Professional Registration Candidate Guidance Notes (CEng, IEng and EngTech)

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1. Introduction

CIHT is licensed by the Engineering Council to assess its members against the standards for the following levels of professional registration:

- **Chartered Engineer (CEng)** – to demonstrate the CEng standard, applicants must be able to develop solutions to engineering problems using new or existing technologies, through innovation, creativity and change. They may be accountable for complex systems with significant levels of risk.

- **Incorporated Engineer (IEng)** – to demonstrate the IEng standard, applicants must be able to maintain and manage the application of current and developing technology, and may undertake engineering design, development, manufacture, construction and operation.

- **Engineering Technician (EngTech) –** to demonstrate the EngTech standard, applicants must be able to apply proven techniques and procedures to solve practical engineering problems and safe systems of work.

2. UK-SPEC, 4th Edition: Competence and Commitment

The competency and commitment requirements for CEng, IEng and EngTech professional registration are set out in *pages 19-45* of the UK Standard for Professional Engineering Competence and Commitment published by the Engineering Council (UK-SPEC, 4th edition).

A summary of key differences between the 3rd and 4th edition of UK-SPEC can be viewed here. Overall, the 4th edition of UK-SPEC aims for greater clarity, making the requirements, i.e. the Standard itself, more obvious, while providing clearer examples of how applicants might provide evidence to fulfil the competency requirements.

Each registration title requires demonstration of competence in five broad areas:

Competence	A	Knowledge and understanding
	B	Design, development and solving engineering problems
	C	Responsibility, management and leadership
	D	Communication and interpersonal skills
Commitment	E	Personal and professional commitment

The UK-SPEC (4th edition) defines **competence** as 'a professional's ability to carry out engineering tasks successfully and safely within their field of practice'. Registered engineering professionals are also required to demonstrate a **personal and professional commitment** to society, to the environment and to their profession. Please refer to *page 9* of UK-SPEC (4th edition) for further information.

Evidence of competence presented by individual applicants will vary according to their job role and work experience. The UK-SPEC (4th edition) provides examples of evidence to help applicants identify activities that might demonstrate the required competence and commitment for each of the competence descriptors. These lists are not exhaustive and other types of evidence might be valid. As an applicant, you will need to demonstrate an understanding of, and familiarity with, the key aspects of competence in all areas as a minimum requirement while demonstrating higher levels of competence in those areas which are critical to your role. Overall, you must demonstrate an appropriate balance of competences to perform your role effectively at the level being sought.

You should consider whether the evidence in your application needs to be adapted for security or commercial sensitivity reasons. If this is the case, you may wish to:

- Make your report non-site specific – for example do not state that the facility was on the Sellafield site or on the Hinkley site or that the asset serves a critical function to the site or country or is or was vulnerable to various threat;
- Omit building numbers or names – e.g. it is sufficient to say 'nuclear facility' or 'nuclear store';
- Remove site and building names from drawings or snapshots of models;
- exclude photographs or other images which reveal the location of buildings and facilities;

- Avoid stating, or showing in drawings or extracts from models, technical details (such as wall thickness) which may reveal security-sensitive information If you work on a security-sensitive project, we recommend that your organisation's information security manager (and also the asset owner's/client's) reads your application and approves the content before submission;
- Familiarise yourself with the Engineering Council guidance note on security (published May 2016)
- Inform CIHT if you believe your reviewers will need security clearance.

3. CIHT Specialisms

To help you relate what you do at work to the generic standards in UK-SPEC (4th edition), CIHT has contextualised the standards for the following Highways and Transportation specialisms:

1) Transport planning
2) Materials and geotechnics
3) Traffic management, safety and systems engineering
4) Infrastructure planning, design, construction and/or maintenance
5) Transport related structural engineering
6) Academic research, teaching, or training
7) Research and development in highways and transportation
8) Intelligent transport systems

You will be asked to indicate your specialism when making your application (*you may choose more than one*). One of your reviewers will be an expert in your declared specialism/s, so it is important that you choose carefully.

