

INSTITUTION OF ROYAL ENGINEERS

REGISTRATION HANDBOOK

SECTION 2

TERMS OF REFERENCE FOR COMMITTEES AND PANELS

INSTITUTION OF ROYAL ENGINEERS

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INSTITUTION OF ROYAL ENGINEERS

PROFESSIONAL REGISTRATION COMMITTEE

Constitution

1. The Professional Registration Committee (PRC) is a duly constituted standing committee of the Council of the Institution of Royal Engineers (the Council). It is chaired by a senior member of the Institution, normally Commandant RSME *ex officio* who is appointed a Vice President of Council. Chairman PRC reports to Council as required and not less frequently than once per year.

Terms of Reference

2. The PRC contributes to the objects of the Institution to promote and advance the science of military engineering and to promote military efficiency and particularly the military efficiency of the Corps of Royal Engineers.

3. Specifically, and in accordance with the Byelaws¹, the PRC and its subordinated panels are to exercise on behalf of Council those functions for which the Institution is licenced by the Engineering Council (EngC) or any successor body in respect of Engineering Technician (EngTech), Incorporated Engineer (IEng) and Chartered Engineer (CEng) and any other registers or sections thereof for which EngC or any successor body may in future award licences (Institution Bye-Law 1j).

4. In furtherance of these objects but not otherwise it is to promote education in the science of military engineering (Bye-laws Object 1a) and promote links with other branches of the engineering profession (Object 1c).

5. Within these objects the specified and principal implied tasks of the PRC are to:

a. Set up, monitor and control professional registration processes and in accordance with direction and guidance provided by the EngC², appointing panel chairman to execute component parts of the process as required.

b. Meet the EngC requirements for annual self assessment, activity reports, continuous performance improvement and audit under the terms of the InstRE licence.

c. Ensure that standards common to all licensed professional engineering institutions³ are maintained.

d. Promote the benefits of professional engineering registration to both serving members of the Corps and retired members.

¹ Charter, Byelaws, Rules and Regulations of the Institution of Royal Engineers (Revised 2009).

² The Engineering Council Licencing Manual (LicMan5 October 2010) and Regulations for Registration (Approved February 2012)

³ UK Standard for Professional Engineering Competence.

- e. Provide advice on academic requirements and professional development to aspiring professional engineering registrants.
- f. Provide advice to those charged with the training and education of serving Royal Engineers on the academic requirements to be met by potential registrants.
- g. Train members of the InstRE Volunteer Peer Group supporting the registration process.
- h. Understand the strategy for the promotion of professional registration of armed forces' engineers.
- i. Understand the operations and strategies of other PEIs, provide support where requested and appoint members to represent the Institution in the affairs of the EngC and other professional bodies.
- j. Advise Council on Institution ethics and codes of conduct with a view to ensuring coherence with EngC professional engineering codes and standards.
- k. Consider complaints and appeals from potential registrants on any aspect of the registration process, appointing appeals panels as appropriate.
- l. Collect registration statistics, monitor resource requirements and identify costs; generate a registration budget proposal for Council annually.
- m. Advise Council upon request on factors that underpin the setting of registration targets and fees.

Membership

- 6. The PRC shall consist of a Chairman appointed by the Council and up to 7 other members appointed by the Chairman and approved by Council and include:
 - a. A senior chartered engineer appointed to chair the Route Advisory Panel (RAP).

- b. A senior chartered engineer appointed to chair the Professional Registration Interview Panel (PRI).
 - c. A senior chartered engineer appointed to chair the Registration Panel (RP).
 - d. A senior incorporated engineer.
 - e. A senior engineering technician appointed to chair the Engineering Technician Panel
 - f. *Ex officio*, Chief Executive of the RE Continuous Professional Development (RE CPD) organisation at Chatham to advise and ensure that educational needs of serving members were correctly identified, representing the professional head of arm's CPD views where appropriate.
7. The Secretary and Registrar of the Institution of Royal Engineers are to be in attendance, and the Registrar is appointed Secretary to the Committee. The Chairman may co-opt or otherwise invite additional members as required, including but not exclusively:
- a. The Institution Liaison Member to the Engineering Council.
 - b. Engineering Council Liaison Members to the Institution of which two have been appointed.
 - c. Chief Instructor Professional Engineering Wing, when relevant business has been tabled for discussion.

Conduct of Business

8. The PRC will meet as required and normally twice a year in the early spring and autumn. Further meetings may be convened as required and papers circulated and agreed out of committee. A quorum shall be no fewer than 4 members one of which is to be a member of Council and another is to be a senior chartered engineer. Members are appointed for 2 years and, normally, will serve for not longer than 5 consecutive years. The committee year runs from January until December, in line with the Council's committee year.
9. Responsibility for the control of the registration process is discharged through five principal panels:
- a. The Route Advisory Panel (RAP) provides advice on academic requirements and professional development to applicants who aspire to be incorporated and chartered engineers and ensures that they have developed the appropriate level of engineering knowledge and understanding.

- b. The Professional Registration Interview Panel (PRI) examines candidates' core competencies to determine whether they meet the standards set out in the UK-SPEC for incorporated and chartered engineers.
 - c. The Registration Panel (RP) confirms that processes have been followed and determines the suitability of candidates for inclusion on the register of incorporated and chartered engineers.
 - d. The Engineering Technician Panel considers and assesses applications and registers Engineering Technicians.
 - e. An Arbitration and Appeals Panel (AAP) may be convened where necessary on an *ad hoc* basis.
10. Terms of Reference for each panel are set out in the Institution of Royal Engineers's Registration Handbook.

INSTITUTION OF ROYAL ENGINEERS

ROUTE ADVISORY PANEL – TERMS OF REFERENCE

Introduction

1. The purpose of these TOR is to set out the role of the Route Advisory Panel (RAP), its outputs and the procedures by which these are achieved.
2. It does not repeat detailed guidance to RAP members which is included elsewhere in the Registration Handbook.
3. Meanings. “RAP” and “Chairman RAP” each have two similar but separable meanings which can be determined by the context in which they are used but should be understood from the outset:
 - a. RAP refers to both to the body of volunteers who serve on the panel and also to an individual meeting convened for the purpose of assessing submissions.
 - b. The Chairman RAP is a senior engineer who heads up the volunteers comprising the RAP. Chairman RAP may also be used to identify a member who is nominated to chair a specific RAP meeting.

Purpose

4. The RAP delivers that part of the registration process that assesses potential registrant’s qualifications and engineering knowledge and understanding (K&U) that underpins their subsequent professional registration application. It does not assess professional engineering competency which is the responsibility of the Professional Review Interview Panel. The RAP provides:
 - a. Firstly, through the evaluation of members’ initial applications, advice to the applicant on the route¹ to registration they should follow. This is covered in the “Initial RAP Advice” section below.
 - b. Secondly and subsequently, for those applicants who lack exemplifying qualifications, an assessment of further evidence of their engineering K&U in the form of experiential learning statements, technical reports or confirmation of further learning. This is covered below in the section entitled “Further Assessment – Stage 2”

RAP Membership

5. The RAP is drawn from the Volunteer Pool of incorporated and chartered engineers and comprises a chairman and at least 6 other members.

¹ For an explanation of the routes to registration see the Registration Handbook, Section 1

6. Members are appointed for a 2 year term and may be re-appointed for further terms but may not serve for longer than 5 consecutive years. However, an existing member of RAP appointed as Chairman RAP may serve a further term.

7. The Chairman is a senior chartered engineer who is appointed by the Professional Registration Committee (PRC) to lead the RAP.

Responsibilities of the Chairman of RAP

8. The Chairman RAP is responsible for the efficient discharge of the RAP function and its outputs as part of the Institution's registration process. Chairman RAP:

- a. Is a member of PRC and contributes to registration strategy and policy.
- b. Chairs RAP meetings and appoints other experienced RAP members to chair RAP meetings in their own right.
- c. Appoints members to RAP meetings.
- d. Ensures RAP advice and assessments are consistent and timely.
- e. Ensures compliance to Institution and Engineering Council guidance, recommending changes where appropriate.
- f. Informs and mentors RAP members and provides special-to-panel training².
- g. Identifies potential new members for the Volunteer Pool.
- h. Recommends appointments to the RAP from the Volunteer Pool.
- i. Devises a succession plan to ensure that somebody is trained to assume the management of the RAP when the current Chairman resigns or retires

9. The Chairman may also co-opt experts, who need not be registered engineers, to provide advice on specialist areas of military engineering.

Panel Meetings

10. The RAP meets as frequently as required. Meetings may be held face to face or remotely through audio visual arrangements or by exchanges of emails etc. Normally at least one meeting per year would take place face to face to raise matters of policy and enable training and / or a more detailed exchange of ideas to take place. The Registrar and the Engineering Council Liaison Officer (EngC LO) should be invited to attend these meetings.

² The Registrar provides process and assessor training to all RAP members as part of their induction into the volunteer pool. Members would normally attend a RAP as observers before assuming their duties.

11. The quorum for a panel brought together to conduct one or more assessments is two members one of whom is Chairman RAP or a member nominated by the Chairman. Where the applicants under consideration seek to pursue chartered status, at least one member of the panel must be a chartered engineer. Where incorporated status is sought, ideally at least one member of the panel should be an incorporated engineer but exceptionally a panel meeting comprising CEng members only may advise.

Outline Procedure

12. Chairman RAP agrees a programme of meetings (both face-to face and virtual) in conjunction with the Registrar and RAP members. Before each meeting the Registrar will advise the Chairman of the likely workload. The Chairman will consult members and chair or nominate a member as RAP chairman as required.

13. The Registrar then forwards the final agenda and relevant applications to the nominated RAP meeting chairman, normally by email, for consideration by meeting members.

14. The nominated chairman coordinates the assessment /advice from the RAP meeting and submits a short report on each applicant, representing the view of the panel.

Initial RAP Advice

15. Following consideration of an initial application the RAP should reach one of the following 8 conclusions that the applicant:

- a. Is a Standard Route candidate.
- b. Is an Individual Route candidate and is required to demonstrate appropriate engineering knowledge and understanding:
 - (1) By submission of a technical report (TR).
 - (2) By the submission of an experiential learning statement.
 - (3) By undertaking further learning³ (FL), or
 - (4) By a combination or choice of the above.
- c. Is an Individual Route candidate who has already undertaken formal further learning which, in the RAP's judgement, is equivalent to exemplifying

³ The Institution of Royal Engineers recognises two types of FL: firstly courses leading to qualifications that the EngC recognise as exemplifying, enabling registration along the Standard Route; secondly courses leading to qualifications that are not exemplifying but taken together with other relevant military engineering qualifications are *judged* by the RAP to be sufficient to enable applicants to proceed with their main professional registration application along the Individual Route. An example of this second type of FL would be the Greenwich University top up degree, taken in conjunction with Clk Wks course leading to the BSc in Construction Management.

qualifications (known as FL(Met)).

- d. Has failed to provide sufficient information for the RAP to reach a conclusion.
- e. Is not suited for registration.

16. The RAP chairman draws up a report on each applicant which should be the collective view of the members of that RAP meeting. These reports are addressed to the Registrar and forwarded via him to applicants (together with any other forms and administrative instructions required in support of the next stage of their application). There is no set format for the report. However each report should be signed by the RAP meeting chairman (electronic signatures are acceptable) and contain:

- a. Details of when the Panel convened, and who constituted its chairman and members.
- b. Brief details of the applicant including tertiary qualifications and summary of experience.
- c. The route recommendation and the evidence to support the conclusion reached. (e.g Eng C Course Reference for accredited exemplifying qualifications).
- d. For a recommendation of TR or experiential learning, detailed guidance in accordance with the relevant sections of the Handbook.
- e. For a recommendation of FL, advice on appropriate qualifications to meet the perceived shortfalls in knowledge and understanding.
- f. Where non –exemplifying FL requirements have been met, (FL(Met), justification for the judgement made.
- g. Where a choice is offered, the RAP should still provide a recommendation on their preferred choice.
- h. Where no conclusion could be reached, specify what additional information might assist the RAP (e.g. degree transcripts, course specifications, expanded CV etc).
- i. Where considered unsuitable, explain why. Experience and age-related factors (both young and old) are not in themselves sufficient justification although sustained employment outside engineering or retirement leading to the judgement that the applicant would be most unlikely to meet later stages of the process might provide grounds.

