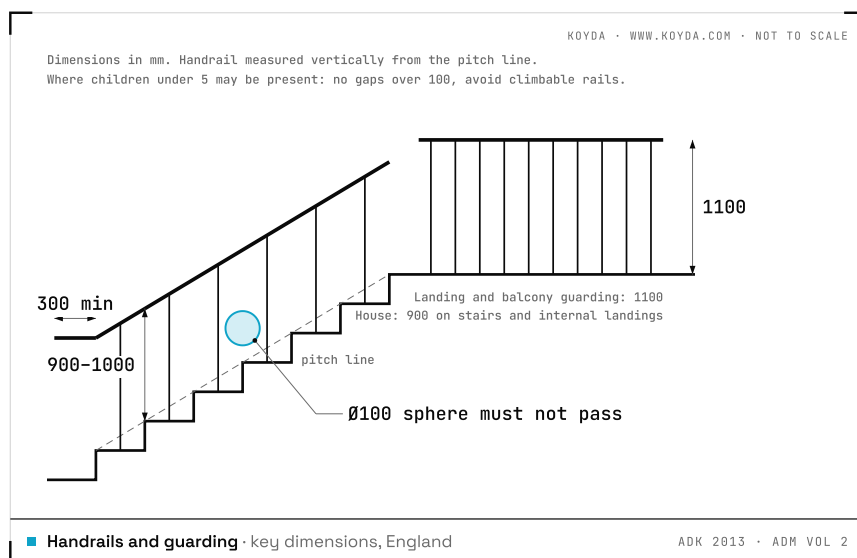


# Handrail and Balustrade Regulations in England

In England, guarding in a house must be at least 900mm high on stairs and internal landings, and 1100mm on external balconies and roof edges. In most other buildings it is 900mm on flights and 1100mm elsewhere. Handrails sit 900–1000mm above the pitch line, on both sides of stairs 1000mm or wider. Where children under five may be present, no gap may let a 100mm sphere through and the guarding should not be easy to climb.

| ITEM                                               | SINGLE-FAMILY DWELLING                           | OTHER BUILDINGS                                                                                      | SOURCE                                 |
|----------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------|
| Guarding needed                                    | Drops of more than 600mm                         | Stairs with two or more risers; other drops of more than two risers, or 380mm                        | ADK 1.40, 1.41, Section 3              |
| Guarding height: stairs and ramps                  | 900mm                                            | 900mm on flights                                                                                     | ADK Diagram 3.1                        |
| Guarding height: landings and floor edges          | 900mm (internal)                                 | 1100mm                                                                                               | ADK Diagram 3.1                        |
| Guarding height: external balconies and roof edges | 1100mm                                           | 1100mm                                                                                               | ADK Diagram 3.1                        |
| Handrail height                                    | 900–1000mm above the pitch line or floor         | 900–1000mm on flights; 900–1100mm on landings                                                        | ADK 1.34, Diagram 1.12; ADM Vol 2 1.37 |
| Handrails on both sides                            | If the stair is 1000mm or wider                  | Both sides of flights and landings                                                                   | ADK 1.34, 1.35                         |
| Handrail extension                                 | –                                                | At least 300mm beyond the top and bottom of the flight                                               | ADK Diagram 1.12; ADM Vol 2 1.37       |
| Handrail profile                                   | –                                                | Round 32–50mm, or 50 × 39mm with 15mm radius edges; 50–75mm clear of the wall                        | ADK Diagram 1.13; ADM Vol 2 1.37       |
| Gaps in guarding                                   | No 100mm sphere through                          | No 100mm sphere through, where children under five may be present                                    | ADK 1.39, 3.3                          |
| Climbing                                           | Not easy to climb                                | Avoid horizontal rails, where children under five may be present                                     | ADK 1.39, 3.3                          |
| Open risers                                        | Treads overlap 16mm min; no 100mm sphere through | Same                                                                                                 | ADK 1.9                                |
| Barrier line load at the top                       | 0.36 kN/m inside the house; 0.74 kN/m balconies  | 0.74 kN/m offices, residential, stairs; 1.5 kN/m restaurants and fixed seating; 3.0 kN/m crowd areas | BS 6180 Table 2                        |