If you are applying for **CEng or IEng**, please refer to the CEng Gap Analysis Exercise or IEng Gap Analysis Exercise so that you can check your engineering competence against the criteria for your specialism(s) and see which one/s is/are relevant to your career. As with the examples of evidence laid out in UK-SPEC (4th edition), you should be able to demonstrate an understanding of, and familiarity with, the key aspects of competence in all areas as a minimum requirement while demonstrating higher levels of competence in those areas which are critical to your role. If you are applying for **EngTech**, you should refer to the EngTech Supplementary Guidance document which contains examples of evidence to help you complete your application.

If your specialism is *'Academic research, teaching, or training,'* please e-mail the CIHT Education Team at education@ciht.org.uk who will send you supplementary guidance to help you prepare your application.

4. Requirements for professional registration

4a) Knowledge

The Engineering Council maintains a publicly accessible recognised course search database which is available to view here. You can use this database to check whether your qualifications are accredited. CIHT will confirm this when you submit an online initial assessment *(see Section 5 below).*

The Engineering Council is the UK signatory to three international Accords; the Washington Accord (for CEng), the Sydney Accord (for IEng), and the Dublin Accord (for EngTech), which recognise professional engineering education programmes accredited by signatories in different countries These recognition agreements are taken into account by CIHT when carrying out initial assessments.

The underpinning knowledge and understanding benchmarks set by the Engineering Council for each section of the Register are listed:

Engineering Technician (EngTech) One of the following:	Incorporated Engineer (IEng) One of the following:	Chartered Engineer (CEng) One of the following:
• Successful completion of an apprenticeship or other work-based learning programme approved by a Licensee • Alongside appropriate working experience, holding a qualification, approved by a Licensee, in engineering or construction set at either: ▸ level 3 (or above) in the Regulated Qualifications Framework or National Qualifications Framework for England and Northern Ireland ▸ level 6 (or above) in the Scottish Credit and Qualifications Framework ▸ level 3 (or above) in the Credit and Qualifications Framework for Wales • Alongside appropriate working experience, holding equivalent qualifications or apprenticeships accredited or approved by a Licensee, or at an equivalent level in a relevant national or international qualifications framework†	• An accredited Bachelors or honours degree in engineering or technology • An accredited Higher National Certificate (HNC) or Higher National Diploma (HND) in engineering or technology started before September 1999 • An HNC or HND started after September 1999 (but before September 2010 in the case of the HNC) or a Foundation Degree in engineering or technology, plus appropriate further learning to degree level • A National Vocational Qualification (NVQ) or Scottish Vocational Qualification (SVQ) at level 4 that has been approved by a Licensee, plus appropriate further learning to degree level* • Equivalent qualifications or apprenticeships accredited or approved by a Licensee, or at an equivalent level in a relevant national or international qualifications framework†	• An accredited Bachelors degree with honours in engineering or technology, plus either an appropriate Masters degree or engineering doctorate accredited by a Licensee, or appropriate further learning to Masters level* • An accredited integrated MEng degree • An accredited Bachelors degree with honours in engineering or technology started before September 1999 • Equivalent qualifications or apprenticeships accredited or approved by a Licensee, or at an equivalent level in a relevant national or international qualifications framework†

* See: www.engc.org.uk/ukspec4th for qualification levels and HE reference points. † For example, UNESCO's International Standard Classification of Education (ISCED) framework.

Once you have demonstrated that you have the required underpinning knowledge and understanding, you may proceed to the Professional Review *(see Section 6 below).*

4b) Experience

CIHT applicants must be able to demonstrate practical experience in a highways and transportation context. This experience is assessed against the Standards listed in pages 19–45 of UK-SPEC 4th edition. There is no prescribed time period or minimum age requirement for the development of competence and commitment. The length of time it takes to achieve the required level of competency depends on current and prior experience as well as personal circumstances such as career breaks or part time working. As a guide, applicants for CEng and IEng will normally have a minimum of 5 years' relevant experience. For EngTech, applicants will normally have 2-3 years' relevant experience.