Further Assessment – Stage 2

17. Individual Route applicants' subsequent TRs and statements of experiential learning, referred to as Stage 2 applications, are submitted by the registrar to a nominated RAP chairman for assessment by RAP members in the same manner as initial applications.
18. Two processes at Stage 2 are iterative:
 - a. The agreement of a detailed TR Synopsis. It is essential that the RAP and applicant agree a TR synopsis that identifies the areas of K&U to be addressed, prior to the applicant starting on the report. The agreed synopsis will guide the assessment of the TR⁴.
 - b. The Statement of Experiential Learning. Under current EngC guidance the experiential statement may be developed incrementally following dialogue between applicant and assessor until it meets the requirement.
19. Interviews. The RAP assessors must conduct an interview on all applicants who submit a TR, satisfy themselves that the requirement has been met, or decide otherwise and submit a report. Interviews are not mandatory for experiential learning statements but may be conducted if deemed helpful in reaching a conclusion.
20. Further Learning. When an applicant submits evidence that a previously identified requirement for further learning has been met, the RAP should confirm that it meets the advice set out in the initial RAP Report.

Summary of Handbook Guidance

21. Guidance to RAP members is contained in the Registration Handbook at:
 - a. Section 3 – 2, Initial Application Guidance Notes
 - b. Section 1 – Annex B, Initial Registration Stage Flowchart
 - c. Section 1 – Annex C, Assessment of Qualifications
 - d. Section 3 – 11, Experiential Learning Strand Guidance Notes for Applicants and Assessors
 - e. Section 3-13, Technical Report (TR) Strand Guidance Notes for Applicants and Assessors
 - f. Section 3 – 12, Experiential Learning Strand Assessors' Submission Form CEng & IEng

⁴ This is essential otherwise the RAP subsequently assessing the TR may not be aware as to what aspects of K & U it was designed to demonstrate.

g. Section 3 – 14, Technical Report Strand Assessors' Submission Form
CEng & IEng

h. Section 3 – 15, Technical report Strand *Interview* Assessment Form CEng
& IEng

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PROFESSIONAL REVIEW INTERVIEW PANEL

1. The Professional Review Interview (PRI) Panel assesses all applications for Engineering Council (EngC) professional registration and, subsequently, interviews all applicants recommended for interview at the assessment phase.

Constitution

2. The PRI Panel is appointed by the Professional Registration Committee (PRC) and shall report to it.

3. The PRI Panel will consist of a Chairman who will report to the PRC and at least 6 members, to include CEng and IEng registered members. Specialists may be co-opted, as determined by the Chairman.

4. Both elements of the Professional Review (review of documentary evidence and the interview) shall be conducted by a quorum of two suitably qualified and trained assessors; however, at the interview stage the Registrar and the EngC Liaison Officer may attend. The assessors shall be registrants at or above the category in which the applicant is seeking registration, with at least one having substantial experience in the relevant engineering discipline. The PRI Panel Chairman shall take all reasonable steps in the selection of assessors to ensure that potential conflicts of interest are avoided.

5. Members are appointed for 2 years and will serve for not longer than 5 consecutive years.

6. Appropriate training will be provided for all PRI Panel members.

7. The PRI Panel year runs from January until December, in line with the institution's committee year.

8. The PRI Panel meetings to assess applications for EngC professional registration shall be held on a virtual basis; frequency to be determined by the number of applications received. Meetings of the PRI Panel to interview applicants shall be held face to face at a frequency, time and location determined by InstRE. At these meetings items of policy may be raised and training given, the Registrar and the EngC Liaison Officer should be invited to attend these meetings.

Terms of Reference

9. To determine from the review and evaluation of the documents submitted with an applicant's EngC professional registration application if there is justification in calling forward the applicant for the Professional Review Interview. The review of the documents is to include an assessment of:

- a. Academic achievements.

- b. Career history.
- c. Sponsors' assessment.
- d. Cross Mapping Form.
- e. Professional Review Report.
- f. Technical Report (TR) (if Individual Route TR strand).
- g. Statement of Experiential Learning (if Individual Route Experiential Learning strand).

10. To determine by interview and advise the Registration Panel if an applicant for EngC professional registration satisfies the Competence and Commitment Standard of the UK-SPEC for the level of professional registration sought and if there is justification in forwarding the application to the Registration Panel for scrutiny.

11. To produce Professional Review Key Word Notes, a Professional Review Score Sheet and a Summary Sheet with recommendations for each applicant to inform the Registration Panel.

Procedure

12. The process is triggered by receiving an application for EngC professional registration.

13. Interview boards will be convened by the Registrar on a regular basis, normally on a 10 week rolling cycle that links with the drum beat of activity in the RAP and RP. They will be held at the Institution's headquarters in The Ravelin Building, Brompton Barracks or other appropriate locations. Assessors and locations will be allocated by Chairman PRI based on availability and suitability for applicants' areas of expertise. Whilst every effort will be made to make available suitable assessors for applicants in the next cycle; occasionally an applicant may be asked to defer his/her review to the following 10 week cycle if suitable assessors are not available.

Summary of Handbook Guidance

14. Guidance for PRI members is contained in the Registration Handbook at:

- a. Section 2 – 4, Guidance Notes for Professional Review Interview Panel Members.
- b. Section 3 – 3, Professional Registration Application Stage for the award of CEng and IEng – Guidance Notes.
- c. Section 1 - Annex G, Professional Review Report Assessment Form.

- d. Section 1 - Annex H, Professional Review Interview and Score Sheet for Incorporated Engineers.
- e. Section 1 - Annex I, Professional Review Interview and Score Sheet for Chartered Engineers.

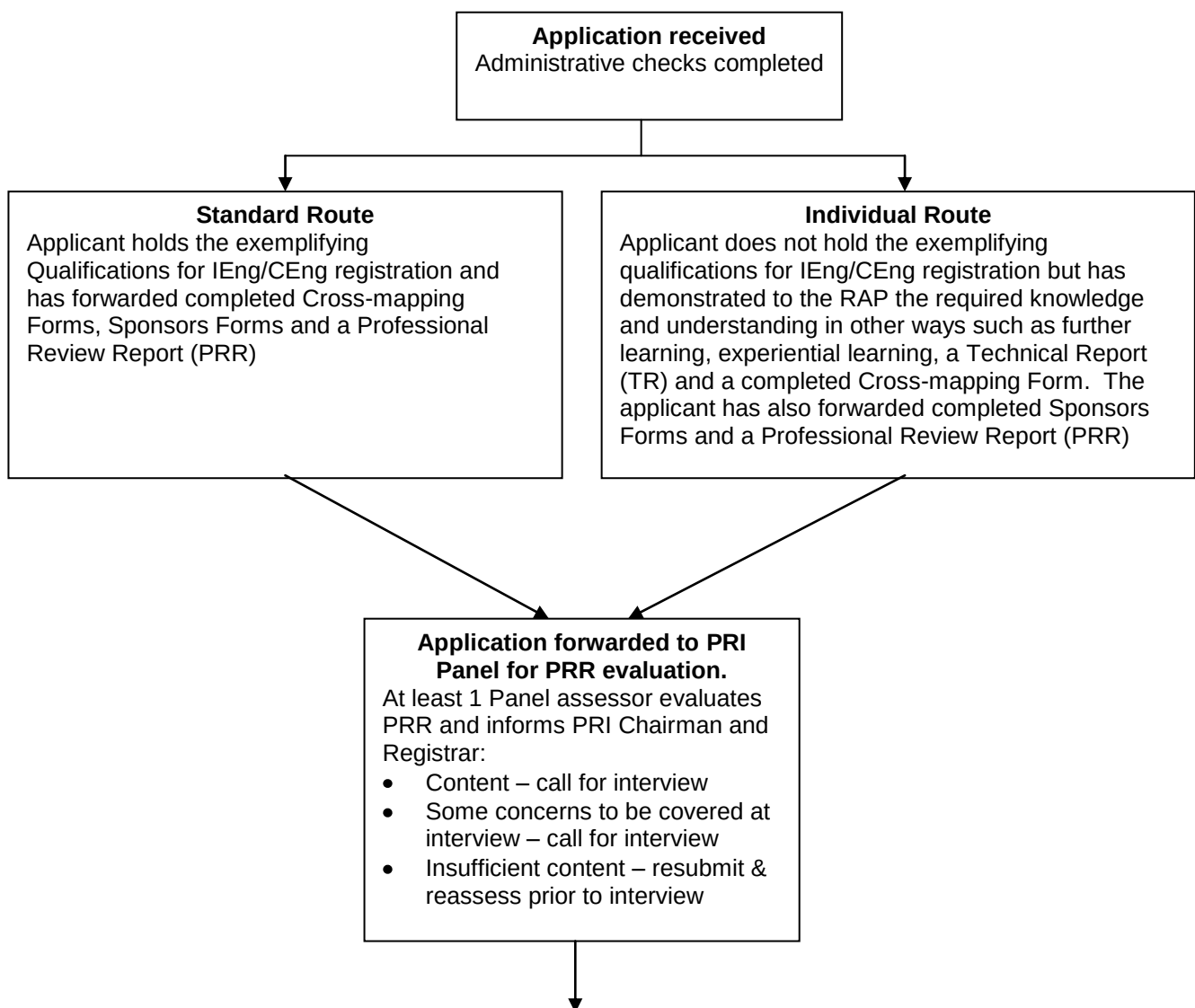
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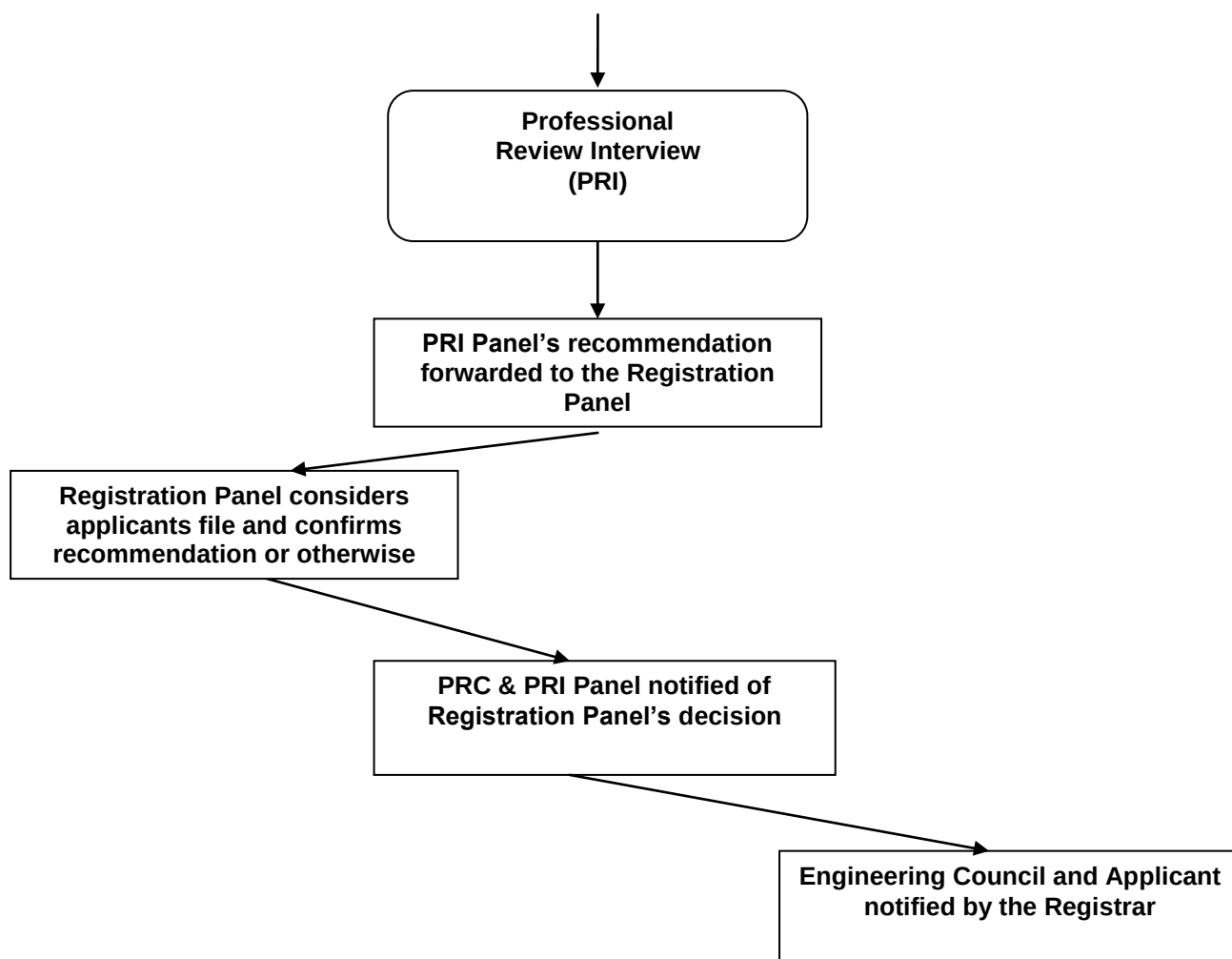
Guidance Notes for Professional Review Interview Panel Members

