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of building
engineers

Chartered Engineer

Guide to CEng Registration for existing CABE members

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Section 1: Before you apply

About this guide

These guidance notes set out what you need to do in order to attain Chartered Engineer (CEng) registration with the Engineering Council through your current CBE membership.

It details the criteria you will need to meet in order to be eligible for CEng registration.

CBE and CEng

In July 2018, CBE members voted in favour of the Chartered Association becoming a fully licensed member of the Engineering Council. This means that, over time, CBE will be able to act as an awarding body for the registration of its members as Chartered Engineer (CEng), Incorporated Engineer (IEng) and Engineering Technician (EngTech).

Registration for CEng requires you to demonstrate your competency based on the CEng Competencies in the United Kingdom Standard for Professional Engineering Competence (UK-SPEC) which governs all engineering institutions.

UK-SPEC is published by the Engineering Council, and provides a framework for assessment and the requirements that must be met to register as a professional engineer. It is important that, before you apply, you understand the current requirements for becoming a Chartered Engineer and are confident you meet them. Please ensure you have read the relevant CEng section of the UK SPEC.

Competency for specialist Building Engineers

For members working in highly specialised disciplines, it may be difficult to demonstrate the full range of competencies. Those concerned with leadership and management or broader building engineering knowledge could still be eligible to apply for CEng registration, and should be able to provide supporting evidence of some of the following:

- In-depth knowledge of a complex specialist discipline
- Involvement in innovative design, development, research or analysis
- Evidence of the broader relevance of, and applicability in, the use of your specialism
- Evidence of presentations to seminars, conferences, technical audiences etc
- Publications, including articles and peer-reviewed papers
- Evidence of recognition of your expert status within your chosen specialism.

Eligibility

To be eligible to apply, you will need to be a current Chartered Building Engineer or Fellow of CBE. Routes to register for IEng and EngTech will follow at a later date.

Routes to registration

Depending on the type of qualifications that you possess and the nature of your professional experience, there are two possible routes to CEng registration – the Academic Route and the Technical Report Route (TRR).

Academic Qualification-based Registration Route

If you have obtained a suitable academic qualification recognised by the Engineering Council, this can form the basis for your registration as CEng.

Find out if your qualification is recognised

Recognised degrees at varying levels are detailed on the Engineering Council Accredited Course Search Database (ACAD) (transcripts may be required). Visit:

www.engc.org.uk/education-skills/course-search/accredited-course-search/

Recognised older courses, such as HND and HNC, can be found at:

apps.engc.org.uk/accreditationstandalone/older_courses.asp

There are two types of relevant qualification:

