



An Roinn Oideachais  
Department of Education

# SDG 02-TN01

## Handrails & Guarding to Stairs in Primary Schools

### Design Guidance Technical Note 01

## 1. Background & Introduction

- 1.1 This Design Guidance Technical Note is provided to update or clarify existing Technical Guidance Documents (TGDs) and/or School Design Guidance Documents (SDGs) information relating to the provision of **Handrails and Guarding to stairs and landings in Primary Schools**. This Design Guidance Technical Note is to be read in conjunction with all other TGDs & SDGs.
- 1.2 This Design Guidance Technical Note is structured under the key headings as follows;
- Regulatory Context.
  - Current Department of Education Technical & Design Guidance.
  - Updates & Clarifications of Technical & Design Guidance.
- 1.3 The requirements of this Design Guidance Technical Note apply to all Primary School projects unless they have already achieved Stage 2a (Developed Design) sign off (in writing from the Client) prior to the publication of this note in **August 2023**.
- 1.4 For further advice on these or any other matter, please contact:

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## 2. Regulatory Context

- 2.1 As a baseline, all elements of a school design and construction should be fully compliant with all current relevant Building Regulations and Statutory Design Codes. For particular reference in relation to Building Regulations for handrails and guarding refer to;
- TGD Part K – Stairways, Ladders, Ramps & Guards
  - TGD Part M – Access & Use
  - TGD Part B – Fire Safety
- 2.2 In addition due to the unique user needs of schools, the Department of Education School Design Guidance includes additional and specific guidance for handrails and guarding in schools.

### 3. Current Department of Education Technical & Design Guidance

- 3.1 The current Department of Education Technical & Design Guidance in relation to stairs, handrails and guarding in primary schools continues to apply including the following;
- 3.2 **TGD 020 – General Design Guidelines for Schools (Primary & Post Primary) - 1st Edition (Revision 2, November 2017).**
  - 3.2.1 In particular refer to TGD 020 Section 13.4 Internal Circulation items (f), (g) and (h).
- 3.3 **Fire Strategy for Schools - A Supplementary Guide for Design Teams - 1st Edition, February 2014.**
  - 3.3.1 In particular refer to guidance in the above Supplementary Guide on TGD B Section 1.4.4.1 Construction of Escape Stairways.

### 4. Updates & Clarifications of Technical & Design Guidance

- 4.1 In addition to the above referenced current Department of Education Technical & Design Guidance which continue to be applicable, the following updates and clarifications relating to the design and installation of Handrails and Guarding to Stairs and Landings in Primary Schools are provided.
- 4.2 The priority consideration is the safety and accessibility requirements of the pupils and other users given the unique user needs of Primary Schools.
- 4.3 Other design considerations which should also be taken into account by design consultants subject to compliance with the above safety & access priority requirements, include structural/ loading, buildability, materials, whole life/ embodied carbon, visual aesthetics & costs.
- 4.4 Designers are reminded of the requirement to risk assess their designs, particularly where a second lower handrail presents a climbing hazard or risk and the guarding should be carefully designed to eliminate such risks.
- 4.5 The vertical height of the guarding to stair flights should be not less than 1400mm above the pitch line of the stairs as per Fig. 1 below.

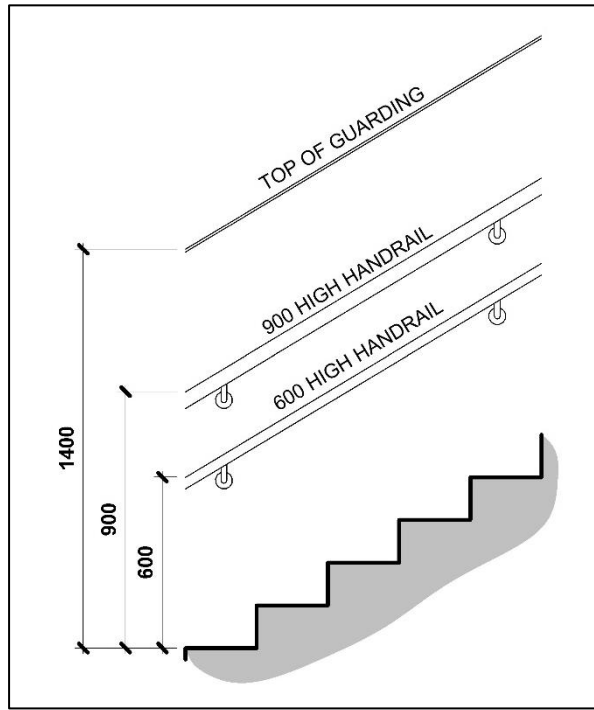


Fig. 1 Heights of guarding and handrails above stairs pitch line.

- 4.6 In addition to the 900mm high handrail, a second handrail of 35mm diameter should be installed at 600mm high to both sides of all stairs in primary schools.
- 4.7 Where there are two or more flights separated by a landing or landings, both handrails should be continuous across flights and landings, except where broken by side access routes on landings.
- 4.8 The minimum guarding height of 1400mm on the stair flights is considered appropriate with the double handrails as the 600mm height of the lower handrail to the flight can be considered not readily climbable due to the pitch and the average height from the tread surface.
- 4.9 The minimum guarding height to the landings should be further considered by design consultants based on a risk assessment of the climbing hazard in specific locations where the double handrails are required on landings. The horizontal nature of the double handrails increases the risk of climbing and therefore the guarding height should be increased to ensure a minimum of 1100mm above the top handrail.
- 4.10 Therefore the guarding height to landings should be not less than 2000mm where there are horizontal double handrails as per Fig. 2 below.

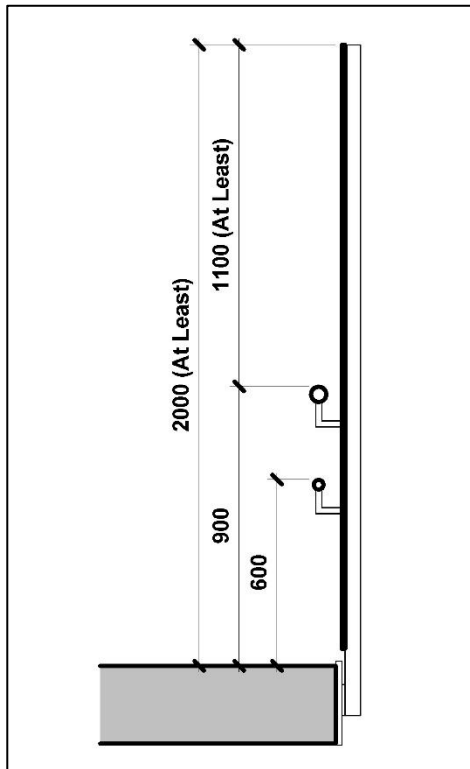


Fig. 2 Heights of guarding and handrails above landing level.

- 4.11 Voids at 2nd floor and above should have full height guarding and be fully enclosed with appropriate glazing and designed for intended purpose.
- 4.12 The design and choice of guarding materials should be carefully selected to provide a high quality design solution and avoid a closed in effect.
- 4.13 Structural Design Codes for loadings to guarding and barriers must be carefully considered by Structural Design Consultants. The design of structural connections and fixings should be co-ordinated with other structural and building elements at an early stage of the design process.



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