1. Candidates applying for IEng and CEng Engineering Council (EngC) Registration will be assessed at a Professional Review Interview (PRI) by the PRI Panel.
2. The PRI Panel assesses applicants who hold the exemplifying qualifications for IEng/CEng Registration and those who do not hold exemplifying qualifications but can 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. After the interview, the interviewers' recommendations are forwarded to the Registration Panel where a final decision on EngC Registration is made.

The Application Process

3. The flowchart below illustrates what happens to a successful Combined Application Form on completion of phase 2 of the application process.





Application Documents

4. Completed applications shall be forwarded to the PRI Panel Chairman for onward distribution to the selected panellists.
5. Panellists may not interview an applicant who is in a position of potential influence over them. If a panellist has any concerns they must inform the PRI Panel Chairman and the InstRE Registrar, withdrawing from the panel on that occasion if appropriate.
6. Applications are checked by the Registrar's staff to verify that they have been completed correctly and that all the necessary supporting documents have been included.
7. An application sent to PRI Chair consists of:
 - a. Route Advisory Panel report(s) (appended by the Registrar if necessary).
 - b. Refreshed and completed combined Application Form.
 - c. Completed Sponsor's Forms from both sponsors.
 - d. A Cross Mapping Form.

- e. The PRR.
8. Panellists must evaluate the complete application and decide whether or not the application will proceed to the PRI.

Evaluating the Application

9. Review the applicant's work experience or CV for:
- a. Relevant employment, type(s) of organisations, range of the applicant's military engineering work and experience.
 - b. Applicant's position(s), job title(s), progression, level of responsibility. Is the range of experience or specialisation, management / supervision experience commensurate with the professional registration sought?
10. Review the Professional Review Report. Is there clear correlation with the UK-SPEC criteria for the relevant level of professional registration? No applicant will be able to cover all the UK-SPEC Criteria to equal depth. Emphasis should be on a holistic assessment of the totality of the information provided by the applicant, rather than a box-ticking approach to every aspect of the competence requirement. An applicant may be slightly weak in certain areas if this is adequately balanced by strengths in other areas. Does the Professional Review Report indicate that this is the case?
11. Review the Development Action Plan (May be included in the PRR or Cross mapping form). Is there evidence of:
- a. Career development planning?
 - b. A logical plan for future CPD?
 - c. Commitment to put the plans into practice?
12. Consider what questions you might ask to verify the evidence provided in the application. Are there areas where the evidence is so weak that you need to see more, either before or during interview?

Completing the PRR Assessment Form

13. On receipt on an application the Registrar provisionally books an interview slot for the candidate. This enables to Panel Chairman to identify and task an assessor who is most likely to lead at the interview with completing the formal PRR Assessment Form. This forms the basis for the call forward for interview. Exceptionally (such as when the time is short between the submission of the application and the next scheduled interview date with space available) the PRI Panel chairman may use his judgement to confirm an interview prior to completion of the PRR Assessment Form.
14. Based on your evaluations of the application, has the applicant achieved sufficient breadth and depth of knowledge and experience in military engineering to

be called for a PRI? In completing the PRR Assessment Form there are three options:

a. Yes – sufficient evidence of knowledge and experience (competence) - the applicant should be called forward for PRI interview.

b. Yes – broadly sufficient but some gaps or areas of concern exist that may be covered in more detail at interview – call forward to interview. These concerns should be brought to the attention of the candidate who may either decide that they can be addressed at interview or who may decide to defer interview until they have been addressed.

c. No – sufficient evidence of knowledge and experience (competence) at the appropriate level has **not** been submitted – do not call forward for interview. The applicant should address the deficiencies and resubmit. Where the application is for CEng and the applicant is not already IEng and the PRR meets the requirements of paragraphs a or b above at that level the PRR assessor may recommend that the applicant should be offered the opportunity to be assessed as an IEng. The recommendation is to be endorsed by the Panel Chairman before informing the Registrar who will advise the applicant. The applicant then has the opportunity to either:

(1) Resubmit the PRR for reassessment and later interview

(2) Be assessed for the award of IEng

15. As indicated above, preferably the assessor who completes the PRR Assessment Form leads the PRI. However this is not an absolute requirement and there may be instances when it would be more appropriate for the assessor to act as the 2nd interviewer and other instances where the PRR assessor may not be present at all. For this reason it is helpful if the PRR assessor clearly indicates areas for further exploration at interview.

Preparing for the interview

16. Keep a clear distinction between IEng and CEng applicants. Please ensure that you are familiar with UK-SPEC criteria for the EngC registration level in question.

17. Agree the broad structure and sequence of your questioning, for example:

A – Use of Engineering Knowledge	Establish the extent of deepening and broadening of engineering knowledge at the appropriate level. Determine involvement in establishing user needs/requirements and the degree of application of best practice. Confirm the level of input to solutions for non-standard engineering problems
B – Application of Engineering Methods	Explore the assessment and selection of engineering methods, techniques and opportunities. Establish the involvement in feasibility studies, design and development of engineering solutions. Determine the involvement in the implementation of engineering designs and evaluation of their performance.
C – Technical and Commercial Management/Leadership	Confirm the level of responsibility and autonomy within the project or processes; where and how the role fits/fitted into the overall project(s). Establish how leadership skills have been developed; how the applicant influences individuals within the

	team(s). Find out the applicant's role in quality improvement.
D – Effective Interpersonal Skills	You will be aware of the written communication skills through the TR and/or PRR. Note the verbal and presentation skills. Examine personal/interpersonal and social skills, explore working relationships and equal opportunities.
E – Commitment to Professional Standards	Establish the level of involvement with and commitment to the Institution and promotion of military engineering in general. Find out how health and safety risks are identified and managed. Examine how sustainable development issues are managed and actions taken. Question career plans and ambitions, approach to CPD and the CPD of others. Establish the level of understanding of the four fundamental ethical principles and examples of their application.

Table1.

At the PRI interview

18. Prior to starting the interview, please check the applicant's ID and record this on the Key Words form. The form of identification will have to be either a MOD Form 90, passport or a photo card driver's licence or similar (e.g. National Identity Card).

19. Timing and sequence. Stick to the agreed schedule; normally 1 hour per applicant plus private discussion time before and after the event. A suggested schedule is as follows:

- a. Interviewers' preparation time
- b. Applicant enters, introductions, settle down 2 mins
- c. Applicant's presentation, including prepared evidence items 20 mins
- d. Questions arising from presentation 10 mins
- e. Further questioning 20 mins
- f. Invite applicant's questions. Check for satisfaction 5 mins
- g. After applicant leaves the interview room, discuss conclusion, write up score sheet and final report

20. Listen, Observe, Probe. The aim of the interview is to gather information: minimise your talking and maximise time spent listening to the applicant.

- a. Create an environment where the applicants can perform at their best. Watch for signs of anxiety and try to alleviate it.
- b. Do listen to what the applicant says. Don't stop listening to plan your next question.
- c. Listen for key words. Start to record immediately.

- d. Listen for the applicant's substantiation of their answers by reference to concrete evidence of examples.
21. When observing the evidence presented, ensure you are satisfied that:
 - a. It is the applicant's own work.
 - b. It is up to date and reflects contemporary military engineering practice.
 22. Avoid asking closed questions which invite a yes or no answer. Try to start questions with What? When? Where? Why? How?
 23. Probe answers:
 - a. Which surprise you.
 - b. Are inconsistent with the documentation the applicant has submitted.
 24. Cover the range of work being presented; don't just focus on your specialism.
 25. Use sampling to test the applicant's grasp of technical detail.
 26. Where you can, refer explicitly to particular competence and commitment elements.
 27. At the end invite questions.
 28. Ask if he / she is satisfied with the way the interview has been conducted.
 29. Remember, it is your responsibility to ensure the applicant has adequate opportunity to demonstrate his/her competence and commitment as an engineer.

Recording the Outcomes

30. All documentation is to be filled out in pen. Your notes and comments will be looked at by the Registration Panel and possibly the applicant. You are therefore asked to write all comments legibly.
31. Key Words & Scores. Use the form to record your impressions as the applicant is speaking. Start to record immediately. You should record how and to what degree the competence elements have been met and accord it a score. Summarise evidence, not just 'good' or 'ok'. As the interview proceeds, use the gaps to guide your questioning.
32. In order to earn a recommendation, the sum of the competence scores should be not be less than 8, any individual competence score must not be less than 1 and not more than one Raw Score is zero.
33. Scoring is an aid not a driver for a recommendation. If an assessor feels that overall the candidate has met the standard but this is not reflected in the scores, then these must be revisited. Assessors should initially complete their assessments

individually but should then confer. If the average score for any competency differs by more than 1, or the overall score differs by more than 2 then the assessors should scrutinise together the evidence they have recorded as omitting evidence is the most likely reason for the discrepancy. That said, assessors should not feel pressured to alter their scores or observations, but nor should they feel embarrassed to make a change or addition after the interview. Changes should be struck through and initialled by the assessor.

34. Recommendation & Summary. Interviewers must complete the assessment process by making an unequivocal recommendation or non-recommendation for the award sought. There is no scope to recommend registration at a higher or lower level. Hopefully the interviewers' recommendations will concur but there is no imperative that they should do so. A split recommendation counts as a non-recommendation. Interviewers are also encouraged to comment on strengths or weaknesses (although the latter should not compromise the recommendation) that may assist the candidate with their further development. Comments should be as specific and as constructive as possible and will be passed on informally by the Registrar to the candidate.

35. At the end of the interview, return all documentation to InstRE Registrar's office for preparation for the Registration Panel, including:

- a. The application documents in their entirety
- b. Key words, score sheets and summary sheet forms

36. Arbitration and Appeals Process. Although unusual, should an applicant observe that they feel they have been unfairly treated in a manner that might impact upon their chances of achieving registration, either in their concluding remarks at interview or informally to the Registrar subsequently, then they will be invited to put their concerns in writing together with the remedy sought, where possible. At this stage any representation made falls short of an appeal (there can be no appeal as no decision regarding registration has been made). This is passed to the Chairman of the PRI Panel who, in conjunction with the Registrar, will consider it and may make any remedy providing it falls within the Engineering Council's Registration Code of Practice. All representations will be forwarded to the Registration Panel for their consideration and the outcome communicated back to the applicant. If necessary the Arbitration and Appeals Panel will be convened.

