

**STATEMENT OF COMPETENCES**

**APPLICATION FOR PERSONAL CERTIFICATION FOR STRUCTURE CLASSES 3 & 4**

**Statement of competences for certification for structure classes 3 & 4**

The statement of competences has been prepared as an aid and a tool for completing the application to become a certified structural engineer at Certification, Ramboll.

The overview below indicates where to find the documentation for a given requirement in BEK 1693 in the applicant’s respective appendices. For each item the applicant must also state with explanatory text how the requirement is estimated to be met.

To read the Danish Authority of Social Services and Housing’s guide to the Executive Order on Certification Scheme, please follow the link on Certification, Ramboll’s website under the section ’How do I get certified’.

**Formalities**

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| Full name: |  | **Karin Lademann** |  |  |
| Date: |  | [Dato] |  |  |

**DOCUMENTATION OF** **COMPETENCES**

At application for certification for structure classes 3 & 4, the project/projects must be submitted for review and assessment at Certification, Ramboll.

The project should be completed, because otherwise the documentation cannot form the basis of an assessment of the competences of an applicant.

If the certification body estimates that the documentation for the project is adequate for an assessment, it may, however, be accepted that a few inspection documents from the construction are not included.

For a project to be suited for assessment of the competences of an applicant, he or she must have knowledge of the structural design of the project in general.

As a minimum, the application material must document that the applicant has:

* **Prepared or inspected** documentation for classification into structure class.
* **Prepared or inspected** A1.1 Basis of structures – building.
* **Prepared** A2.1 Structural calculations – building.
* **Prepared** parts of building sections in A2.2 Structural calculations – building sections, so the applicant shows that he or she can prepare structural calculations for various construction materials or structural members. This includes:
* At least two types of construction materials (e.g. steel and reinforced concrete or steel and timber).
* At least two types of structural members (e.g. pillars, beams, washers, decks) and two different joints between structural members.
* Foundation.
* **Inspected or prepared** A3. Structural drawing to the extent that the drawings indicate conditions included in the documentation for A2.1. Structural calculations – building and A2.2. Structural calculations – building – building sections prepared by the applicant.
* **Prepared** **or inspected** B1 Structural inspection report
* **Prepared** **or inspected** B2 Structural inspection plan

Certification, Ramboll may demand submission of any part of the structural document in accordance with BEK 1693, §16, subsection 3.

| **No.** | **Reference to BEK 1693 and**  **Guide to certification of structural engineers and fire advisors** | **Applicant’s comments on the documentation requirements** | **Reference to appendix** |
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| KK3&4  3.1 | *§16, subsection 1 no. 2*  *The project material must be at least in construction class 2. If the projects are in construction class 2, the scope and complexity of the static documentation must correspond to projects in at least construction class 3. The documentation must also be supplemented with documentation of the construction's robustness.* |  |  |
| KK3&4  3.2 | *§16, subsection 1, no. 4*  *The projects must be a maximum of 8 years old in relation to the time of issue of the building permit or 5 years old in relation to the time of issue of the commissioning permit.* |  |  |
| KK3&4  3.3 | *§16, subsection 1 no. 6*  *In addition to foundation, at least two types of construction materials and two types of structural members must be included (which the applicant has performed).* |  |  |
| KK3&4  3.4 | *§16, subsection 5 and BR18, chapter 28, §494, subsection 2*  *Reasonable evaluation of the structure class, into which the building can be classified.* |  |  |
|  | *§16, subsection 2*  *The applicant must enclose enough parts of the structural documentation, cf.* ***BR18****, chapter 28 to provide the basis for the assessment.*  *§16, subsection 6*  *The application material must for projects built pursuant to* ***BR10*** *or* ***BR15****, as a minimum include the structural documentation, as stipulated in SBi 223, Documentation of load-bearing structures.* |  |  |
| KK3&4  3.5 | *§16, subsection 2*  *A1.1* Basis of structures, building   * *Basis, loads, materials, description of building* * *Structural performance, robustness, fire and soil engineering*   *(Cf. SBi 223, A1. Basis of project, building)* |  |  | |
| KK3&4  3.6 | *§16, subsection 2*  *A2.1.* Structural calculations, building   * *Main structural calculations - stability, internal forces, load bearing, robustness* |  |  | |
| KK3&4  3.7 | *§16, subsection 2*  *A2.2. Structural calculations, building sections*   * *Demonstration of force, function requirements* * *2 types of construction materials* * *2 types of structural members* * *2 different joints between structural members* * *Foundation and soil*   *(Please state which building sections are suited for review)* |  |  | |
| KK3&4  3.8 | *§16, subsection 2*  *A3. Structural drawings*   * *Master drawings, building element drawings and detailed drawings relevant for the submitted building sections, and understanding of the project.* |  |  | |
| KK3&4  3.9 | *§16, subsection 2*  *B1. Structural project report*   * *Organization, division of tasks and interfaces*   *(Cf. SBi 223, B1. Structural project report)* |  |  | |
| KK3&4  3.10 | *§16, subsection 2*  *B2. Structural inspection plan*   * *Reference points, allocation of reference points, scope of inspection of design and construction*   *(Not included in structural documentation according to SBi 223)* |  |  | |
| KK3&4  3.11 | *§16, subsection 2*  *B3. Structural project report*   * *Inspection documentation for design – minimum two building sections* * *Inspection documentation for construction* - *minimum two special reference points (not included in SBi 223)* |  |  | |
| KK3&4  3.12 | *§16, subsection 2*  *Declaration of commencement and possible declaration of completion from a certified structural engineer*  *(Not included in structural documentation according to SBi 223)* | *To be attached, but is not included in the assessment – remember to refer to appendix number* |  | |
| KK3&4  3.13 | *§16, subsection 2*  *Other documents relevant for the understanding of the project, e.g. architectural plans, sections and building element drawings.*  *The applicant’s ability to evaluate the scope of relevant material will be part of the assessment.* |  |  | |

**Information oN ORAL PRESENTATION OF SUBMITTED PROJECT**

At the presentation, the applicant must bring identification with a CPR number, such as healthy card, driver’s license, passport etc., to allow identification of the applicant at appearance.

As part of the certification body’s assessment, the applicant must provide an oral presentation of the project and prove that the applicant has worked on the project as described in the documentation and in accordance with good professional practice.

The oral presentation serves to assess the applicant’s competences at an overall review of the project as well as an elaboration and illustration of disputed points found by the assessors through the project review.

The applicant’s statement should include:

* Description of the structure.
* Description of building sections and interfaces for section design.
* Description of classification into consequence classes and structure classes, including assessment of whether the structure is traditional/untraditional and simple/complex.
* Description of the structural performance of the structure.
* Description of conditions related to fire and robustness.
* Description of the construction materials included.
* Determination of loads.
* Overall review of stability calculations.
* Overall review of structural calculations of selected different types of structural members, including joints and materials.
* Overall review of the inspection plan.
* Overall review of the inspections prepared by the applicant.

The oral presentation must identify the applicant’s role in the project and understanding of the major structural conditions of the project, and if his or her work complies with the Building Regulations and as described in the application.