## Guarding heights (ADK Diagram 3.1)

| BUILDING AND LOCATION                                                                      | MINIMUM HEIGHT                             |
|--------------------------------------------------------------------------------------------|--------------------------------------------|
| Single-family dwelling: stairs, landings, ramps, edges of internal floors                  | 900mm                                      |
| Single-family dwelling: external balconies (including Juliet balconies) and edges of roofs | 1100mm                                     |
| Factories and warehouses (light traffic): stairs and ramps / landings and floor edges      | 900mm / 1100mm                             |
| Residential, institutional, educational, office and public buildings                       | 900mm on flights, otherwise 1100mm         |
| Retail                                                                                     | 900mm on flights, otherwise 1100mm         |
| Assembly: within 530mm in front of fixed seating / other locations                         | 800mm / 900mm on flights, 1100mm elsewhere |
| Opening windows (guarding to glazing), except roof windows in loft extensions              | 800mm                                      |

## Barrier loads (BS 6180 Table 2, summary)

| USE (SUMMARY OF BS 6180 TABLE 2)                                                                                            | LINE LOAD AT TOP (KN/M) |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Inside a single-family dwelling, including stairs and landings (not external balconies or roof edges)                       | 0.36                    |
| Other residential; balconies, including Juliet balconies; stairs, landings and corridors; offices not prone to overcrowding | 0.74                    |
| Areas with fixed seating within 530mm of the barrier; restaurants                                                           | 1.5                     |
| Theatres, cinemas, shopping malls, assembly areas and other areas where crowds can gather                                   | 3.0                     |

## Glass

Glass guarding must also meet ADK Section 5: glass within 800mm of the floor, and in or beside doors up to 1500mm, must meet at least Class 3 of BS EN 12600. Free-standing glass with no independently supported handrail should be toughened laminated.

## Scotland, Wales, Northern Ireland

Different rules apply. Wales has its own Approved Document K; Scotland uses the Building Standards Technical Handbooks (section 4.4); Northern Ireland uses its Technical Booklets.

## Common questions

### How high should a balustrade be in a house in England?

At least 900mm on stairs, landings, ramps and internal floor edges, and at least 1100mm on external balconies, Juliet balconies and roof edges. These minimums come from Approved Document K, Diagram 3.1.

### What height should a stair handrail be?

900mm to 1000mm, measured vertically from the pitch line of the stair, or from the floor on a landing. In buildings other than dwellings, handrails on landings can be 900mm to 1100mm and should extend at least 300mm beyond the top and bottom of the flight.

### What is the 100mm sphere rule?

Where children under five may use a building, no opening in the guarding should let a 100mm sphere pass through. This applies to the gaps between balusters, gaps under the bottom rail and open risers on stairs (Approved Document K, paragraphs 1.9, 1.39 and 3.3).

## Sources

- Approved Document K: protection from falling, collision and impact (2013 edition, GOV.UK) · <https://www.gov.uk/government/publications/protection-from-falling-collision-and-impact-approved-document-k>
- Approved Document M Volume 2: buildings other than dwellings (2015 edition incorporating 2020 and 2024 amendments, GOV.UK) · <https://www.gov.uk/government/publications/access-to-and-use-of-buildings-approved-document-m>
- BS 6180:2011 Barriers in and about buildings. Code of practice, Table 2 (BSI)
- BS EN 1991-1-1 and UK National Annex; PD 6688-1-1 (BSI)
- BS EN 12600 Glass in building: pendulum test (BSI)
- Building standards technical handbook: domestic, section 4.4 pedestrian protective barriers (gov.scot) · <https://www.gov.scot/publications/building-standards-technical-handbook-2022-domestic/4-safety/4-4-pedestrian-protective-barriers/>
- Approved Document K for use in Wales (GOV.WALES) · <https://www.gov.wales/approved-document-k-protection-falling-collision-and-impact>

## Need balustrades, handrails or stairs designed, made and installed? Send us your drawings.

Koyda Ltd  
Units 27-29 Jesmor Farm, St Piers Lane  
Lingfield, Surrey RH7 6PN

Email: [joe@koyda.com](mailto:joe@koyda.com)  
Phone: 07753 213617  
Web: [www.koyda.com](http://www.koyda.com) · Mon-Fri 07:00-17:00

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