GUIDANCE NOTES: INCORPORATED ENGINEER (IEng)					
Score & Level of Evidence	Competence A Use of Engineering Knowledge	Competence B Application of Engineering Methods	Competence C Technical and Commercial Management	Competence D Effective Interpersonal Skills	Competence E Commitment to Professional Standards
0 Insufficient	A1: Theoretical Knowledge Little or no evidence of attempt to deepen or broaden engineering knowledge beyond initial education and training Unclear on limits of own knowledge and skills A2: Solving Engineering Problems Not involved in establishing user requirements Little or no evidence of data gathering and its analysis to solve engineering problems	B1: Select Methods Little or no evidence of selection of engineering techniques and methods B2: Contribute to Design Little or no involvement in feasibility studies, or in producing designs or technical specifications B3: Implement Designs Limited involvement in implementing designs or evaluating their effectiveness	C1: Plan Projects Limited involvement in project planning teams C2: Manage Tasks and Resources Plays a role in the management of time, cost and quality C3: Manage Teams Works with other team members helping them to develop new skills C4: Manage Quality Improvement Little or involvement in quality improvement	D1: Communication Communicates in writing and verbally D2: Presentation and Discussion Delivers simple presentations D3: Personal and Social Skills Understands own strengths and weaknesses Aware of equal opportunities regulations Comfortable in a range of company	E1: Professional Conduct Little evidence of commitment to InstRE or promotion of engineering E2: Safe Systems of Work Takes responsibility for own health and safety E3: Sustainable Development Aware of SD issues E4: CPD Limited evidence of CPD E5: Ethical Principles Aware of ethical principles
1 Sufficient	A1: Theoretical Knowledge Some evidence of deepening engineering knowledge at degree level and broadening engineering knowledge Clear on limits of own knowledge and skills A2: Solving Engineering Problems Some involvement in	B1: Select Methods Some evidence of selection of engineering techniques and methods B2: Contribute to Design Contributes to option identification and whole life costs for project elements Contributes to designs and technical specifications for project elements	C1: Plan Projects Contributes to scheduling work, identifying resources, and assessing risks in small project teams C2: Manage Tasks and Resources Contributes to management of time, cost and quality, allocation of tasks, and management of task teams / contractors	D1: Communication Writes letters, chairs simple meetings and prepares minutes / RODs D2: Presentation and Discussion Delivers presentations and contributes to formal discussions D3: Personal and Social Skills	E1: Professional Conduct Some evidence of commitment to InstRE and promotion of engineering E2: Safe Systems of Work Assesses safety risk, and enforces health and safety standards E3: Sustainable Development

GUIDANCE NOTES: INCORPORATED ENGINEER (IEng)					
Score & Level of Evidence	Competence A Use of Engineering Knowledge	Competence B Application of Engineering Methods	Competence C Technical and Commercial Management	Competence D Effective Interpersonal Skills	Competence E Commitment to Professional Standards
	establishing user requirements Some evidence of data gathering and its analysis to solve engineering problems	B3: Implement Designs Delivers solutions based on simple designs Contributes to evaluation of effectiveness of completed engineering solutions	C3: Manage Teams Contributes to setting team objectives, assessing performance, planning training and providing feedback C4: Manage Quality Improvement Evidence of quality promotion and taking action to correct quality shortfalls	Takes the needs of others into account Applies equal opportunities regulations Confident in a variety of interpersonal circumstances	Evidence of taking account of SD issues in work E4: CPD Good evidence of CPD E5: Ethical Principles Evidence of applying the four fundamental ethical principles in the workplace
2 Good	A1: Theoretical Knowledge Clear evidence of deepening engineering knowledge at degree level and broadening engineering knowledge Evidence of use of others with specific engineering knowledge to address issues outside own expertise A2: Solving Engineering Problems Clear evidence of personal involvement in establishing user requirements and tempering with best practice Clear evidence of an data gathering and its analysis to solve non-standard engineering problems	B1: Select Methods Clear evidence of selection of engineering techniques and methods B2: Contribute to Design Contributes to option identification, value engineering and whole life costs for projects Contributes to designs and technical specifications for projects B3: Implement Designs Delivers complex solutions based on design solving problems as they are encountered Contributes to evaluation of effectiveness of completed engineering solutions and identification of lessons for the future	C1: Plan Projects Contributes to working with stakeholders and tenderers, scheduling work, identifying resources, and assessing risks C2: Manage Tasks and Resources Contributes to management of time, cost and quality, allocation of tasks, management of contractors, and control of funding C3: Manage Teams Sets team objectives, assesses performance, plans training, provides feedback and contributes to disciplining individuals when required C4: Manage Quality Improvement Contributes to implementation of quality improvement assisted by	D1: Communication Contributes to technical reports and chairs meetings on complex issues D2: Presentation and Discussion Delivers presentations on complex issues, and manages discussions D3: Personal and Social Skills Takes own feelings and those of others into account Strong advocate of equal opportunities Confident and flexible in new interpersonal circumstances	E1: Professional Conduct Is an example of commitment to InstRE and promotion of engineering E2: Safe Systems of Work Manages safety risk, and develops and implements health and safety regimes E3: Sustainable Development Manages application of SD to benefit the environment and the community E4: CPD Understands own development needs and carries out selected CPD to develop competences E5: Ethical Principles Understands the values and

GUIDANCE NOTES: INCORPORATED ENGINEER (IEng)					
Score & Level of Evidence	Competence A Use of Engineering Knowledge	Competence B Application of Engineering Methods	Competence C Technical and Commercial Management	Competence D Effective Interpersonal Skills	Competence E Commitment to Professional Standards
			ISO 9001 / EFQM / BSC		importance of the four fundamental ethical principles and applies them to the benefit of the organisation.
3 Very Good	A1: Theoretical Knowledge Strong evidence of deepening engineering knowledge at degree level and broadening engineering knowledge Manages external specialist engineering support effectively to supplement own expertise A2: Solving Engineering Problems Strong evidence of personal involvement in establishing user requirements and tempering with best practice Strong evidence of data gathering and its analysis to solve non-standard engineering problems	B1: Select Methods Strong evidence of selection of engineering techniques and methods B2: Contribute to Design Contributes to option identification, value engineering and whole life costs for multi-disciplinary projects Contributes to multi-disciplinary designs and technical specifications for complex projects B3: Implement Designs Delivers multi-disciplinary solutions based on design solving problems as they are encountered Contributes to evaluation of effectiveness of completed engineering solutions and developing recommendations on Corps policy	C1: Plan Projects Contributes to working with stakeholders and tenderers, scheduling work, identifying resources, and assessing risks in complex projects C2: Manage Tasks and Resources Manages time, cost and quality, allocation of tasks, management of contractors, and control of funding C3: Manage Teams Sets staff and team objectives, assesses performance, plans training, provides feedback and disciplines individuals when required C4: Manage Quality Improvement Contributes to implementation of quality improvement / assurance systems that deliver superior performance	D1: Communication Briefs superiors in writing and/or verbally on technical issues and their implications D2: Presentation and Discussion Delivers presentations on technical issues to invited / external audiences, and manages discussions D3: Personal and Social Skills Creates and maintains productive working relationships, and resolves conflicts Applies equal opportunities regulations in unusual circumstances Confident and flexible in unusual and changing interpersonal circumstances	E1: Professional Conduct Plays a role in setting professional standards across engineering E2: Safe Systems of Work Manages and evaluates health and safety systems, and delivers improvements E3: Sustainable Development Consults with stakeholders on SD issues and ensures appropriate actions are taken to benefit the environment and the community E4: CPD Carries out CPD and evaluates outcomes against development objectives. Helps others with CPD E5: Ethical principles Fully understands professional and ethical behaviour, applies the four fundamental ethical principles and clearly

GUIDANCE NOTES: INCORPORATED ENGINEER (IEng)					
Score & Level of Evidence	Competence A Use of Engineering Knowledge	Competence B Application of Engineering Methods	Competence C Technical and Commercial Management	Competence D Effective Interpersonal Skills	Competence E Commitment to Professional Standards
					demonstrates the high ideals of professional life.

GUIDANCE NOTES: CHARTERED ENGINEER (CEng)					
Level of Evidence	Competence A Use of Engineering Knowledge	Competence B Application of Engineering Methods	Competence C Technical and Commercial Leadership	Competence D Effective Interpersonal Skills	Competence E Commitment to Professional Standards
0 Insufficient	A1: Theoretical Knowledge Little or no evidence of attempt to deepen or broaden engineering knowledge beyond initial education and training Unclear on limits of own knowledge and skills A2: Creative Engineering Solutions Involved in establishing user requirements but not user needs Little or no evidence of delivery of creative engineering solutions	B1: Identify Opportunities Little or no evidence of involvement in identification of technical opportunities B2: Produce Designs Little or no involvement in feasibility studies, or in producing designs or technical specifications B3: Implement Designs Limited involvement in implementing designs or evaluating their effectiveness	C1: Plan Projects A member of project planning teams not a leader C2: Direct Tasks and Resources Plays a role in the management of time, cost and quality C3: Lead Teams Works with other team members helping them to develop new skills C4: Deliver Quality Improvement Little or no evidence of attempts to improve quality	D1: Communication Communicates in writing and verbally D2: Presentation and Discussion Delivers simple presentations D3: Personal and Social Skills Understands own strengths and weaknesses Aware of equal opportunities regulations Comfortable in a range of company	E1: Professional Conduct Little evidence of commitment to InstRE or promotion of engineering E2: Safe Systems of Work Takes responsibility for own health and safety E3: Sustainable Development Aware of SD issues E4: CPD Limited evidence of CPD E5: Ethical Principles Aware of ethical principles
1 Sufficient	A1: Theoretical Knowledge Some evidence of deepening engineering knowledge at post-graduate level and broadening engineering knowledge Clear on limits of own knowledge and skills A2: Creative Engineering Solutions Some involvement in establishing user needs and	B1: Identify Opportunities Some evidence of identifying and assessing technical opportunities B2: Produce Designs Identifies options and prepares whole life costs for project elements Produces designs and technical specifications for project elements	C1: Plan Projects Leads small project teams in scheduling work, identifying resources, and assessing risks C2: Direct Tasks and Resources Manages time, cost and quality, allocates tasks, and manages task teams / contractors	D1: Communication Writes papers, chairs simple meetings and prepares minutes / RODs D2: Presentation and Discussion Delivers presentations and leads formal discussions D3: Personal and Social Skills	E1: Professional Conduct Some evidence of commitment to InstRE and promotion of engineering E2: Safe Systems of Work Assesses safety risk, and enforces health and safety standards E3: Sustainable Development

GUIDANCE NOTES: CHARTERED ENGINEER (CEng)

