STATEMENT OF QUALIFICATIONS AND COMPETENCES

APPLICATION FOR PERSONAL CERTIFICATION FOR STRUCTURE CLASS 2

Statement of qualifications and competences for certification for structure class 2

The statement of qualifications and 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 674 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. The application is considered to be satisfactory when all the requirements listed in the overview have been stated.

The overview comprises 3 sections:

- Documentation of education and experience
- Documentation of qualifications
- Documentation of competences (to be filled in when the certifying body has chosen project)

To read the Danish Transport, Construction and Housing Authority'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

Full name:	[Navn]
Date (1st submission):	[Dato yyyy-mm-dd]
Date (2nd submission):	[Dato yyyy-mm-dd]

DOCUMENTATION OF EDUCATION AND EXPERIENCE

No.	Reference to BEK 674 and Guide to certification of structural engineers and fire advisors	Applicant's comments on the documentation requirements	Reference to appendix
KK2 1.1	*§12, subsection 1 no. 1* *An education in technical conditions at a level corresponding to 180 ECTS points, of which at least 60 ECTS points are within design, analysis and design of load-bearing structures.* Definition of technical conditions and fields within design, analysis and design, see table 2, 3 and 5 in Guide to certification of structural engineers and fire advisors. If the combination of the basic education does not fulfill the requirement for at least 60 ECTS points within design, analysis and design of load-bearing structures, missing ECTS points can be achieved through continuing education.		
KK2 1.2	*§12, subsection 1 no. 8* *3 years of experience within the last 5 years in use of qualifications included in §12, subsection 1 no. 1-7.*		
KK2 1.3	*Guide to certification of structural engineers and fire advisors, section 4.1.2.3* *At least one project should be specified, where the applicant's task has been concentrated on the preparation of structural documentation and one project, where the applicant has worked with inspection of structural documentation.*		

DOCUMENTATION OF QUALIFICATIONS

Qualifications according to §12, subsection 1, nos. 2-7, may be documented by a diploma from an accredited educational institution stating that the learning goals are included in the education, cf. §12, subsection 1, no. 1.

It is, however, no condition that the qualifications in §12, subsection 1, nos. 2-7, are obtained through accredited education. The requirements may also be met through other education, course etc. (course certificate must be attached as appendix to the application – as an alternative the applicant may state in detail how he or she obtained this qualification.

Qualifications for preparation of documentation and inspection of documentation as required, cf. §12, subsection 1, nos. 5-7, can also be assessed through submitted project material. In that case the applicant must state how the qualifications were obtained and which documents in the project list document this.
At application for certification, the qualifications cannot be documented by a declaration.

No.	**Reference to BEK 674 and Guide to certification of structural engineers and fire advisors**	**Applicant's comments on the documentation requirements**	**Reference to appendix**
KK2 2.1	*§12, subsection 1 no. 2* *Knowledge of the use of the fundamental provisions of the Danish Building Act, including:* *a) The scope of the Danish Building Act.* *b) The provisions for liability of the Danish Building Act.* The applicant must have knowledge of the fundamental provisions of the Danish Building Act, including provisions regarding the scope of the act and which types of construction works are covered by the act. The applicant must also have knowledge of the provisions for liability following from the act.		

	The applicant must also be knowledgeable about the role of the local council in a building project in relation to liability issues. The provisions for liability are indirectly important to the certified structural engineer, for which reason the certified structural engineer must have knowledge of these.		
KK2 2.2	*§12, subsection 1 no. 3* *Knowledge of the administrative provisions of the Danish Building Regulations 2018 (BR18) and the provisions for structural design.* The applicant must have knowledge of: • How to apply for building permit and which documentation for structural conditions to be submitted to the building authority according to BR18, chapter 1. • Requirements for structures in BR18, chapter 15. This assumes knowledge of the following in BR18, chapter 1: The scope of the Building Regulations, cf. BR18, chapter 1, §§ 4-6. • For which buildings to apply for building permit, cf. BR18, chapter 1, §§ 7-15. • Classification in structure class, cf. BR18, chapter 26. • Use of certified structural engineer at application for building permit, cf. BR18, chapter 1, §§ 16-19. • Building permit, cf. BR18, chapter 1, §§ 35-38. • Completion of building project, cf. BR18, chapter 1, §§ 41, 43 and 44. This assumes knowledge of the following in BR18, chapter 15: • Structures, cf. BR18, chapter 15, §§ 340-343. • Planning and building of structures and foundations, cf. BR18, chapter 15, §§ 344-352. • Transportable structures, cf. BR18, chapter 15, §§ 353-355. • Exceptions, cf. BR18, chapter 15, § 356. • Operation, inspection and maintenance, cf. BR18, chapter 15, § 357.		

KK2 2.3	*§12, subsection 1 no. 4* *Knowledge of the safety and applicability of load-bearing structures, including:* *a) Structural understanding and statement of the function of the main structures, building sections and joints of buildings.* re a) The applicant must state, how a structure will behave compared to the forces exposed to it in relation to distribution and form of cycle of forces, internal forces, deformations and vibrations. The applicant must evaluate if the structure, structural elements and joints function as planned and modelled, and are robust and buildable. *b) Identify any critical conditions important to the safety and applicability of load-bearing structures.* re b) The applicant must identify the critical parts of a load-bearing structure and indicate methods for assessment hereof. *c) State the terminology, principles, main rules and correlations in standards for structural design, relevant regulations concerning CE marking of building elements and good practice for documentation of load-bearing structures as described in the instructions of the Danish National Building Research Institute SBi 223, Documentation of load-bearing structures or SBi 271, Documentation and inspection of load-bearing structures.* re c) The applicant must have knowledge of standards and guides, reference is made to BR18, chapters 15 and 28, so the applicant can on this basis document the performance of load-bearing structures.		