4c) Professional Commitment

Applicants are required to demonstrate a personal and professional commitment to society, to the environment and to their profession. As part of demonstrating overall competence, it is mandatory to show that you have adopted a set of values and conduct that maintains and enhances the reputation of the profession. This includes:

- Maintaining public and employee safety
- Undertaking work in a way that protects the environment and contributes to sustainable development
- Complying with codes of conduct, codes of practice and the legal and regulatory framework
- Managing, applying and improving safe systems of work
- Carrying out the CPD necessary to maintain and enhance competence in relation to duties and responsibilities
- Exercising responsibilities in an ethical manner
- Recognising inclusivity and diversity
- Adopting a security-minded approach
- Actively participating within the profession

The Engineering Council has published a CPD Code for Registrants, as well as guidance on risk, sustainability, whistleblowing and security and professional and ethical behaviour in UK-SPEC (4th edition).(*See pages 46 and 47*). CIHT's Code of Professional Conduct, which reflects the values and professional principles listed above, can be downloaded here .

4d) Continuing Professional Development (CPD)

CIHT applicants for CEng, IEng and EngTech professional registration are required to submit a CPD record that shows a minimum of 25 hours of CPD per year for each of the two years prior to making an application. CPD is essential for maintaining and enhancing the required competence and commitment for professional registration, as well as for developing new competences.

CPD has several purposes, as outlined in UK-SPEC (4th edition).

- To assure continuing competence in a current job
- To prepare for a different role
- To follow a longer-term career development plan
- To enhance professionalism in a wider context than a specific job role.

In general, any activity that has expanded your knowledge in relation to your work can qualify as CPD. CIHT's guidance on CPD can be found here.

5. Initial Assessment

Initial assessment is the first stage of the CIHT application process for CEng, IEng or EngTech registration.

The Initial Assessment form is completed online where you will be asked to submit your:

- CV
- Details related to the qualifications you hold (level, subject, name of institution, start/end dates)
- Copies of academic certificates

Initial assessment is free of charge. Applicants for professional registration must be CIHT members at Member grade (MCIHT) before making their application. Find out more about becoming a CIHT Member here

CIHT has agreements with the Institute of Asphalt Technology (IAT) and the Institute of Quarrying (IQ) to assess their members for professional registration with the Engineering Council. If you are an IAT or IQ members, please contact your membership body to register your interest.

The initial assessment outcome will confirm whether or not you have achieved the underpinning knowledge benchmark to satisfy the Engineering Council requirements for the level of registration you are seeking.

Applicants who have a qualification, or qualifications, that satisfy the benchmark can proceed directly to the Professional Review via what is known as the Standard Route.

Applicants whose qualifications do not satisfy the underpinning knowledge benchmark can demonstrate their knowledge through other options which are explained in the initial assessment outcome email. Progression via this option is known as the **Individual Route** (see Section 7 below).

6. Professional Review

The Professional Review consists of

- The submission of a Portfolio of Evidence
- Attendance at a Professional Review interview

Your Portfolio of Evidence is assessed in conjunction with your interview performance to determine whether or not you meet the required level of competence for professional registration.

a) Portfolio of Evidence

Portfolio of Evidence (PoE) applications should be submitted online via the members' area of the CIHT website (MyCIHT). You must have completed an online initial assessment (and provided evidence of this) in order to unlock the full online application form. Guidance is provided on each page of the application form to help you complete the relevant sections. You do not have to complete your Portfolio of Evidence in one go, you can attach evidence, save it and return to it at a later date.

When you are ready to submit your Portfolio of Evidence you will be able to pay the relevant fee online and a single PDF copy of your Portfolio of Evidence will be generated and sent to the Education Team for review.