Level of Evidence	Competence A Use of Engineering Knowledge	Competence B Application of Engineering Methods	Competence C Technical and Commercial Leadership	Competence D Effective Interpersonal Skills	Competence E Commitment to Professional Standards
	requirement definition Some evidence of delivery of creative engineering solutions	B3: Implement Designs Delivers solutions based on simple designs solving problems as they are encountered Evaluates the effectiveness of completed engineering solutions	C3: Lead Teams Sets staff and small team objectives, assesses performance, plans training and provides feedback C4: Deliver Quality Improvement Evidence of quality promotion and taking action to correct quality shortfalls	Takes the needs of others into account Applies equal opportunities regulations Confident in a variety of interpersonal circumstances	Evidence of taking account of SD issues in work E4: CPD Good evidence of CPD E5: Ethical Principles Evidence of applying the four fundamental ethical principles in the workplace
2 Good	A1: Theoretical Knowledge Clear evidence of deepening engineering knowledge at post-graduate level and broadening engineering knowledge Evidence of use of others with specific engineering knowledge to address issues outside own expertise A2: Creative Engineering Solutions Clear evidence of personal involvement in establishing user needs and using best practice to inform requirement definition Clear evidence of delivery of creative engineering solutions – the approach may have been adopted by others	B1: Identify Opportunities Identifies technical opportunities and assesses viability B2: Produce Designs Identifies options, carries out value engineering and prepares whole life costs for projects Produces designs and technical specifications for projects B3: Implement Designs Takes account of constraints to deliver complex solutions based on design solving further problems as they are encountered Evaluates the effectiveness of completed engineering solutions and identifies lessons for the future	C1: Plan Projects Leads project teams in working with stakeholders and tenderers, scheduling work, identifying resources, and assessing risks C2: Direct Tasks and Resources Manages time, cost and quality, allocates tasks, manages contractors, and controls funding C3: Lead Teams Sets staff and team objectives, assesses performance, plans training, provides feedback and disciplines individuals when required C4: Deliver Quality Improvement Implements quality improvement assisted by ISO	D1: Communication Authors technical reports and chairs meetings on complex issues D2: Presentation and Discussion Delivers presentations on complex issues, and leads and sustains discussions D3: Personal and Social Skills Takes own feelings and those of others into account Strong advocate of equal opportunities Confident and flexible in new interpersonal circumstances	E1: Professional Conduct Is an example of commitment to InstRE and promotion of engineering E2: Safe Systems of Work Manages safety risk, and develops and implements health and safety regimes E3: Sustainable Development Consults with stakeholders on SD issues and ensures appropriate actions are taken to benefit the environment and the community E4: CPD Understands own development needs and carries out selected CPD to develop competences E5: Ethical Principles

GUIDANCE NOTES: CHARTERED ENGINEER (CEng)					
Level of Evidence	Competence A Use of Engineering Knowledge	Competence B Application of Engineering Methods	Competence C Technical and Commercial Leadership	Competence D Effective Interpersonal Skills	Competence E Commitment to Professional Standards
			9001 / EFQM / BSC		Understands the values and importance of the four fundamental ethical principles and applies them to the benefit of the organisation
3 Very Good	A1: Theoretical Knowledge Strong evidence of deepening engineering knowledge at post-graduate level and broadening engineering knowledge Leads external specialist engineering support effectively to supplement own expertise A2: Creative Engineering Solutions Strong evidence of personal involvement in establishing user needs and using best practice to inform requirement definition Strong evidence of delivery of creative engineering solutions – the approach may have been adopted across the Corps	B1: Identify Opportunities Identifies major technical opportunities and assesses commercial viability B2: Produce Designs Identifies options, carries out value engineering and prepares whole life costs for multi-disciplinary projects Produces multi-disciplinary designs and technical specifications for complex projects B3: Implement Designs Takes account of constraints and anticipates problems to successfully deliver multi-disciplinary solutions based on design Evaluates the effectiveness of completed engineering solutions and uses lessons to inform Corps policy	C1: Plan Projects Leads large project teams in working with stakeholders and tenderers, scheduling work, identifying resources, and assessing risks C2: Direct Tasks and Resources Manages time, cost and quality, allocates tasks, manages contractors, and controls funding in complex projects C3: Lead Teams Coaches and mentors staff to encourage them to develop their skills and to enhance team performance C4: Deliver Quality Improvement Plans and implements quality improvement / assurance systems that deliver superior performance	D1: Communication Briefs senior staff in writing and/or verbally on technical issues and their implications D2: Presentation and Discussion Delivers presentations on technical issues to invited / external audiences, and leads and sustains discussions D3: Personal and Social Skills Creates and maintains productive working relationships, and resolves conflicts Interprets and applies equal opportunities regulations in unusual circumstances Confident and flexible in unusual and changing interpersonal circumstances	E1: Professional Conduct Plays a role in setting professional standards across engineering E2: Safe Systems of Work Manages and evaluates health and safety systems, and delivers improvements E3: Sustainable Development Imaginative and original application of SD to benefit the environment and the community E4: CPD Carries out CPD and evaluates outcomes against development objectives. Helps others with CPD E5: Ethical principles Fully understands professional and ethical behaviour, applies the four fundamental ethical principles and clearly demonstrates the high ideals of professional life.

GUIDANCE NOTES:
KNOWLEDGE AND UNDERSTANDING - EXAMPLES OF MEETING CRITERIA

Area	Criteria	Examples	
		Incorporated Engineer	Chartered Engineer
Knowledge	Knowledge of scientific principles underpinning engineering	Knowledge of Mass and Density Knowledge of Centre of Gravity Knowledge of Forces Knowledge of Gears / Pulleys Knowledge of Energy / Power Knowledge of Expansion / Contraction Knowledge of Stress / Pressure Knowledge of Electrical Charge / Current Knowledge of Fluid Flow Knowledge of Heat Knowledge of Combustion / Explosion	Knowledge of Mass and Density Knowledge of Centre of Gravity Knowledge of Forces Knowledge of Gears / Pulleys Knowledge of Energy / Power Knowledge of Expansion / Contraction Knowledge of Stress / Pressure Knowledge of Electrical Charge / Current Knowledge of Fluid Flow Knowledge of Heat Knowledge of Combustion / Explosion
	Knowledge of mathematical methods underpinning engineering	Knowledge of Graphical Techniques Knowledge of Trigonometry Knowledge of Algebra	Knowledge of Graphical Techniques Knowledge of Trigonometry Knowledge of Complex Algebra Knowledge of Calculus Knowledge of Complex Numbers
	Knowledge of engineering principles	Knowledge of Dead and Live Loads Knowledge of Deflection / Deformation Knowledge of Corrosion / Erosion Knowledge of Jointing Methods Knowledge of Failure Mechanisms Knowledge of Safety Factors / Diversity	Knowledge of Dead and Live Loads Knowledge of Deflection/ Deformation Knowledge of Corrosion / Erosion Knowledge of Jointing Methods Knowledge of Failure Mechanisms Knowledge of Safety Factors / Diversity Awareness of gaps / insights in principles Knowledge of latest developments
	Knowledge of commercial and economic context of engineering	Knowledge of Procurement Techniques Knowledge of Forms of Contract Knowledge of Budgetary Techniques	Knowledge of Procurement Techniques Knowledge of Forms of Contract Knowledge of Budgetary Techniques Knowledge of Investment Appraisal Knowledge of Business Cases
	Knowledge of engineering	Knowledge of Team Dynamics	Knowledge of Personnel Management

	management techniques	Knowledge of Project Management	Knowledge of Leadership Techniques Knowledge of Project Management Awareness of gaps / insights in techniques Knowledge of latest developments
	Knowledge of engineering materials, equipment and processes	Knowledge of Material Properties Knowledge of Tools and Equipment Knowledge of Quality Control	Knowledge of Material Properties Knowledge of Tools and Equipment Knowledge of Quality Assurance
	Knowledge of relevant legal requirements	Knowledge of HASW Act Knowledge of Safe System of Work Knowledge of CDM Regulations Knowledge of Environmental Regulations Knowledge of Sustainable Development	Knowledge of HASW Act Knowledge of Safe System of Work Knowledge of CDM Regulations Knowledge of Environmental Regulations Knowledge of Sustainable Development
Understanding	Apply mathematical methods to solve engineering problems	Apply mathematical methods above Use multiple methods to solve problems	Apply mathematical methods above Use multiple methods to solve problems
	Apply engineering principles to analyse engineering systems	Apply engineering principles above Synthesise principles to devise argument Apply principles to extend knowledge	Apply engineering principles above Synthesise principles to devise argument Apply principles to extend knowledge Apply principles in an original manner
	Apply modelling techniques to assess engineering systems	Interpret of results of measurement Conduct tests / trials Appreciate / manage uncertainty	Interpret of results of measurement Conduct tests / trials Appreciate / manage uncertainty Critically evaluate research / new ideas
	Use computer software to solve engineering problems	Use simple computer models	Use Finite Element Analysis Use Structural Analysis Software Use software in an original manner Develop improved software models
	Apply a systems approach to engineering problems	Critically evaluate assumptions / proposals Develop solutions to problems Make engineering decisions	Critically evaluate assumptions / proposals Develop solutions to complex problems Make complex engineering decisions Act autonomously to solve problems
	Use of technical literature and	Use of Technical Specifications	Use of Technical Specifications

	information sources	Use of Engineering Drawings Use of Manufacturers' Information Manage own learning from multiple sources	Use of Engineering Drawings Use of Manufacturers' Information Manage own learning from multiple sources
	Use of appropriate codes of practices and standards	Use of Codes of Practice Use of British Standards Use of Building Regulations	Use of Codes of Practice Use of British Standards Use of Design Codes

INSTITUTION OF ROYAL ENGINEERS

REGISTRATION PANEL - TERMS OF REFERENCE AND GUIDANCE

Role & Membership

1. The Registration Panel (RP) is the Institution's Member's Committee responsible for registration. Its role is to:
 - consider the candidate's report(s) from Professional Review, and decide whether to confirm the recommendation of the Professional Review Interview (PRI) panel.¹
 - provide feedback to improve process and procedure.
2. The RP is drawn from the Volunteer Pool of professionally registered members, details of whom are maintained by the Registrar, and comprises a chairman and at least 6 other members.
3. The Chairman is a senior chartered engineer appointed by the Professional Registration Committee (PRC) and responsible to them for the smooth and effective discharge of RP duties. Members, also appointed by the PRC must be incorporated or chartered engineers.
4. Chairman RP and members are appointed for a 2 year term and may be re-appointed for further terms but may not serve for longer than 5 consecutive years. However, an existing member of RP appointed as Chairman RP may serve a further term.
5. InstRE registration process and assessor training will be provided for all RP members prior to their active engagement at panel meetings. Chairman RP may provide additional bespoke training as required.

Conduct and Frequency of Meetings

6. Chairman RP would normally chair RP meetings but may nominate other suitably experienced members to chair meetings on their behalf. A meeting is duly constituted with a chairman and one other member. However, where possible, panels should comprise an odd number of members to enable decisions to be taken forward on a majority basis in the unusual circumstances where a split decision is reached. Specialists may be co-opted by the Chairman as advisors but have no "vote".
7. The professional recognition (IEng, CEng) of RP members at a meeting should match the recognition sought by the professional registrants under consideration. Exceptionally a panel meeting comprising CEng members only may confirm the registration of IEng applicants but not the reverse.

¹ Engineering Council Registration Code of Practice (Revision approved by RSC 13/08/2015)
<http://www.engc.org.uk/about-us/our-purpose-and-organisational-structure/committees/> then look for the document at the bottom of this page.

8. Chairman RP will determine the frequency (and location) of meetings which may be held face to face or remotely through audio visual arrangements or by exchanges of emails etc. They should be held as frequently as required and as resources permit and normally there would be an expectation that no more than 6 weeks should elapse between candidates' PRIs and the notification of their successful registration (or otherwise). The maximum time to elapse between PRI and RP should be no more than 6 months.

9. Normally at least one meeting per year would take place face to face to raise matters of policy and enable training and / or a more detailed exchange of ideas to take place. The Registrar and the Engineering Council Liaison Officer (EngC LO) should be invited to attend these meetings.

Process

10. Chairman RP acts as the single point of contact for the Registrar for all RP matters but may delegate this administrative function to a member in which case the Registrar must be informed. The RP process is shown in the schematic below. In summary:

a. Registrar informs Chairman RP when professional registration applications are forwarded to Chairman PRI for consideration. This acts as a warning order that RP action *may* be required in approx 10 weeks time².

b. Following PRI, Registrar forwards relevant documentation (usually electronically) to Chairman RP, comprising candidates':

(1) Record of progress.

(2) RAP reports, and for Individual Route candidates, evidence that knowledge and understanding requirements have been met.

(3) Professional Registration Application, Professional Review Report (PRR) and Cross Mapping Report.

