



Certification Performance Criteria Guidance

B5.1 Building Envelope (including cladding and glazing)

Revision A

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 and that there is evidence that the design and details have had the appropriate level of checking.

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.

Where Schedule 1 has been used Certifiers must satisfy themselves that adequate details have been prepared and that there are sufficient preliminary calculations or other evidence to demonstrate the adequacy of the solution proposed.

Where a Form Q is required, Certifiers shall review the calculations and details for the finalised design and satisfy themselves that they meet the requirements of the appropriate performance specification.

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) 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 warrant application is made and therefore that the building envelope will have to be part of a staged warrant application with certification of the building envelope being deferred until the design of all the elements has been completed and checked and all the information required by BSD's Procedural Guidance on Certification can be submitted to the Verifier.

Examples of Major Non-conformances

Absence of or grossly inadequate evidence of the Certifier's review of the design of building envelope.

The design of the building envelope clearly does not meet the requirements of Standards 1.1 and 1.2.

Absence of or grossly inadequate suitably checked structural calculations, load/span tables, test certification or other justification for the design of any element of the building envelope.

Absence of or grossly inadequate suitably checked details for any element of the building envelope.

Absence of or grossly inadequate evidence demonstrating that the certifier considered the compatibility of the elements of the external envelope and the supporting structure.

Absence of or grossly inadequate performance specification and details on the warrant plans, where glazing was included on Schedule 1 (RC1 buildings only).

Absence of or grossly inadequate calculations, etc. to justify the preliminary design shown on the warrant plans, where glazing was included on Schedule 1 (RC1 buildings only).

Absence of or grossly inadequate evidence to demonstrate that a review of a third party's finalised design for the glazing had been carried out by the Certifier before an interim or final Form Q was signed. (RC1 buildings only).

Examples of Improvement Issues

Insufficient evidence of the Certifier's review of the design of building envelope.

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 to demonstrate that a review of a third party's finalised design for the glazing had been carried out by the Certifier before an interim or final Form Q was signed. (RC1 buildings only).

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