The Education Team will conduct an administrative check to ensure that the application is complete, once submitted, and will inform you if any additional information is required. Following the administrative check, you will be provided with information on arrangements for your Professional Review interview.

b) Professional Review Interview

Interviews for **CEng** and **IEng** last approximately 75 minutes and start with a 15-minute presentation by you on a project of your choice.

Interviews for **EngTech** last approximately 45 minutes and start with a 5 to 10-minute presentation about your career to date.

Your interview will be conducted by two CIHT members who are professionally qualified practitioners, one of whom will usually be an expert in the specialism(s) declared on your application form. Your reviewers will structure the interview discussion to establish whether you have met the four competence standards and one commitment standard set by the Engineering Council, for the level to which you aspire (UK-SPEC, 4th edition).

c) Professional Review results

Following each round of Professional Review interviews, CIHT's Engineering Professional Standards Panel meets to consider reviewer recommendations and confirm results. You will receive confirmation of your result via e-mail within 6 weeks of the date of your review. If you are unsuccessful in your review, you will receive feedback to help you address the shortfalls identified by the reviewers.

PROFESSIONAL REVIEW TIPS

- Professional presentation: Make sure your Portfolio of Evidence is concise and clearly presented and your appendices are well-referenced. Check your spelling and grammar. This is important to create a good 'first impression' with your reviewers.
- Practice your presentation: To make sure your presentation does not over-run and your visual aids are clear, practice your presentation with your mentor or colleagues.
- Know your portfolio: You may be asked a question on any part of your Portfolio of Evidence so make sure that you are able to talk confidently about anything that you have included.
- Focus on your contribution: The reviewers will focus on your competence and commitment so avoid talking about 'the team' or 'the company'; it is your contribution to projects and your knowledge and understanding that they want to hear about.

7. The Individual Route

The Individual Route allows applicants to demonstrate that their ***knowledge and understanding of engineering principles*** meets the benchmark requirements set by the Engineering Council. Achievement of the underpinning knowledge and understanding benchmark must be confirmed by CIHT before applicants can proceed to Professional Review.

The Individual Route may be completed by submission of:

- A Further Learning Report (*See 7a) below*)
- A Technical Report (*See 7b) below*)
- Work-based learning approved by CIHT
- A qualification gained through further formal study acceptable to CIHT

a) Further Learning Report (FLR)

The Further Learning Report (FLR) option may be available to you if your academic qualification is of the same level as required for your chosen registration (e.g. Masters-level for CEng) but is not accredited by the Engineering Council.

As part of the FLR, you will need to complete the **FLR Table** (*template online*) which lists the relevant learning outcomes that must be demonstrated. You will need to identify, with supporting evidence as an Appendix, how your learning meets each of the learning outcomes listed.

A FLR application should consist of:

- A completed FLR application form (downloadable from the relevant section of the CIHT website CEng, IEng, EngTech)
- A copy of the initial assessment e-mail from CIHT stating that a FLR may be submitted
- A copy of your CV
- Authenticated copies of your qualifications (including English translations where necessary)
- A completed FLR Table
- Your CPD record demonstrating a minimum of 25 hours per year for the two years prior to the date of the FLR submission.
- Appendix of supporting evidence.

CIHT-appointed assessors will assess the FLR and confirm whether or not the learning outcomes have been demonstrated. Applicants are informed of the assessment outcome within 6 weeks of making a submission. There is no requirement for an interview.

Upon successful completion of the FLR, you will be invited to Professional Review in the same format as a Standard Route candidate *(See section 6 above).*

b) Technical Report

The purpose of the Technical Report is to demonstrate that you have acquired the equivalent level of technical knowledge and understanding of scientific and engineering principles to **underpin** Competences A and B of UK-SPEC 4th edition, as further described in the Accreditation of Higher Education Programmes 4th edition (AHEP) to the same level as those whose qualifications satisfy the Engineering Council's underpinning knowledge and understanding benchmark i.e. an integrated Master's degree level, if applying for CEng.