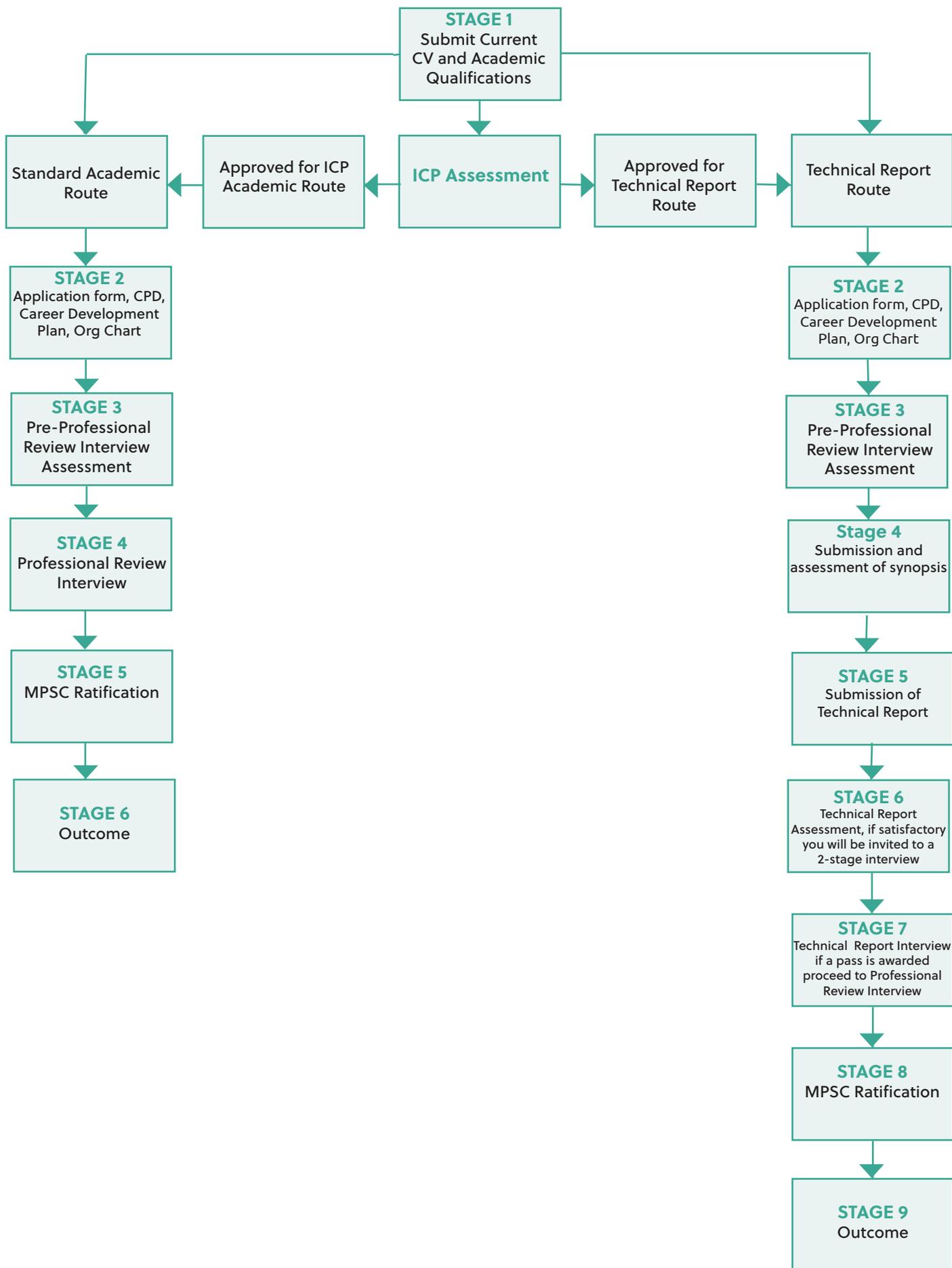
1. **Accredited Degree or Recognised older qualification** – for members with an accredited Master's, BEng Degree (Level 6/7 qualification) or equivalent recognised by the Engineering Council.
2. **Individual Case Procedure (ICP) Assessment** – members with qualifications not accredited with the Engineering Council or those requiring further training may still be assessed on a case-by-case basis through the Individual Case Procedure (ICP) assessment to see whether their qualification can benefit them in this process. This will be assessed by the CABE Academic Panel.

Competency-based Registration – Technical Report Route

If you do not have a qualification that is eligible for the Academic Route application process, you will need to use a combination of qualifications and experience to demonstrate compliance with the Engineering Council requirements by following the TRR, which is a competency-based application route.

Section 2: The assessment process for CEng Registration

The flowchart defined below provides an overview of the process



Standard / ICP Academic route

The key stages for applicants following this process are as follows:

Stage 1 – Submit current CV and evidence of relevant academic qualifications

These must include all relevant academic qualifications (certificates, transcripts etc.) and verified by two persons as true copies of the originals – these persons should either be registered with the Engineering Council, a Chartered Member, Chartered Building Engineer or Fellow of CABE, your sponsors or a senior manager in your place of work.

Stage 2 – Application

Complete and submit the application form (Annex A) along with all of the necessary supporting information. See Section 3 for guidance.

Stage 3 – Pre-Professional Review Interview assessment

CABE will undertake an assessment of information provided and validate that the application is complete, at which point your eligibility for Pre-Professional Review Interview (PRI) will be confirmed, if your application is not complete CABE will write to you and explain why they believe this is the case and what you should do next.

Stage 4 – Professional Review Interview

You will attend a PRI which will be used to further explore the competencies covered in your application (see further guidance on PRI at Annex C).

Stage 5 – Marking Panel

Recommendations from the PRI Panel are passed to the Membership and Professional Standards Committee (MPSC) for ratification.

Stage 6 – Outcome

CABE will notify you in writing of the outcome of the PRI process, including any relevant feedback within a period of no longer than three months.

