



## Certification Practice Note 4

# Guidance on the certification of the structural design of protective barriers

### 1.0. Background

1.1. The Building (Scotland) Regulations require that sudden changes in level within or around a building be protected by the provision of barriers. Mandatory Standard 4.4 applies to the protection of pedestrians and Mandatory Standard 4.12 applies to vehicles. These barriers are required where there is a possibility of a severe injury resulting from a fall.

1.2. Mandatory Standard 1.1 requires that the building is designed so that the loadings that are liable to act on it will not lead to:

- a) the collapse of the whole or part of the building
- b) deformations which would make the building unfit for its intended use, unsafe, or cause damage to other parts of the building or to fittings or to installed equipment, or
- c) impairment of the stability of any part of another building.

1.3. References to “building” in the legislation include references to part of a building. And it is for this reason that Certifiers must consider whether or not parts of the building, such as protective barriers, meet the above requirements.

1.4. This document provides some guidance in relation to the certification of the structural design of protective barriers.

### 2.0. General Guidance

2.1. Barriers are required in a wide range of situations with very different risks associated with their failure. Certifiers must take a proportionate approach to the certification of the design, based on a risk assessment which is to consider factors such as:

- a) Whether it is a proprietary product or a bespoke design
- b) Who the designers of the barrier are
- c) The likely manufacturer of the barrier
- d) Position of the barrier in the building
- e) The magnitude of the fall protected by the provision of the barrier
- f) The robustness/integrity of the supporting structure to which the barrier is to be fixed
- g) The consequences of a failure of all or part of the barrier and/or its fixings and supports

- 2.4. The risk assessment should help to determine the extent of the Certifier's review of the design.
- 2.5. The responsibilities of the Certifier with respect to the certification of the design of any protective barriers will be no different than for any other element of the building in that the Certifier must be satisfied that the design has been appropriately checked and that it meets the requirements of Mandatory Standards 1.1 and 1.2. This may be achieved by reviewing structural calculations or other justification for the design, such as BBA certificates or other recognised test certification, manufacturers literature, etc. The Certifier must also see that any specifications are consistent with the assumptions made in the calculations, test certification etc. Any testing of protective barriers to demonstrate compliance with the Mandatory Standards should be undertaken on a representative prototype of the barrier and the supporting structure prior to certification.
- 2.6 The Certifier must also see that any drawings that are submitted for building warrant are sufficiently detailed.
- 2.6 Furthermore, as noted in other guidance, the Certifier is required under the legislation to keep records of how compliance with the building regulations was established. In all cases therefore, irrespective of the risk determined, there must be clear evidence of the risk assessment within the certification records.

### 3.0. Use of Schedule 1

- 3.1 Where appropriate on projects in Risk Groups RG1A and RG1B, use may be made of the third party designed details option. See guidance on Certification Performance Criteria B1.4.
- 3.2 In particular, Certifiers must see that the warrant submission includes an appropriately detailed performance specification and that the warrant drawings show a conceptual design for the barrier and its fixings, which is substantiated by calculations or other means of justification.
- 3.3 Certifiers should also check to see that the design of the primary structure to which the barrier is fixed is compatible with that of the barrier and its fixings.

### 4.0. Certification Performance Criteria

- 4.1 Certifiers should also refer to the Certification Performance Criteria, which can be found on the SER website.

March 2022