Your Technical Report will be assessed against the following five areas of learning, as outlined in AHEP, 4th edition.

1) Science and mathematics
2) Engineering analysis

3) Design and innovation
4) The Engineer and society
5) Engineering practice

CEng candidates should refer to the M1- M18 learning outcomes on pages 32-37 of AHEP for further guidance. IEng candidates should refer to the B1- B18 learning outcomes on pages 27-31 of AHEP for further guidance.

The Technical Report is a three-stage process.

i) Stage 1 – Submit a synopsis

The synopsis is an outline of what you propose to write about in your Technical Report and may be submitted at any time during the year. In the synopsis, you will need to demonstrate that what you intend to cover in your full Technical Report (Stage 2) will satisfy the knowledge and understanding of engineering principles which underpin the UK-SPEC A and B Competences, as further described in the AHEP document.

A Stage 1 Technical Report submission consists of:

- A completed Stage 1 Technical Report application form
- A copy of the initial assessment e-mail from CIHT
- A 500 to 1000-word synopsis of the Technical Report which you plan to submit
- A copy of your CV. This should cover your relevant academic qualifications as well as your work experience to date.
- CPD record (a minimum of 25 hours per year for **each** of the two years prior to the date of your application)

The Technical Report Stage 1 application should be sent electronically in one single comprehensive PDF file to education@ciht.org.uk. Stage 1 applications may be submitted at any time.

You are encouraged to seek the support of a **mentor** to provide you with advice and guidance in preparation for your Technical Report application.

Your Stage 1 submission will need to be signed off by a **sponsor** (*who may also be your mentor*) to verify that the content of your application is, to the best of their knowledge, a true and accurate reflection of your professional knowledge and experience. Your sponsor needs to be an active Engineering Council registrant at the level of registration being sought by you, or at a higher level.

Your assessors may approve your synopsis (with or without feedback). If they do not approve your synopsis, they will give you feedback which explains why you are unable to proceed to Stage 2. You will then have the option of re-submitting at any time.

ii) Stage 2 – Submit the Technical Report

If your Technical Report synopsis is approved, you will then have 12 months to submit your full Technical Report for assessment *(see website for submission dates).* Your report should not exceed 8,000 words and will be assessed against the UK-SPEC competences and the AHEP requirements.

A Stage 2 Technical report application consists of:

- A completed Stage 2 application form ***(refer to template)*** signed off by a sponsor who is an Engineering Council registrant at the level being sought, or above.
- Your 8,000-word Technical Report - word limit excludes acknowledgements, references, footnotes, bibliography and appendices *(guidance below)*
- An updated CPD record, demonstrating a minimum of 25 hours per year for each of the previous two years.

When compiling your Technical Report, the following structure is advised:

- ***Title page**:* Including your name, membership number, report title, the purpose of the report e.g. 'application for CEng registration' and any other useful information.)
- ***Summary:*** Summarise your achievements in relation to the engineering principles which underpin the UK-SPEC and AHEP.
- ***Contents page** with page numbers*
- ***Introduction:*** A short overview of the content and structure of the rest of the report

  Main body of the report: The report should be structured in a way that suits your experience and the competences to be assessed. The aim of the report is to clearly demonstrate your knowledge of engineering principles gained as a result of your engineering experience.
- ***Conclusion:*** Provide considered opinion on your work, reflecting on any lessons learned and highlighting any aspects you would now approach differently
- ***Appendices:*** The report may include evidence such as reference to designs, drawings, calculations, and any other types of activity or analysis that you have undertaken. Some of this evidence might be contained in appendices and each appendix should be clearly referenced in text in the body of the report.
- ***Bibliography/References:*** Design data such as guidelines and standards as well as any other relevant documentation which is generally available should be cited and the full bibliography provided in a reference list at the end of the report.