Technical Report route

The key stages for applicants following the Technical Report Route (TRR) process are as follows:

Stage 1 – Submit current CV and evidence of all academic qualifications

These must include all relevant academic qualifications (certificates, transcripts etc.) and verified by two persons as true copies of the originals – these persons should either be registered with the Engineering Council, a Chartered Member or Fellow of CABE, your sponsors or a senior manager in your place of work.

Stage 2 – Application

Complete and submit the application form (Annex A) along with all of the necessary supporting information. See Section 3 for guidance.

Stage 3 – Pre-Professional Review Interview assessment

CABE will undertake assessment of information provided and validate that the application is complete, at which point your eligibility for PRI will be confirmed, if your application is not complete as required CABE will write to you and explain why they believe this is the case, and what you should do next.

TRR applicants will need to prepare and submit a Technical Report which will be used as the basis for assessing the member's competency. It will be assessed by the Professional Review Interview panel prior to the interview itself. If the Technical Report (TR) is assessed as satisfactory, a date for PRI will be set.

Technical Report

You should submit a synopsis of up to 1,000 words outlining the content and projects to be contained in your full Technical Report. The synopsis will be assessed by the panel and feedback provided to allow you to complete your Technical Report to demonstrate that you meet the CEng competencies.

The report should be between 4000-6000 words, and should follow the guidance for the structure and content indicated in [Annex B](#).

The aim of the report is to provide an opportunity for you to demonstrate the depth and breadth of your knowledge, skills, understanding, experience and competency in your chosen discipline.

Stage 4 – Submission and Assessment of Synopsis

Stage 5 – Submission of Technical Report

If the synopsis is deemed satisfactory by the assessors, move onto the next stage.

Stage 6 – Technical Report Assessment

The Technical Report Interview panel will assess the Technical Report when submitted and, if the panel is satisfied that it demonstrates the application of knowledge requirements of the Engineering Council, you will be invited to attend a two-stage interview. If the panel is not satisfied that the report meets the Engineering Council requirements, you will be provided with feedback of areas for improvement.

The first stage of the interview will consist of a Technical Report Interview (Stage 7 – see below). Where the outcome of this stage is satisfactory by the interview panel you will move to a second stage Professional Review Interview (Stage 7 – see below) which will be on the same day.

Stage 7 – Technical Report Interview & Professional Review Interview

Your Technical Report Interview will last approximately 60-90 minutes and will allow the panel of assessors to further explore your attributes and competency based on the Technical Report that you have submitted. Once the first stage of the interview is complete, you will be asked to leave the room for a short period whilst the review panel decides on the Stage 6 outcome.

You will then be invited back into the interview room and informed of the outcome of the Technical Report Interview. If you have demonstrated the necessary competency, the interview will proceed to the Professional Review Interview.

If, on completion of your Technical Report Interview, the panel is not satisfied of your competency, you will not proceed to the PRI and feedback will be provided of areas for improvement.

The Professional Review Interview will further examine your professional competencies and will last approximately 40-50 minutes (see guidance on Professional Review Interview in Annex C).

Stage 8 – MPSC

Recommendations from the PRI Panel are passed to the MPSC for ratification.

Stage 9 – Outcome

CABE will then notify you in writing of the outcome of the PRI process, including any relevant feedback within a period of no longer than three months.

Registration

Following successful completion of the CEng Professional Review Interview process, members will be registered with the Engineering Council through CABE

Section 3 – Guidance on completing your application

How to apply

All applicants for CEng registration must complete the CEng application form (Annex A - separate document), completing all the relevant sections, ensuring all requirements stated in the checklist are complete. Completed application forms need to be submitted to assessment@cbuild.com

Information accompanying your application

You should ensure that your application includes the following:

- A completed application form (Annex A)
- The required registration fee (Annex D).

You will also need to provide the following

- Your CPD record for the last two years
- A Career Development Plan explaining how you intend to maintain and develop your professional skills over the coming years
- An organisational chart identifying your role.

The application form

The application form consists of the following:

Section 1 – Personal Information

Please provide all of the information requested. This includes information about your education, industry qualifications, professional memberships and a summary of your career. Your application must also be supported by a sponsor. The sponsor could be your line manager, HR manager or a professional person.

Section 2 – Training and Experience Statement

A full CPD record detailing training undertaken and learning outcomes, ensuring that CABE minimum requirement of 35 hours annually has been met.

Section 3 – Personal Competency Statements

The application form provides an opportunity for you to detail how your education and experience underpins your ability to meet the required competency. A guide of 200-300 words per competency is recommended. You can include photographs, sketches, calculations and diagrams as appendices – if you wish to discuss these at interview, you must bring copies with you.

