



Certification Performance Criteria Guidance

B4.8 Superstructure – Other Elements

Performance Criteria

Certifiers shall satisfy themselves that adequate details have been prepared for all other elements, including secondary beams, trimmers, staircases, etc., and that sufficient calculations have been prepared in accordance with an acceptable methodology to demonstrate the adequacy of the design.

Background

In order to be safe, a building should be capable of resisting all loads acting on it as a result of its intended use and geographical location. To achieve this, the structure of a building should be designed with appropriate margins of safety.

Other elements of the superstructure will be those elements which are not regarded as principal loadbearing or stability elements and will include secondary beams, trimmers, staircases, suspended floors, plant room floors and their immediate supports, supports for significant items of building services, such as air conditioning plant, heavy ductwork and cable trays.

Guidance

Calculations for any other elements should be carried out in accordance with the Codes and Standards listed in 'Technical Guidance Document Part 1: Structure'. Where design methodologies have been used which are not based on these then Certifiers must be satisfied that the alternative approach still meets the standard required by the regulations and clearly demonstrate how they have satisfied themselves in this regard.

The plans should show all elements of superstructure and they should be consistent with the design calculations.

The level of checking undertaken will depend on a wide range of factors which include the complexity of the design and the risk associated with structural failure. For more detailed guidance refer to SER Guidance Note 7, 'Guidelines for Checking the Structural Design of Buildings'.

As stated in other guidance structure is not explicitly defined in the Bye-laws and therefore must be inferred from consideration of the Requirements. In the context of Requirement 1.1 it can be implied to mean any part of a building that is required to sustain and transmit load. It is therefore important that the Certifier checks to see that all the loadbearing elements of the building have been designed and detailed appropriately.

Examples of Major Non-conformances

The design of any of the other superstructure elements clearly does not meet the Requirements 1.1, 1.2 and 1.3.

Absence of suitably checked structural calculations, load/span tables, test certification or other justification for the design of any other important elements of structure.

Absence of suitably checked drawings/details.

Grossly inadequate details for other elements on the drawings.

Examples of Improvement Issues

Inadequate or insufficient details on the plans.

Inadequate or insufficient structural calculations, load/span tables, test certification or other justification for the design of any other element of structure.

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