



Certification Performance Criteria Guidance

B5.1 Building Envelope (including cladding and glazing)

Performance Criteria

Certifiers shall satisfy themselves that adequate details have been prepared for the external envelope of the building and that there are sufficient calculations or other evidence to demonstrate the adequacy of the design.

Certifiers shall satisfy themselves that the design of the external envelope is compatible with the design of the supporting structure, particularly with respect to deflection.

Background

The building envelope is required to fulfil a wide range of building regulation requirements. While the envelope will frequently not contribute to the strength and stability of the building structure it will require to support its own weight, transfer wind loads into the structure and remain attached to the building under the effects of wind load.

The Standing Committee on Structural Safety (SCOSS) has highlighted a number of potential problems arising from deficiencies in design of elements of the building envelope and these can pose a serious risk to the health and safety of people in and around buildings.

Guidance

The envelope of a building often comprises a series of mutually dependent elements, such as roof and wall cladding, curtain walling, glazing, the secondary structure supporting these elements, the fixings between the various elements and the fixings to the primary structure. The design of these elements is often carried out by different designers and at a late stage in the building design process. It is important that the design of the various elements is properly coordinated prior to the certification of the building envelope.

It is unlikely that the information that will be required for certification of the building envelope will be available when the initial permit application is made and therefore that certification of the building envelope will be deferred until the design of all the elements has been completed and checked.

Examples of Major Non-conformances

The design of the building envelope clearly does not meet 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 element of the building envelope.

Absence of suitably checked drawings/details.

Grossly inadequate details for any element of the building envelope.

Absence of evidence demonstrating that the Certifier considered the compatibility of the elements of the external envelope and the supporting structure.

Absence of evidence demonstrating that the Certifier made adequate enquiry regarding the design of any element of the building envelope and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.

Examples of Improvement Issues

Inadequate or insufficient calculations or other justification for the design of any element of the building envelope.

Inadequate or insufficient details for any element of the building envelope.

Inadequate consideration of the compatibility of the elements of the external envelope and the supporting structure.

Insufficient evidence demonstrating that the Certifier made adequate enquiry regarding the design of any element of the building envelope and/or the experience of those undertaking the design where this was prepared by an external specialist/third party.

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