The Technical Report Stage 2 application should be sent electronically in one single comprehensive PDF file to education@ciht.org.uk by the submission deadline published on the CIHT website.

You should avoid simply writing about a project that you have worked on. The formation of an engineer is usually through a variety of projects and experiences and the assessors will expect to see this variety reflected in your Technical Report.

If your assessors are satisfied with the content of your report, you will be invited to attend a Technical Report interview. If your report is considered to not yet meet the requirements to proceed to a Technical Report interview, you will be advised to re-submit this in accordance with the feedback given.

TECHNICAL REPORT TIPS

- You should make sure that your Technical Report remains focussed on your approved synopsis.
- You should aim to write in the first person e.g. 'I decided…' and emphasise your own technical knowledge and the basis on which you made design and other decisions. Phrases such as 'we decided…' should be avoided, but where a decision was group based, you should clearly identify your contributions to the group decision.
- Any illustrative diagrams, tables, drawings, calculations and statistics should be included in an Appendix to the main report to support the development of a point. You must be able to demonstrate your understanding and interpretation of them.
- All appendices should be referenced at the appropriate place in the text within the main report. The appendices should be ordered according to the order in which they are introduced in the text. Each appendix should be clearly and separately titled (e.g. "Appendix A – highway pavement calculations"). Appendices should only include essential additional documentation which provide evidence to support an assertion you are making in the report. Submissions with an excessive bulk of appendices should be avoided and it is recommended that they should ideally consist of no more than **50 sides of A4.**

iii) Stage 3 – Attend a Technical Report Interview

If your Technical Report is approved, two CIHT assessors will conduct the interview which normally lasts for approximately one hour. At the start of the interview, you will be invited to speak about your career to date for around 5 minutes, highlighting your significant **engineering** achievements. Your interview will be a structured discussion between you and your assessors, who will expect you to demonstrate your range and depth of knowledge and understanding of engineering principles, based on your Technical Report.

Upon successful completion of Stage 3, you will be invited to apply for Professional Review in the same format as a Standard Route candidate *(see Section 6 above).*

8. Making a Professional Review application

All Professional Review applications should be sent submitted through the CIHT website by the submission deadline:

Chartered Engineer
Incorporated Engineer
Engineering Technician

The Education Team will conduct an administrative check to ensure that all your documentation is present and will inform you if any additional information is required.

Once the administrative check has been completed, you will be provided with information on the next steps.

9. Submission Deadlines and Interview Dates

Submission deadlines and interview dates for Technical Report and Professional Review applications can be found on the CIHT website

Applications for Initial assessment and Further Learning Report submissions can be made at any time.

10. Assessment Fees

Please refer to the CIHT website for further information regarding fees. Fees for Professional Review will be made as part of your online submission through the MyCIHT website. All other fees can be paid online via your MyCIHT account or by telephone.

11. Results

Results are issued by e-mail approximately 6 weeks after the submission deadline and/or the interview and are sent to the e-mail address provided in your application form. Please remember to contact the Education Team at education@ciht.org.uk if you need to update your contact details.

12. Re-sits

If you are unsuccessful in your application, you will be required to re-submit the relevant documentation and follow the standard application process, including payment of the appropriate assessment fee.

13. Appeals

Applicants have the right to appeal their result if they feel there was an error in the administration process or in case of unforeseen events. Appeals must be received in writing within six weeks of receiving the result and should be sent via e-mail to education@ciht.org.uk

14. Maintenance of registration

To maintain your CEng, IEng or EngTech registration, you will need to remain a CIHT membership and pay an annual registration fee to the Engineering Council through CIHT. The initial registration and annual registration fees can be found on the Engineering Council's website here. You will also be expected to continue undertaking and recording your CPD as this will be periodically audited.

15. Further information

If you have any queries about applying for Engineering professional registration through CIHT, contact the Education team (education@ciht.org.uk)