Section 4 – Personal Commitment

On completing this application, you are agreeing to adhere to the Chartered Association of Building Engineers' Codes of Conduct, including making a professional commitment to developing and maintaining your competency.

Section 5 – Checklist and Submission

You should use the checklist provided to ensure that your application is complete.

Annex A – CEng Application Form

See separate application form.

Annex B – Preparing a Technical Report Technical Report (TR) Guidance Notes for Candidates and Assessors

C1. Introduction

CABE believes that individuals who achieved a high standard of professional competence in the course of their careers should not be restricted by a lack of early formal educational achievements.

The Engineering Council Standard for Professional Engineering Competence (UK-SPEC) states: 'Applicants who do not have exemplifying qualifications may demonstrate the required knowledge and understanding in other ways, but must clearly demonstrate they have achieved the same level of knowledge and understanding as those with exemplifying qualifications.'

One of the ways to demonstrate this is by writing a Technical Report, based on their experience, and demonstrating their knowledge and understanding of engineering principles.

The purpose of producing a Technical Report is to provide a pathway to Engineering Council registration for those who do not have formal academic qualifications at the required level, but are able to demonstrate that they have achieved a high standard of engineering experience and technical knowledge.

It should be stressed, however, that the burden of proof upon the candidate seeking registration using a Technical Report is stringent. If the assessors agree that the technical standard of the report is met, they will proceed to examine the candidate verbally on the submission and any other matters they may consider relevant.

The assessors need to identify that the candidate has, thorough experience, gained the fundamental knowledge and understanding of engineering principles expected of an engineer of similar standing who has satisfied the educational requirement in the academic manner.

It must be noted that the Technical Report should focus on the knowledge and understanding of engineering principles required by the competency areas A and B in the UK-SPEC. Other aspects relating to competencies C to E, such as finance control and project management, should only be used to complement the main theme of the report. Candidates who satisfy the criteria will then be invited to attend a Professional Review Interview (PRI) to assess competence and commitment. On successful completion and ratification by the Membership & Professional Standards Committee (MPSC), candidates will be registered with the Engineering Council at the appropriate level.

C2. The Technical Report

The Technical Report should be written in English. The length of the paper is determined by the amount of 'top-up' content required from the candidate's base qualification to the registration level – e.g. a candidate with a Bachelor's degree applying for CEng should be able to satisfy the requirements in less than 5,000 words, whereas a candidate with a HND would need to demonstrate a greater depth of 'top-up' content, which would require more than 5,000 words.

The report may be based upon a design or project case study, a report of original work or on other previously published works of the candidate's own authorship, but in the case of joint authorship, the candidate's contribution should be made clear. Candidates should note that in the Technical Report they will not be required to demonstrate their professional competence e.g. management experience and skills.

The candidate will be expected to offer an ordered and critical exposition of some aspects of industry-related engineering, defining the problems or development aims involved, and demonstrating their resolution or achievement by the application of building engineering principles and knowledge. Historical reviews should not be undertaken, except where necessary as an essential background to the subject. Most candidates will find it more profitable to concentrate in-depth on a recent building engineering achievement for which they had technical responsibility than to attempt to cover a wider field.

The Technical Report should contain more descriptive matter than could be assembled from published material. It should contain reasoned analysis, assessment and synthesis. There should also be discussions on the validity of the applications of basic knowledge to the development of the subject of the paper. In many topics, cost-effectiveness and optimisation could be introduced beneficially as fundamentals of good engineering where they support the technical content of the report. Consideration should also be given to safety and environmental aspects where they support the technical aspects of the project.

The Technical Report should be written in the first person to demonstrate what you – the candidate – have achieved.

Where appropriate, the Technical Report should contain mathematical calculations to demonstrate the basic building engineering principles involved in the design, or consideration, of the subject matter. It should also contain references to standards and published guidance that may be used.

Where appropriate, the text should be illustrated by clearly drawn sketches and/or diagrams and a reference list should be provided if the candidate makes use of any source material.

A covering statement must be included in the report to state that the Technical Report is the candidate's own work and that any works from external sources are clearly shown within the report and/or appendices. This is to prevent plagiarism.