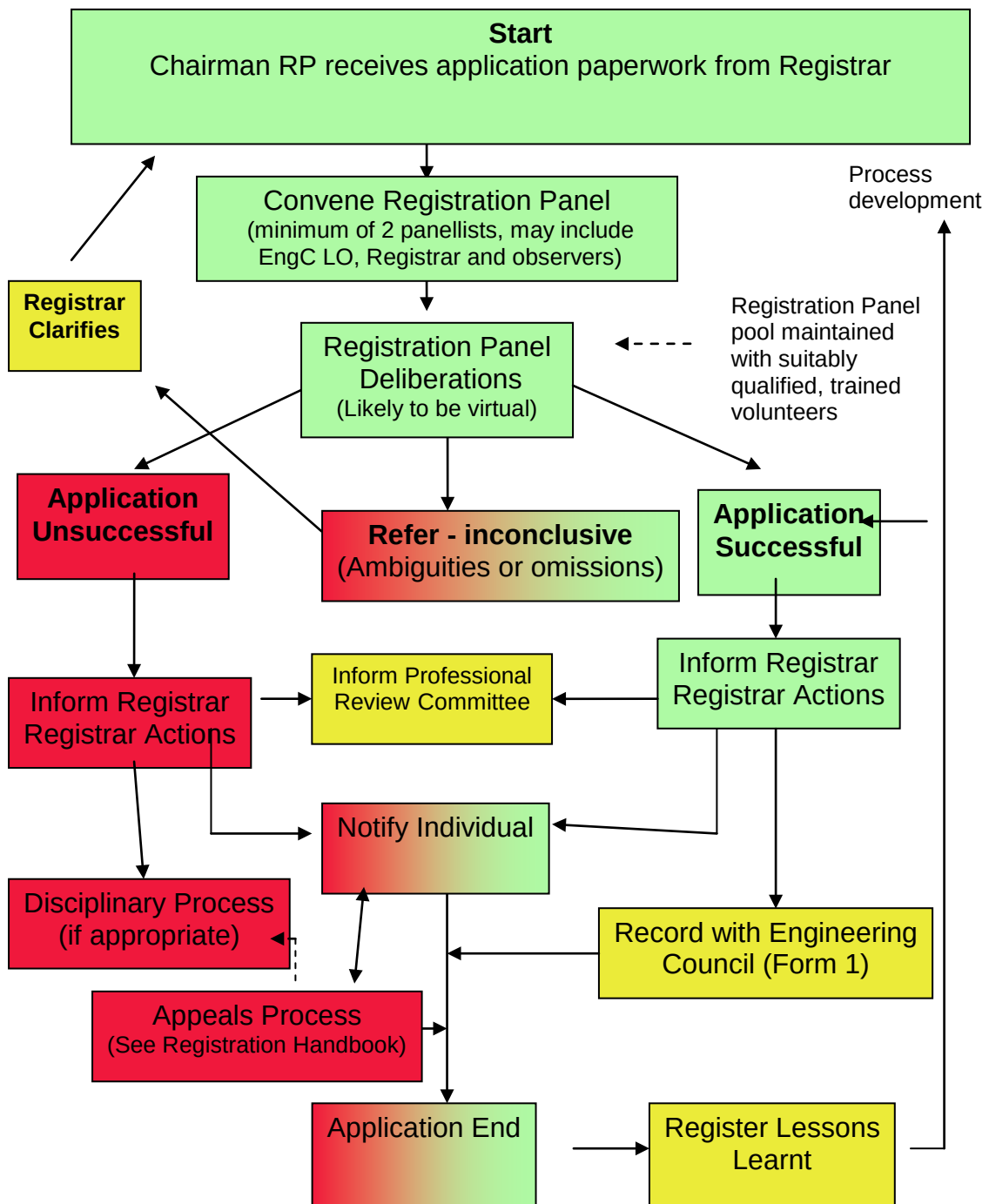
(4) PRR Assessment Form(s) and Professional Review Interview and Score Sheet.

c. Chairman RP convenes panel meeting and forwards documentation to members. Additionally, when meeting is face to face, informs Registrar of date, time and location. Registrar then issues documentation and invite to EngC LO.

d. RP deliberates and Chairman RP informs the Registrar in writing of its findings and decisions, including lessons identified if applicable.

² Upon receipt of main application, Chairman PRI aims to review candidates' application and Professional Review Report (PRR) within 6 weeks and, if acceptable, call candidates to PRI as soon as practical thereafter.

Registration Panel Application Review Flowchart



Registration Panel Decision Options

11. The table sets out the 6 decision options available RP

Ser	RP Decision Options	RP Action	Remarks
(a)	(b)	(c)	(d)
1	RP agree with the PRI panel recommendation that the candidate's application for professional registration is <i>successful</i>	Inform Registrar in writing	Registration process with the EngC is completed and the candidate informed.
2	RP agree with the PRI panel recommendation that the candidate's application for professional registration is <i>not</i> successful:	Inform Registrar in writing <i>and</i> A draft note highlighting the applicant's strengths and deficiencies. The note may include possible remedies and suggest a time frame for re-application but need not.	Registrar advises candidate of result, the reviewers' comments and the procedure should the applicant wish to appeal.
3	RP <i>disagree</i> with the PRI panel recommendation that the candidate's application for professional registration is <i>successful</i>	Consider on a case by case basis and <i>either</i> As per Ser 2c above <i>or</i> Refer – Inconclusive (ambiguity or omission) and refer back to Registrar for clarification	It would be unusual to declare the candidate as unsuccessful outright in such circumstances and this conclusion should only be reached when the RP are unanimous in their view that the candidate does not meet the standard required. The RP must report the evidence underpinning such a conclusion which should be sufficiently

			robust to rebuff an appeal. Where the possibility exists that the failure to reach agreement with the PR recommendation may be due to shortcoming in the assessors or process, RP should normally take the option to refer in first instance. See Ser 5.
4	RP <i>disagree</i> with the PRI panel recommendation that the candidate's application for professional registration is <i>not successful</i>	State reasons for disagreement and refer back to Registrar for clarification	RP may not overturn a negative recommendation from PRI panel. On referral Registrar will invite PRI to reconsider.
5	RP cannot reach a conclusion – Refer - Inconclusive	Refer back to Registrar with reasons for decision in writing	Registrar would investigate the reason for the referral consulting other InstRE staff, RAP and PRI chairmen, EngC and EngC LO where necessary before re-submitting the application together with an explanatory note for RP to re-deliberate.
6	RP Split Vote – RP members cannot agree a decision	Chairman RP does <i>not</i> have the controlling vote but may take a majority view or expand panel (when even number of members originally) or reconvene a new RP to reconsider the application.	Reasons for disagreement must be forwarded in writing to Registrar

Registration Panel Q & A

12. Common Q & A is set out below:

Ser	Question	Answer
(a)	(b)	(c)
1	Can the RP overturn a recommendation from the PRI Panel	Yes, but only to deny registration and this should only happen in exceptional circumstances. The reasons for such a decision should be recorded and there should be a review of processes.
2	Should the Registrar be in attendance? If so, should the paperwork resulting from the PRI alone be the source of information for consideration of the RP?	There is no requirement for the Registrar to be present. If present, then any additional information held by the Registrar may be used if it would assist the RP in reaching a decision that would otherwise be judged as “Inconclusive – Refer”. The Registrar’s contribution should be minuted by Chairman RP in his report.
3	Do unsuccessful applications have to be registered with EngC or just successful?	There is no requirement to register unsuccessful applications with EngC although the Register retains data in order to monitor success rates.
4	The Registration Handbook covers complaints, arbitration and appeals. Does an appeal apply to all stages of the application or just those which have reached the “unsuccessful” stage?	The appeals procedure applies only to applications at the “unsuccessful” stage. However an applicant may complain about any aspect relating to the handling of his application at any stage of the procedure. Such complaints are to be directed to the Registrar for initial consideration or, if about the conduct of the Registrar, to Sec InstRE.
5	Who notifies unsuccessful candidates?	The Registrar, upon receiving written advice from Chairman RP which would include appropriate direction on how to address deficiencies which would normally include information from RAP and PRI panels.
6	In what circumstances could RP refer an application?	RP refer applications when panel members decide there are

		inconsistencies in the PR reports (mismatched scoring and key words for example) or they otherwise have insufficient information upon which to form a judgment as to whether the candidate is successful or unsuccessful (missing data, indecipherable reports etc). Referrals are referred back to the Registrar who will, through chairman PRI, establish what was deficient and why and inform RP to enable them to reach a decision.
7	Could an application terminate before the RP stage?	An applicant may voluntarily withdraw his application at any point until PRI. Once interview has commenced applications may not be terminated and must be determined by RP.
8	Do RP need to monitor results and kept statistics?	Chairman RP should retain a file of all records and submissions from RP to the Registrar or delegate this responsibility to another panel member. However, there is no absolute requirement for RP to keep statistics although Chairman RP may choose to do so to monitor trends. Such data must not identify applicants by name. Panel members should maintain private records of meetings, including names of candidates but no other identifying data as part of their own CPD and to ensure there is no conflict of interest.
9	Can a panel comprising CEng and IEng confirm registration of CEng applicants?	Yes
10	In assessing an applicant for CEng does the view of a CEng panellist carry more weight than an IEng panellist?	No.
11	I know the applicant well, socially and at work. Should I withdraw from the RP?	In a small and select institution such as InstRE is inevitable that panel members and applicants would have worked or

		socialised together and such a relationship is not in itself a bar to sitting on the panel and forming a judgment in respect of an individual applicant who you know well. However panel members are bound to act impartially at all times and their relationship and conduct must not give grounds for suspicion that they may have acted otherwise. Therefore, members with concern that their relationship with the applicant could give rise to such grounds should exempt themselves from making a judgement on that particular candidate and inform Chairman RP. They need not provide any further explanation or justification.
12	The PR assessors have not scored the candidate highly enough to pass and as a consequence have made a “non-recommendation” but all the other evidence from the application and the “key words” suggests that the applicant <i>should</i> be successful. On what basis can I overturn their recommendation?	The non-recommendation cannot be overturned and the application should be referred. Scoring or grading does not remove the need for a holistic view to be taken of the applicant’s competence and commitment. PRI should be invited to examine the inconsistencies between scores and key words and their recommendations.
13	Should we fall in line with other institutions and offer the opportunity for the RP to award a different grade to that applied for?	Yes, but EngC have revised their guidance and RP may only do so if PRI panel have identified the possibility beforehand and compiled separate PRI reports at interview for both IEng and CEng.

Sample RP Letters

13. Formal letters are preferred but emails will suffice but they should cover the information set out below:

**Name and address
of Chairman RP**

Telephone:
Military Network:
Facsimile:
Military Facsimile:
E-mail:
Military E-mail:

Registrar
Institution of Royal Engineers
Ravelin Building
Brompton Barracks
CHATHAM
Kent ME4 4UG

Date

**RECORD OF THE Xth REGISTRATION PANEL HELD AT (Place) ON (Date) AT
(Time) HOURS**

1. The Xth Institution of Royal Engineers Registration Panel was convened in accordance with the Institution of Royal Engineers Chartered Engineers & Incorporated Engineers Registration Handbook Version (insert Handbook Version) on (Insert DTG) at (Place).³

2. The Registration Panel comprised:

Col Alfa Chairman
Maj Bravo, Member
Mr Charlie, Member
Mr Delta, Member (candidates Able and Baker only)
Capt Echo, RP member under instruction
Maj (Retd) Foxtrot, Observer, EngC LO

3. The Registration Panel reviewed 4 applications and made the following decisions:

a. 24362960 Warrant Officer 1 A B Able to be awarded Chartered Engineer status. His award should be recorded under the ~~standard~~ / individual route.

b. 501301 Major B C Baker to be awarded Incorporated Engineer status. His award should be recorded under the standard / ~~individual~~ route.

