of extending small dwellings. For all houses with two or less bedrooms, applicants must indicate whether or not the house is extendable. If the house is not extendable, the initial planning consent will be conditional on the withdrawal of the householder's right to extend within the guidance set out as part of the Permitted Development Rights.

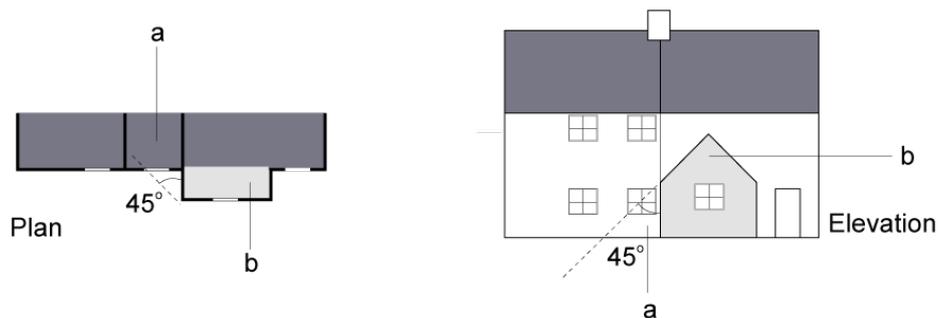
- 2.7 If the house is extendable, the applicant must indicate (as part of the initial planning application) how the house may be extended in the future without causing problems to neighbouring dwellings and curtilages or facing an unacceptable loss of garden area.



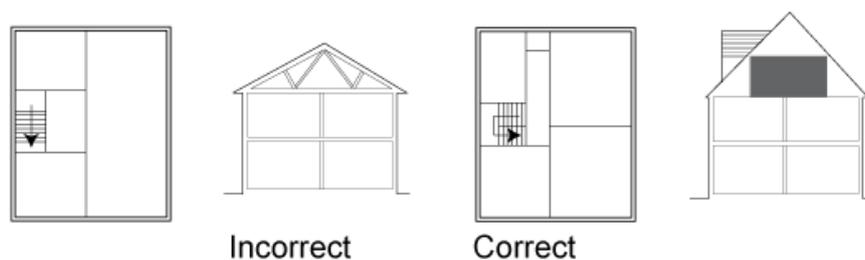
*Dwelling frontages*

- a) Zone suffering from loss of light
- b) Garden area affected by neighbouring extension

- 2.8 A ground-level rear extension is most easily accommodated without causing problems to neighbours or loss of daylight to the existing house interior if the original house has a wide frontage and shallow plan.
- 2.9 The Building Research Establishment’s report ‘Site Layout Planning for Daylight and Sunlight’ (2011) suggests that obstruction of light and outlook from an existing window can be avoided. This is achieved by ensuring that the extension does not result in the centre of the existing window falling within a combined plan-and-section 45° overshadowing zone.