Report Structure

If the Technical Report is based on a design or project case study or report, the documents submitted may take a variety of forms but, in every case, should be such as to illustrate the candidate's understanding and application of building engineering principles. Commentary and calculations illustrating the lines of thought followed should accompany drawings covering a design, assessment or feasibility study. Papers or reports published or unpublished, of which the candidate is the author may be used provided the subject is original work for which the candidate was responsible and that is industry-related engineering.

The Technical Report should be self-contained and not refer to other papers unless they are provided in appendices. The report should flow logically and be possible for an engineer to read and understand without prior knowledge of the subject. Typical sub-divisions might be as follows (not all need be included):

1. **Title**
2. **Contents list**
3. **Personal Statement – this is a declaration that the work is original and by the candidate**
4. **Introduction**
 - What the report is about.
 - Will include synopsis, if applicable.

5. **Aims and Objectives**
 - This will inform how the report meets the TRR requirements.
6. **Background**
 - This sets the scene.
 - Purpose.
 - Sets out objectives.
 - Sets out aims and objectives.
7. **Main Body of Report**

This section should contain the essence of the report.

 - Elaboration of project.
 - Outline of principles.
 - Demonstration of underpinning technical knowledge and expertise for CEng.
8. **Main Body Content**
 - Mathematical calculations, these can be in background sub-division, or as an appendix.
 - Fitness for purpose.
 - Schematic and technical drawing.
 - Mathematic aspects and calculations.
 - Application of new and innovative technology.
 - Application of analysis and modelling.
 - Evaluation sustainable technologies.
 - Selection and use of materials.
 - Apply information from technical knowledge resources.
 - Application of engineering practices and processes.
 - Discussion of alternative sources of data and information
 - Analytical comment on theoretical work and engineering technology.
 - Other design aspects.
 - Financial considerations.
9. **Conclusions**
 - In relation to the application of engineering principles.
 - Summary of the report drawing argument together in a logical manner.
 - Lessons learnt – successes and failures.
 - Recommendations.
 - Outcomes.
 - Feasibility.
 - Future/current application.
 - Management of paper (report).
10. **Appendices**

This may contain the following to support the report:

 - Drawing.
 - Graphs.
 - Schematics.
 - Project management charts.
 - Financial aspects.
 - Environmental.
 - Sustainability.
 - Health and Safety.
 - Risk assessment.
 - Detail calculations.
 - Glossary of terms.

The appendices should only contain supplementary information which does not form part of the main content of the report.
11. **References**
 - A summary of numbered references used throughout the report to indicate sources of information.
12. **Bibliography**
 - A general acknowledgement and list of books and papers used for research.

The Technical Report must be typed and printed on single-sided A4 paper and should be page-numbered. One hard copy, securely bound in a separate folder, and three soft copies on USB sticks should be sent to CABE. It is recommended that candidates retain at least one further copy as CABE cannot accept responsibility for submissions which are lost in transit.

It is the responsibility of the candidate to obtain their employer's permission to submit work of a confidential nature. Special arrangements can be made at the request of employers in cases where security needs to be preserved. The purpose of the Personal Statement is to declare that the Technical Report is the candidate's own work.

Assessment of the Technical Report

The candidate's Technical Report will be assessed by two CABE, registered assessors. The Technical Report will be assessed against the following criteria:

Knowledge

- Building engineering principles.
- Appropriate application of a scientific approach.
- Design concepts including solutions to problems.
- Analytical methods and tools.

Understanding

- Application of technical standards.
- Use of relevant building engineering standards.
- Knowledge of limits of any process/es.
- Appropriate design methods including the use of IT.

Abilities

- Creativity and innovation.
- Use of theoretical principles to solve problems.
- Communication skills (including presentation of), and content of Technical Report.

The assessors may require minor modification of, or additions to the candidate's Technical Report. If the paper is regarded as inadequate, the assessors may suggest modifications to overcome specific shortcomings.

A candidate whose Technical Report is deemed adequate for further consideration will be required to attend an interview. A fee is payable for this interview and the interviewers may be the same people who assessed the Technical Report. A member of staff or an internal auditor may be present during the interview to observe the process, but will not play any part in it.

Notes

The Technical Report serves as a means for both assessors at the interview to determine that the candidate's knowledge of the underlying industry-related, fundamental engineering principles satisfies the educational requirements of CABE and Engineering Council.