³ For Virtual Panels or those held by VTC the place should be the location of the Chairman and reference should be made in paragraph as to the nature of the conference. A date for the meeting should be determined by the Chairman for the convening of the meeting even if the actual deliberations took place over several days (or weeks)

c. 123465 Mr C Cod was not successful in his application for Chartered Engineer status. A letter summarising the deficiencies to be addressed is attached.

d. 132423 Capt D E Dobbin's application for the award of Incorporated Engineer is referred for action by the Registrar. A letter summarising the reasons for the referral is attached.

3. Please now carry out all actions necessary to enact these decisions.

4. I shall write to the Institution Secretary separately with lessons learnt from this Registration Panel.

A B Seaman
Colonel
Chairman Registration Panel
Institution of Royal Engineers

Copy (less attachments) to:

Other Panel Members
Member under Instruction
EngC LO
Chairman Professional Registration Committee
Chairman Professional Review Interview Panel
Chairman Route Advisory Panel
Secretary Institution of Royal Engineers

**Name and address
of Chairman RP**

Telephone:
Military Network:
Facsimile:
Military Facsimile:
E-mail:
Military E-mail:

Registrar
Institution of Royal Engineers
Ravelin Building
Brompton Barracks
CHATHAM
Kent ME4 4UG

Date

Dear Registrar

Unsuccessful Application for Chartered Engineer – Mr C COD

You will be aware that Mr COD's application for chartered status was considered at the Xth RP Meeting held on (Date) at (Place). This is the Mr Cod's second application.

I would be grateful if you would inform him of our decision along the lines set out below:

"Dear Mr. Cod

Your application for the award of Chartered Engineer was considered by the Registration Panel of the institution of Royal Engineers on (date) and I regret to inform you that your application was not successful in this instance.

Your Reviewers report that you successfully demonstrated your competence in the following attributes:

Independent Judgement and Responsibility; through your sound decisions during the planning for Op Telic IV engineering work and for taking responsibility for ensuring your construction sequence was followed. Also through your site roles in various locations, including with the Royal Engineers in Afghanistan.

Commercial Ability; through your costing and estimating work, experience in making agreements for sub-consultancy work and later involvement in Early Warning Notices under the NEC3 PSC option E contract.

Health, Safety and Welfare, through your various site supervisory roles, your identification of the significant hazards and risks on Op Telic and preparation of Designers' Risk Register.

Sustainable Development, through your involvement with site waste management plans and the mitigation of environmental issues, including air quality, noise and dust.

Interpersonal Skills and Communication, through your experience of communicating with design teams and specialists and, in Afghanistan, your role in communicating with contractors and the local population in a difficult environment.

Professional Commitment, through your understanding of the Code of Conduct, your willingness to accept assignments in various locations outside the UK and your experience with the British Army in Afghanistan.

However, based on the assessment of your submission and performance on the day, you failed to demonstrate to your Reviewers that you have achieved a satisfactory standard in the following attributes:

Engineering Knowledge and Understanding: There was little evidence of sound Engineering Knowledge in either of your reports and supporting documents. When asked to sketch the forces on the multi-span floating pier equipment bridge, you did not demonstrate a confident grasp of the loadings. Your explanation of the forces and restraint for the bridge parapet was not confident.

Engineering Application: There was no specific evidence of your application of engineering principles to the solution of problems. Nor was there evidence of your evaluation of the effectiveness of solutions.

Yours truly, etc Registrar

A B Seaman
Colonel
Chairman Registration Panel
Institution of Royal Engineers

**Name and address
of Chairman RP**

Telephone:
Military Network:
Facsimile:
Military Facsimile:
E-mail:
Military E-mail:

Registrar
Institution of Royal Engineers
Ravelin Building
Brompton Barracks
CHATHAM
Kent ME4 4UG

Date

Dear Registrar

Referred Application for Chartered Engineer – Mr D E Dobbin

You will be aware that Mr Dobbin's application for Incorporated Engineer status was considered at the Xth RP Meeting held on (Date) at (Place) and has been referred for the reasons set out below.

The "key words" report from his PRI Reviewer Bilbo Baggins was quite illegible and RP members agreed that they were unable to proceed with Mr Dobbin's registration. Nor did the individual scores recorded by Bilbo match the total.

I would be grateful if you could provide a certified typed copy of Baggins' reports and I will reconvene the RP. Please also inform Chairman PRI so that necessary remedial action can be taken to ensure this does not occur in future.

Yours etc,

A B Seaman
Colonel
Chairman Registration Panel
Institution of Royal Engineers

INSTITUTION OF ROYAL ENGINEERS

ARBITRATION AND APPEALS PANEL

1. The Arbitration and Appeals Panel (AAP) reviews, on request, all failed applications for Engineering Council professional registration that merit a review. Applications rejected for misrepresentation of evidence and other special circumstances shall not merit a review.

Constitution

2. The AAP is appointed by the Professional Registration Committee (PRC) and shall report to it.

3. The AAP shall consist of a Chairman who will report to the PRC and at least 2 members at the appropriate level of professional registration. Specialists may be co-opted, as determined by the Chairman.

4. A quorum for the appeal review shall consist of the Chairman and 2 members. At any stage of the procedure the PRI interviewers and members of the Registration Panel may be requested to attend.

5. Appropriate training will be provided for all AAP members.

6. The AAP meetings to review disputed application recommendations shall, where appropriate, be held on a virtual basis; as and when required. Reviews that require the appellant to be interviewed shall be arranged by the Registrar, who will also be secretary for the meeting, at a time and location determined by the Registrar. After such meetings items of policy may be raised and training given, the Engineering Council Liaison Officer should be invited to attend these meetings.

Terms of Reference

7. To determine from the review of the appellants professional registration application and the recommendations of the PRI and Registration Panels if there is justification for their recommendations to be overturned or upheld. The review of the documents is to include an assessment of:

- a. Academic achievements.
- b. Career history.
- c. Sponsors' assessment.
- d. Professional Review Report.
- e. Statement of Experiential Learning (if Experiential Learning stream)

- f. Technical Report (if TR stream).
 - g. The PRI interviewers' Key Words Forms.
 - h. The PRI interviewers' Score Sheets.
 - i. The PRI interviewers' Summary Sheets.
 - j. The Registration Panels notes and comments.
9. To determine by interviewing the appellant, if appropriate, if there is justification for the initial recommendations to be overturned or upheld.
10. To produce a report with recommendations.

Procedure

- 11. The process is triggered by the Registrar on receipt of a valid appeal.
- 12. The AAP will be convened by the PRC as and when required.
- 13. Interview Boards will be convened by the Registrar on the recommendation of the AAP.

INSTITUTION OF ROYAL ENGINEERS

REGISTRATION MENTOR PANEL – TERMS OF REFERENCE

“A mentor empowers a person to see a possible future, and believe it can be obtained. It’s that feeling that someone is concerned about you, that they want you to succeed.”
Shawn Hitchcock

Shawn Hitchcock is Professor of Chemistry, University of Illinois and mentors underrepresented students in STEM fields.

Introduction

1. The professional engineering registration process can be tortuous especially for those who lack exemplifying qualifications in engineering. The Institution of Royal Engineers is committed therefore to providing structured mentor support to all potential IEng & CEng registrants¹. The Institution maintains a pool of members who are experienced professional engineers, called the Mentor Panel, who have volunteered to perform this function.

2. Line managers and colleagues - who may not be professional engineers or professional engineers registered with other institutions - are also valuable sources of support that applicants can draw upon. Some of the competences that need to be demonstrated (leadership and communications for example) are common to many professions. Notwithstanding such support applicants are also encouraged to request the support of an InstRE mentor who will be up-to-date with InstRE procedures which may differ slightly from those of other professional engineering institutions.

Purpose

3. These Terms of Reference set out the Institution’s formal mentoring roles and responsibilities, training arrangements and process but do not seek to identify the special qualities that contribute to the making of a successful mentor.

Roles & Responsibilities

4. **Senior Mentor.** The Senior Mentor is a senior chartered engineer appointed by the Professional Registration Committee (PRC) and responsible to it for the efficient discharge of the mentor function as part of the Institution’s registration process. The Senior Mentor:

- a. Sets and maintains standards for the InstRE Mentor Panel, ensuring mentoring arrangements comply with Engineering Council guidance.

¹ The Institution does not routinely mentor Engineering Technicians as Institution staffs are able currently to advise and support EngTech applications.

- b. Is a member of PRC and contributes to registration strategy and policy recommending changes where appropriate.
 - c. In conjunction with the Registrar, identifies suitable individuals to serve on the Mentor Panel, ensuring they are appropriately briefed and up-to-date and that there are sufficient to meet demand.
 - d. Brings mentees and suitable mentors together, acting as a single point of contact for all requests for formal mentoring.
 - e. Supports the mentors and acts as a mentor in his own right.
5. **Mentors.** Mentors are also experienced incorporated and chartered engineers. As well as holding a current registration with the Eng C at least at the level sought by those they mentor, ideally they will have served in some other registration-related capacity, perhaps as an assessor. Their responsibilities include:
- a. Understanding the detail of the UK Standard for Professional Engineering Competence (UK-SPEC)² and relevant sections of the Institution's Registration Handbook explaining the relevance to the applicant.
 - b. Expanding on the advice of the Route Advisory Panel where necessary, explaining the nuances of the standard and individual routes to registration and their impact on the applicant. Where further learning has been advised, ensure the applicant understands the value of obtaining accredited and therefore exemplifying qualifications over those that are not.
 - c. Assisting applicants without exemplifying qualifications to demonstrate knowledge and understanding through their Experiential Learning Statements or Technical Reports, ensuring that the evidence they provide meets the qualification descriptor³ relevant to the level of registration sought to the best extent possible.
 - d. Assist with the completion of the Professional Review Report ensuring that the applicant covers each of the competency statements set out in the UK-SPEC.
 - e. Understand the importance placed on evidence of military engineering competence and ensure the applicant complies with Institution guidance.
 - f. Advise on the assessment and interview process and help the candidate to prepare for their Professional Review Interview.
 - g. Act as sponsors if appropriate.

² Published at <http://www.engc.org.uk/ukspec.aspx>

³ See <http://www.qaa.ac.uk/en/Publications/Documents/Framework-Higher-Education-Qualifications-08.pdf>

- h. Where an application has been unsuccessful, be prepared to help applicants to interpret the feedback provided and, where appropriate, how they may best re-engage.

Mentors support applicants by asking challenging questions in order to encourage the applicant to identify suitable evidence of professional competence achieved in their careers to date, and help them identify deficiencies and how they might be met. The mentor offers balanced, impartial and unbiased advice. They do not, however, manage the candidate's application process, nor provide solutions or complete work on the candidate's behalf.

6. **Sponsorship.** Mentors may sponsor the applicant – and many have – although they are under no obligation to do so. The main role of sponsors is to provide independent confirmation of the identity of applicants and the veracity of the evidence written in support of their application. Applicants require two sponsors who are both registrants and familiar with their work, one of whom should be MInstRE. Some applicants are unable to find a sponsor who is both a member and registrant at the level sought and who knows their work well. InstRE recognise that in the course of their mentoring mentors will have come to know the applicant well and their work (albeit indirectly) and should be sufficiently well placed to act as sponsor.

Mentor Panel Membership & Training

7. Mentors are normally drawn from the InstRE's Pool of incorporated and chartered engineers and will have received a briefing from the Registrar on the InstRE Registration process, including assessor training, on their entry into the Pool. They receive further mentoring training from the Senior Mentor or through arrangements with other professional engineering institutions. There is no time limit for which they might serve but terms of between 2 and 5 years or longer would be normal.

8. The Senior Mentor may appoint a mentor from outside the Pool when specialist expertise is required.

9. Unlike other panels, mentor panel members operate as individuals but, whilst respecting mentee confidentiality, are encouraged to share approaches and best practice. Mentors and assessors must also share a common recognised registration picture. Time is set aside for these purposes at the Institution's annual seminar normally held in February.

