

**BSP3: Minimum requirements when submitting  
Structural Calculations for Building Warrant  
Applications.**

**Overview**

Structural calculations, which are being submitted for the purpose of obtaining a Building Warrant, should be in the form of a report and be prepared by a chartered civil or structural engineer experienced in the type of design proposed. This may be submitted in typed or hand written form and must;

- Be clear, legible and accurate;
- Contain a table of contents;
- Have all pages titled, numbered and signed;
- Provide in-text clauses to the relevant British Standards and or text references; and
- Contain sketches and drawings as relevant.

The calculations should contain the following information.

**Note:-** Where calculations are not submitted in the following format will be returned to the applicant/agent as appropriate for redrafting.

**1.0 Description of the Building**

The calculations should contain a detailed description of the building. This should highlight the following aspects:

- (a) Existing structural condition.
- (b) Functional requirements
- (c) Site requirements
- (d) Architectural requirements.

**2.0 Design Requirements**

The calculations should provide a list of components that are required to be designed and, which has been included in the calculations document. This should highlight any specific design requirements of the various structural elements.

**3.0 Design Methodology/ Structural Function.**

A detailed Methodology as to how the building/structural element will be analysed and design must be provided. An account of how the building will function structurally to withstand vertical and horizontal loads must also be provided.

#### **4.0 Standards and Specifications**

The design should conform to the current and relevant British Standards and Building Regulations 1.1 (Design Loadings) and 1.2. (Prevention of Disproportionate Collapse). References to specific standards must be included within text wherever relevant.

The specification of materials must be detailed in the document and in drawings.

#### **5.0 Loading Calculations**

A breakdown of all permanent and imposed horizontal and lateral loading must be provided. References to the relevant British Standards and other relevant documents where characteristic loads were obtained must be listed and referred to where used.

The site wind load calculations must be provided where applicable.

#### **6.0 Structural Analysis**

The Structural analysis may be done manually or by the use of computer software. Analysis calculations done by software must be checked and validated by the designer.

#### **7.0 Design Calculations**

Design calculations should be done in accordance with the relevant British Standards. The location of each structural component being designed must be shown in a drawing and sketches of the relevant details must be provided. The design must take into account the practical issues relating to construction and health and safety issues.

#### **8.0 Detailed Drawings**

Detailed drawings of the designed structural components must be provided illustrating all relevant design components. All drawings must have a title block, all relevant information and must be signed.

#### **9.0 Other Information.**

The document must contain all information used in the structural design. This would include, Geotechnical Investigation report, site survey information etc.