

Guidance on the submission of structural calculations to Building Control

Introduction

This guidance note is intended to give guidance to structural engineers in England and Wales on the information that needs to be submitted in support of a Building Regulations application in order to demonstrate compliance with the Building Act 1984 and the Building Regulations 2010. This is to enable the Building Control body to assess your submissions more effectively, and to give a targeted and efficient response. (Different regulations apply in other areas of the UK.)

When to submit?

This information does **not** necessarily have to be submitted at the time of the application. This is because structural information is often required in response to conditions that are attached to an approval. Therefore, structural calculations and drawings can be submitted when the design is sufficiently developed. However, you should ensure that this is submitted **in advance** of the works commencing to reduce the potential risk of abortive work. This is particularly relevant to foundation design and innovative design solutions. For minor projects, it would be expected that all information was submitted with the application.

What to submit?

Design summary

You should submit a design summary with every submission which contains the following, if relevant:

- a list of the structural design codes with which it complies
- an explanation of the basis of design. This requires sufficient detail to allow others to understand the structural principles used
- the class of the building for purposes of disproportionate collapse design (Table 11 of Approved Document A). If the building is in a number of classes, describe the division
- a description of the measures taken to guard against progressive collapse
- a description of the load path to the foundations and how lateral stability is achieved (with illustrations as required to give sufficient clarity)
- the name of the organisation, or individual, who has overall responsibility for the stability of the structure as required by the design codes
- a schedule of the software used, and for what purpose; confirming that its application and limitations are understood and that the results have been verified
- a statement of the qualifications of the person undertaking the design, whether the design has been subject to any in-house or third-party checking, and the name and qualifications of the person doing that checking

All of these items should be applicable to most projects. If they are not, there is no need to submit unnecessary information.

Design

The design should then be submitted, in a clear and readable format, with clearly referenced pages. Elements should be consistently referenced and highlighted on plans. Design submissions are not necessarily required for all elements, but you should include the design for typical elements, all transfer structures, unusual and safety-critical elements. Foundation design and assessment of any effects on existing structure should also be submitted. Supporting documentation, such as results of any site investigation or tests, should also be included. If unsure, it is best to discuss with your Building Control body first.

What codes of practice can be used?

Building Regulations do not preclude any method of design, provided you can justify its acceptability. Approved Document A refers to the Eurocodes as an acceptable method of design, and as the most up-to-date code it would be deemed to be acceptable to use them. Older codes which are not maintained are less likely to reflect current design practices, and issues which have subsequently been found to be a problem will not have been incorporated. Therefore, if you wish to use any design standard other than the Eurocodes, you should justify its application. You should not mix codes, without appropriate justification.

This guidance note has been prepared by the Institution of Structural Engineers' Business Practice and Regulatory Control Committee.

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