KK2 2.4	*§12, subsection 1 no. 5* *Preparation of structural documentation, including:* *a) Interpret and evaluate the results of preliminary examinations and formulate the basis of the project.* re a) The applicant must evaluate the necessary scope of preliminary examinations, and whether the results are adequate for the design and on this basis prepare a basis of the project equivalent to A1. Basis of structures and B1. Structural project report, as described in BR18, chapter 28, and SBi 271. *b) Structure and draw up the documentation for load-bearing structures.* re b) The applicant must prepare documentation for load-bearing structures, i.e. declaration of commencement, declaration of completion and structural documentation, as described in BR18, chapter 28, and SBi 271. *c) Prepare structural calculations, evaluate the results found and state the application and limitations of the simulation models used.* re c) The applicant must prepare structural calculations corresponding to A2. Structural calculations as described in BR18, chapter 28, and SBi 271, evaluate the results of the calculations and state and document results.		

KK2 2.5	*§12, subsection 1 no. 6* *Inspection, including:* *a) Plan, perform and document inspection of structural documentation, cf. BR18, chapter 30, and prepare inspection plans and inspection reports for structural documentation.* re a) The applicant must plan, perform and document inspection of a structural documentation in accordance with BR18, chapters 28 and 30, and SBi 271, including prepare B2. Structural inspection plan and B3. Structural inspection report for structural documentation. b) *Plan, perform and document inspection of load-bearing structures, including prepare inspection plans and inspection reports.* re b) The applicant must plan, perform and document inspection of construction in accordance with BR18, chapters 28 and 30, and SBi 271, including prepare B2. Structural inspection plan and B3. Structural inspection report for load-bearing structures.		
KK2 2.6	*§12, subsection 1 no. 7* *Prepare documentation of the completed building, cf. BR18, chapter 28.* The applicant must prepare and inspect the full documentation for the load-bearing structures in the completed building in accordance with BR18, chapters 28 and 30, and SBi 271.		

DOCUMENTATION OF COMPETENCES

The applicant must document his or her competences by means of submitted project material. At application for certification for structure class 2, the certification body selects a project or parts of more projects for review and assessment at Certification, Ramboll.

The project documents are chosen from the projects selected by the applicant and included in the project list. A project is suited for assessment, once the overall structural documentation has been completed and building permission has been granted.

When the applicant has been informed by the certification body of the project/parts of projects chosen for assessment, the form below must be filled in and the statement resubmitted together with relevant project material.

If the form below refers to a document not chosen for assessment, the text 'Not included in assessment' should be entered in the column under the applicant's comments.

No.	**Reference to BEK 674 and Guide to certification of structural engineers and fire advisors**	**Applicant's comments on the documentation requirements**	**Reference to appendix**
KK2 3.1	*§11, subsection 2 no. 1* *The project must be at least in structure class 2.*		
KK2 3.2	*§16, item 3* *The project must not be older than 5 years at the time of application estimated against the time of issue of commissioning permit.*		

No.	Reference to BEK 674 and Guide to certification of structural engineers and fire advisors	Applicant's comments on the documentation requirements	Reference to appendix
	Guide to certification of structural engineers and fire advisors, section 4.1.3. *The applicant must enclose enough parts of the structural documentation, cf. BR18, chapter 28, BR15 appendix 4, BR10 appendix 4) to provide the basis for the assessment.* *The documentation must be prepared in accordance with SBi 223 or 271.*		
KK2 3.3	*BR18, chapter 28, §494, subsection 2* *1) Documentation for classification in structure class*		
KK2 3.4	*§12, subsection 2* *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)*		
KK2 3.5	*§12, subsection 2* *3) A2.1. Structural calculations, building* • *Main structural calculations - stability, internal forces, load bearing, robustness*		

No.	Reference to BEK 674 and Guide to certification of structural engineers and fire advisors	Applicant's comments on the documentation requirements	Reference to appendix
KK2 3.6	*§12, subsection 2* *4) A2.2. Structural calculations, building sections* • *Demonstration of force, function requirements, and joints between structural members*		
KK2 3.7	*§12, subsection 2* *5) B1. Structural project report* • *Building sections, organization, division of tasks and interfaces* *(Cf. SBi 223, B1. Structural project report)*		
KK2 3.8	*§12, subsection 2* *6) 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)*		

No.	Reference to BEK 674 and Guide to certification of structural engineers and fire advisors	Applicant's comments on the documentation requirements	Reference to appendix
KK2 3.9	*§12, subsection 2* *7) B3. Structural inspection report* • *Inspection documentation for design* • *Inspection documentation for construction (not included in SBi 223)*		
KK2 3.10	*§12, subsection 2* *The applicant chooses other appendices relevant for the understanding of the project and the project material included in the assessment.* *For instance:* • *General and building element drawings* • *Architectural plans, main sections and building element drawings* *The applicant's ability to evaluate the scope of relevant material will be part of the assessment.*		