- a) Affected window
- b) Extension



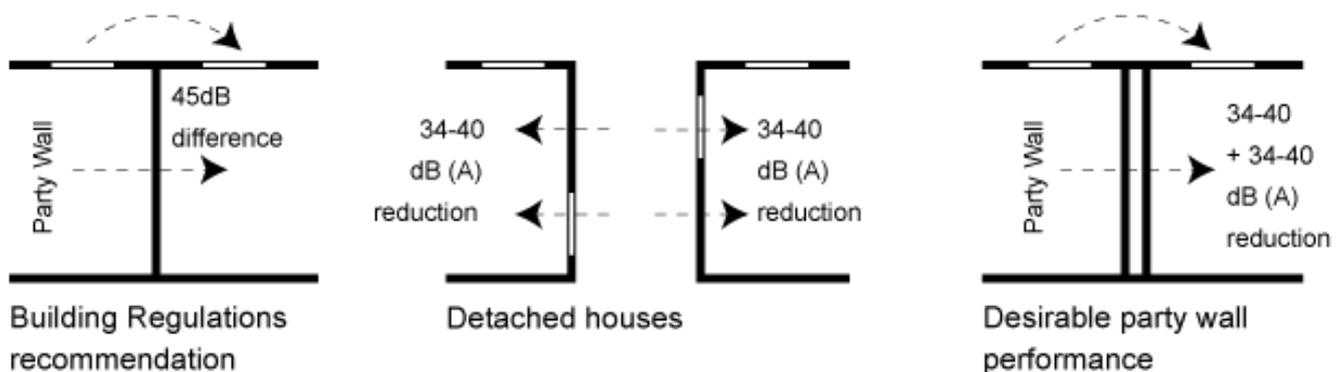
*Loft extension*

## Sound Insulation

- 2.10 Residents must be protected from extraneous noise so that they can sleep, rest and engage in normal domestic activities. Such noise may be due to external sources such as aircraft, traffic or nearby industry; it may also take the form of airborne sound originating with neighbours. In the case of flats, it may be structure-borne impact sound originating with neighbours on an upper floor.

### Airborne Noise from Neighbours

- 2.11 The Building Regulations recommend various forms of party wall and flooring which, when tested, achieve a minimum weighted standardised noise level difference (DnTW+ Ctr) of 45dB between neighbouring premises.
- 2.12 According to the Construction Industry Research and Information Association's report 'Sound Control for Homes' (1986), external walls typically reduce outside noise by 34dB(A), though by increasing their specification this can be improved to 40dB(A). Designers should aim to increase the specification of party walls permitted by the Building Regulations so that their performance is equivalent to that of a detached house. It is also prudent to zone the rooms of adjoining houses so that, for example, living rooms, stairs and toilets do not abut neighbouring bedrooms.



### Sound control

### Impact Sound from Neighbours

- 2.13 Building Regulations recommend various forms of party floor construction for dwellings which, when tested, achieve a minimum weighted standardised impact sound pressure level (L<sub>1nT,w</sub>) of 62dB. Clearly, there is more limited scope here for improving the specification so that performance is equivalent to that of a detached dwelling. The need to zone the rooms of dwellings to avoid incompatible juxtapositions is therefore even more crucial.

### Internal Airborne Sound

- 2.14 To ensure privacy, the Building Regulations require sound insulation of 40 R<sub>w</sub>dB between any room containing a WC (except en suites) and habitable rooms, as well as between bedrooms and other rooms.

## Nationally Described Space Standards

| Number of bedrooms (b) | Number of bed spaces (persons) | 1-storey dwellings | 2-storey dwellings | 3-storey dwellings | Built-in storage |
|------------------------|--------------------------------|--------------------|--------------------|--------------------|------------------|
| 1b                     | 1p                             | 39 (37) *          | -                  | -                  | 1.0              |
|                        | 2p                             | 50                 | 58                 | -                  | 1.5              |
| 2b                     | 3p                             | 61                 | 70                 | -                  | 2.0              |
|                        | 4p                             | 70                 | 79                 | -                  |                  |
| 3b                     | 4p                             | 74                 | 84                 | 90                 | 2.5              |
|                        | 5p                             | 86                 | 93                 | 99                 |                  |
|                        | 6p                             | 95                 | 102                | 108                |                  |
| 4b                     | 5p                             | 90                 | 97                 | 103                | 3.0              |
|                        | 6p                             | 99                 | 106                | 112                |                  |
|                        | 7p                             | 108                | 115                | 121                |                  |
|                        | 8p                             | 117                | 124                | 130                |                  |
| 5b                     | 6p                             | 103                | 110                | 116                | 3.5              |
|                        | 7p                             | 112                | 119                | 125                |                  |
| 6b                     | 8p                             | 121                | 128                | 134                | 4.0              |
|                        | 7p                             | 116                | 123                | 129                |                  |
|                        | 8p                             | 125                | 132                | 129                |                  |

2.15 The table above shows minimum gross internal floor areas and storage (m<sup>2</sup>).

2.16 The nationally described space standard will replace the existing different space standards used by local authorities. It is not a building regulation and remains solely within the planning system as a new form of technical planning standard.

2.17 The standard is one part of a wider housing standards review package which the government announced on 27 March 2015.