Annex C – Your Professional Review Interview

Guidance for candidates in preparation for the Professional Review Interview

Introduction

All applicants for Chartered Engineer (CEng) registration will have their competence and commitment assessed at a Professional Review Interview (PRI). The assessment will be against the competence and commitment threshold statements within the Chartered Engineer application document according to The UK Standard for Professional Engineering Competence (UK-SPEC).

The Professional Review will include two components:

- A review of documentary evidence
- A Professional Review Interview (PRI).

The PRI is obligatory for all CEng registration applicants. The PRI will be conducted by two suitably experienced, qualified and trained interviewers. The PRI will be conducted in English, subject to the provisions of the Welsh Language Act 1993.

The interviewers will complete an assessment sheet and a summary report with a recommendation for each applicant. The report will cover the competence and commitment standards and reflect the interviewers' professional judgement of whether the required competence and commitment has been satisfactorily demonstrated.

The panel will consider the technical report (applicable for the TRR only) for the professional review and will make the final decision on whether to confirm the recommendation.

The applicant will be informed of the outcome. If the application is unsuccessful, then any recommendations and advice by the PRI interviewers will be passed on to the applicant.

Preparation by the candidate

Organising the evidence for Technical Report

The assessment of the candidate is based on evidence submitted. To match the criteria, candidates can either choose one significant project that covers all the necessary competences or small, but significant number of projects or work activities in which they have been engaged. Ideally, these will:

- provide the interviewers with 'hard evidence' and may be in the form of design studies, assessments, data sets, calculations, drawings, defect investigations, project plans, artefacts, photographs, computer programmes
- be of the candidates own work; or larger pieces of work in which the candidate's personal contribution is identified and substantiated

Registration is not narrow and job-specific; it requires a breadth of experience and an ability to transfer capability from one area of work to another. Therefore, a candidate also needs to show a reasonable range of work.

Planning ahead will provide several different approaches. For example:

1. Authenticated records will save much nugatory work at the Professional Review Interview. Even if career directions have changed several times, it should still be possible to map 'old' achievements to 'new' criteria and demonstrate their continued validity.
2. A candidate may well have to approach former colleagues, clients or managers and ask them formally to certify work which has been done in the past. These referees will not be asked to make a judgment on the candidate, but only to confirm (usually in writing) whether certain 'outcomes' were achieved and, if so, with what degree of reliability, repeatability etc. It is the Professional Review interviewers who make an holistic judgment and come to a registration recommendation. This is based on all evidence; any single piece will rarely provide sufficient basis for a decision.
3. No matter what retrospective evidence and records are presented for the Professional Review Interview, there will always be a requirement for evidence of reflection upon past work, evaluation of future needs and some form of action planning. The candidate must be prepared to discuss their future development strategy with the interviewers.
4. No matter how much original material is available, it will only be valuable if it is indexed, cross-referenced and organised against the A1 to E5 criteria.
5. A key to any acronyms used must be included.

At Interview

During the PRI, candidates may choose to give a short career overview presentation to the interviewers, highlighting the pertinent areas of responsibility and responsible experience which support their case for registration with the Engineering Council.

The presentation may be in the form of a PowerPoint© presentation or a verbal presentation with documentary evidence. Anticipate searching questions to confirm your knowledge and involvement; verbal evidence alone will not be accepted.

The candidate should also have evidence to demonstrate all aspects of their Continuing Professional Development (CPD), which should include the planning and recording of CPD activities. The CABE CPD template can be downloaded from the CABE website.

Annex D – Fees

The following fees will be applied:

Standard / ICP Academic Route		
£25	Admin Fee	For assessment of your CV and supporting documentation
£165	Assessment Fee	Payable at the time of submission of your application and prior to a Professional Review Interview
£100	Interview Fee	Payable at the time of receiving notification of your allocated date for Professional Interview
£53.20	Engineering Council Entry Fee	Fixed by Engineering Council

Technical Report Route		
£25	Admin Fee	For assessment of your CV and supporting documentation
£165	Assessment Fee	Payable at the time of submission of your application
£50	Assessment Fee	For assessment of synopsis and if approved a Technical Report
£125	Interview Fee	Payable at the time of receiving notification of your allocated date for both the Technical Report and Professional Interviews
£53.20	Engineering Council Entry Fee	Fixed by Engineering Council

Both routes will be subject to an annual subscription fee fixed by Engineering Council

We're here to help

If you have any queries about becoming a Chartered Engineer, please contact us membership@cbuildde.com. You can also find out further information at cbuildde.com.

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