Outline Procedure

10. Following an enquiry a prospective applicant is provided with a pack containing guidance and an initial application form. Queries in connection with an initial application can normally be resolved by the Registrar and Institution staff and at this stage applicants do not normally require formal mentoring.

11. When received, the initial application is forwarded to the Route Advisory Panel (RAP). They provide preliminary advice and direction regarding the appropriate route to registration. Their advice falls into three broad areas, to:

- Proceed directly with a main professional application when academic knowledge and understanding requirements have been met in full (Standard Route with exemplifying qualifications or Individual Route when other further learning requirements specified by the Institution have been satisfied), or when such academic standards are *not* met, to
- Provide further evidence of knowledge and understanding at the appropriate level through submitting a technical report or experiential learning statement, or when the applicant is unlikely to be able to provide evidence of knowledge and understanding by the above, to
- To undertake formal learning and acquire further relevant, preferably exemplifying academic qualifications.

12. The Registrar forwards this advice to both applicant and Senior Mentor. Applicants then request mentor support via the Senior Mentor. Applicants are encouraged to submit an initial draft of the application or next stage at the same time, both to show intent and to provide material to facilitate the appointment of a suitable mentor.

13. The Senior Mentor finds and appoints a suitable mentor who then gets in touch with the applicant.

14. The mentor/ mentored relationship may not work for a variety of reasons and either party can withdraw from the arrangements informing the Senior Mentor who will, where possible, appoint another mentor. Infrequently applicants may make unreasonable demands on mentors' resources and the Senior Mentor may withdraw the offer of further mentor support at his discretion, informing PRC accordingly.

Summary of Handbook Guidance

15. Further guidance to mentors is contained in the Registration Handbook at:

- a. Section 3 – 2, Initial Application Guidance Notes
- b. Section 1 – Annex B, Initial Registration Stage Flowchart
- c. Section 1 – Annex C, Assessment of Qualifications
- d. Section 3 – 11, Experiential Learning Strand Guidance Notes for Applicants and Assessors

- e. Section 3-13, Technical Report (TR) Strand Guidance Notes for Applicants and Assessors
- f. Section 3 – 12, Experiential Learning Strand Assessors' Submission Form CEng & IEng
- g. Section 3 – 14, Technical Report Strand Assessors' Submission Form CEng & IEng
- h. Section 3 – 15, Technical report Strand *Interview* Assessment Form CEng & IEng

INSTITUTION OF ROYAL ENGINEERS

ENGINEERING TECHNICIAN BOARD - TERMS OF REFERENCE AND GUIDANCE

Background

1. Membership of the Institution of Royal Engineers (The Institution or InstRE), and access to professional registration, is open to those who serve or have served in the Corps of Royal Engineers¹ (RE) regular or reserve forces as officers or soldiers at any rank.
2. The Institution is licenced by the Engineering Council (EngC) to conduct an integrated assessment of candidates for Engineering Technician (EngTech) registration. InstRE has held this licence since 2007.
3. All RE soldiers and commissioned officers are trained progressively throughout their careers to meet the demands placed upon them as military engineers. As part of the process to obtain its licence to award EngTech, the Institution mapped the training and development provided by the RE as an employer against the UK Standard for Professional Engineering Competence (UKSPEC) for EngTech.
4. It determined that in successfully completing Class 1 Military Engineering (ME) training, *together* with command, leadership and management (CLM) training, RE soldiers had demonstrated the majority² of the competency requirements set out in the UKSPEC. Further, that the Class 1 ME training courses - many of which attracted a Level 3 award or higher on the National Qualifications Framework - met the academic knowledge and understanding standards required. Officers were able to demonstrate the necessary education and competences on completion of the Royal Engineers Troop Commanders course (RETCC). All members of the Institution are required to have completed one or other of these training routes and assessment

¹ Including Queens Gurkha Engineers (QGE)

² Some competences such as E1 – the requirement to comply with InstRE’s Code of Conduct – lie outside the training remit and always required separate attestation.

5. Following the review of the UKSPEC in 2013, the EngC introduced a new sub-competence E5 – exercise responsibilities in an ethical manner. InstRE determined that whilst Military Annual Training Test (MATT) 6 - Values and Standards and MATT 7 - Operational Law – covered the application of ethical behaviour in general, it was necessary for applicants to give their own examples where they have applied appropriate values and standards, or upheld ethical principles.

Role

6. The Engineering Technician Board (The Board) is responsible for all aspects leading to the professional registration of Institution members as EngTechs. As such it combines into one board the roles carried out by separate panels for incorporated and chartered engineer registration³. Nevertheless, these roles remain functionally distinct and are carried out by different Board members in respect of any single application and comply with the EngC's Registration Code of Practice.

Definitions

7. The Board has two meanings easily discernable by context. Either:
- a. The totality of registered members appointed to carry out EngTech professional registration, or
 - b. A selection of those members appointed to examine a number of applications at a prescribed date or time (as in *to convene a Board*).
8. Similarly, whilst there is one Chairman of the Board, chairmen are also appointed to chair individual Boards when convened.

Membership

³ The two functions are Professional Review and Members' Registration carried out by PRI Panel & Registration Panel for IEng & CEng applicants

9. The Board is drawn from the Volunteer Pool of professionally registered members, details of whom are maintained by the Registrar. Training in the InstRE registration and assessment process is provided prior to their active engagement on boards.
10. Under the principle that professional registrants should be assessed by their peers, where possible the preponderance of the Board should be senior engineering technicians.
11. The Board should maintain sufficient trained and competent registrants for the Board to discharge its duties.
12. The Chairman is a senior engineering technician or professional engineer appointed by the Professional Registration Committee (PRC).
13. Chairman and members are not appointed for any fixed term as much would depend on case load (the number of applications annually) and availability but Engineering Council guidance suggests a period of up to 5-6 years would be the norm.
14. The Chairman may appoint a Board Secretary; otherwise this and all other InstRE Eng Tech staff functions are the responsibility of the Assistant Registrar InstRE who may also serve as a member if registered.

Meeting Frequency

15. Boards should convene at a frequency to be determined by the Chairman to meet demand. Ordinarily this should be sufficiently frequent to ensure that no more than 12 weeks should elapse between the submission of a satisfactory⁴ application and professional review and potential registration.

Functions and Duties

⁴ “Satisfactory submission” means that InstRE staff deem it complete. This does not imply that any assessment has taken place.

16. The chairman is a full member of the Institution's Professional Registration Committee and responsible to it for the smooth and effective discharge of the Board functions and duties.

17. The main function of the Board is to convene to:

- a. Assess - Conduct professional reviews of the applications and make recommendations on the suitability of applicants for professional registration.
- b. Register - Examine recommendations arising from the professional reviews and confirm applicants' suitability for professional registration or otherwise, ensuring that procedures have been followed and determining whether such applications are Individual Route or Standard Route.
- c. Keep its processes under review, develop, propose and implement improvements.
- d. Conduct training and updating of Board members to maintain their currency and competence.

18. Other duties, either self-directed, or tasked by the PRC may include support to:

- a. Activities to ensure InstRE meets or exceeds the requirements of its EngC licence.
- b. A periodic review of Class 1 ME Training courses and Army CLM courses to ensure that content and assessment continues to meet the standards set out in the UKSPEC, identifying competences that need to be assessed separately where appropriate⁵.

⁵ See paragraph 5 above. Cl1 ME or CLM course assessments may not provide current or sufficient evidence of meeting certain sub competences. Currently this includes Sub-competences E1 & E5.

- c. A periodic review and re-approval of InstRE-approved standard route qualifications listed on the EngC Database of Engineering Technician Qualifications <http://www.engc.org.uk/techdb> , proposing and assessing new ones as appropriate. RE-CPD maintain a record of those vocational qualifications relevant to RE tradesmen and those at NVQ Level 3 and above that form the basis of the qualifications approved by InstRE as meeting in full or part the Standard Route requirements for Eng Tech.

Process and Conduct of Meetings

19. Preparation. Prior to the convening of a Board, InstRE staff would have carried out the following preparatory activity:

- a. Generated and disseminated a forecast of dates when a board would convene for at least the next 12 months ahead, and invited members to submit their provisional availability.
- b. In consultation with the Chairman, selected and invited sufficient members to attend for the efficient conduct of Board business, a minimum of 4.
- c. Carried out preliminary staff checks on the applications primarily to ensure they are complete.
- d. Issued an outline agenda.

20. Agenda. The board should cover the following items:

- a. Chairman's welcome and introduction.
- b. Matters arising from previous meeting(s).

- c. Training, update and lessons identified (continuous improvement).
- d. Professional review of applications & registration of applicants where appropriate.
- e. AOB.
- f. Closing remarks / details of next meeting.

21. Conduct of the Board. Each application is to be examined by two Board members allocated to the professional review function, and two Board members allocated to the Members' Registration function to meet the requirements set out by the EngC. Members may fulfil both functions at the same Board providing they are suitably trained, but may not complete both functions in respect of the same application. In both functions, members examine the applications independently but then may confer. The chairman may organise the Board to undertake the functions in any way deemed practical. For example, it would be acceptable to divide the applications into two, have all members complete the review function, then exchange applications and complete the members' registration function,

22. Professional review function. The reviewer must form a view in 4 areas, providing appropriate evidence, before reaching a firm recommendation for or against registration. The areas are qualification, commitment, competence and currency:

- a. Qualifications. Identify exemplifying qualifications where possible, or equivalent qualifications approved by the Institution. If none, say so and indicate where relevant knowledge and understanding has been gained in other ways, perhaps by prior learning at ME Class 1 level - the default setting - or work-based experience.
- b. Commitment. This may be evidenced by the presence of a development plan, related interests that lead to deepening of understanding, training, taking an interest in the development of others, etc. In circumstances where the employer

has a well organised and coherent development programme for the individual to follow, evidence of the employer's plan will suffice.

c. Competence. The reviewer should consider whether there is evidence that the applicant has achieved the competences set out in the UKSPEC to the necessary standard *at some stage* either through assessed training, or work experience or, most likely a combination of both. All UKSPEC competences should be treated equally. A significant lack of evidence in respect of *all* elements of a competence is likely to lead to a non-recommendation. However, deficiencies in a sub-competence need not, but they should be commented upon.

d. Currency. The reviewer should take a view on the evidence that the applicant's skill set is current. Currency is a complex area and in forming a judgement the reviewer should take into account a number of factors including the applicant's current employment. Promotion into more senior management roles should not preclude registration. Inevitably some competences may be highly practiced but others less so. Some skill fade is inevitable and in forming a judgement the reviewers should consider whether they could be remedied quickly if the need arose or conversely, or whether they would require significant retraining. There are no absolute yardsticks but where formal training has been undertaken more than 3 - 5 years ago, reviewers should look for evidence of more recent professional development.

e. Quality of submission. Irrespective of the route taken, a high standard of presentation is expected, to include as much detail as possible of what the applicant themselves has done and what part they played, etc. Having an exemplifying qualification will not remove the onus on an applicant to present a submission that is professionally informed and laid out.

After reaching an overall decision to recommend or otherwise, reviewers may confer. This ensures no evidence has been missed or misunderstood. The aim is to produce an agreed and positive outcome. Where there is disagreement over meaning then the normal response would be to refer the application to the Assistant Registrar for

clarification and resubmission. Each reviewer carries equal weight. If reviewers cannot reach agreement then the negative view is to prevail.

If reviewers consider that an application is significantly above the standard required of the UKSPEC for EngTech then they can recommend that the applicant makes early consideration of working towards an Incorporated Engineer application.

23. Registration Function. The board members tasked with the registration function:

- a. Independently verify or otherwise confirm whether the applicant has followed the Standard or Individual Route to Registration, providing (or confirming) evidence.
- b. Examine the application in its entirety to confirm that procedures have been followed and that there is no evidence of fraud or impropriety (e.g. presentation of false documentation).
- c. Confirm the recommendation of the reviewers or otherwise refer to the board secretary or chairman with reasons for the referral (for referral see below).

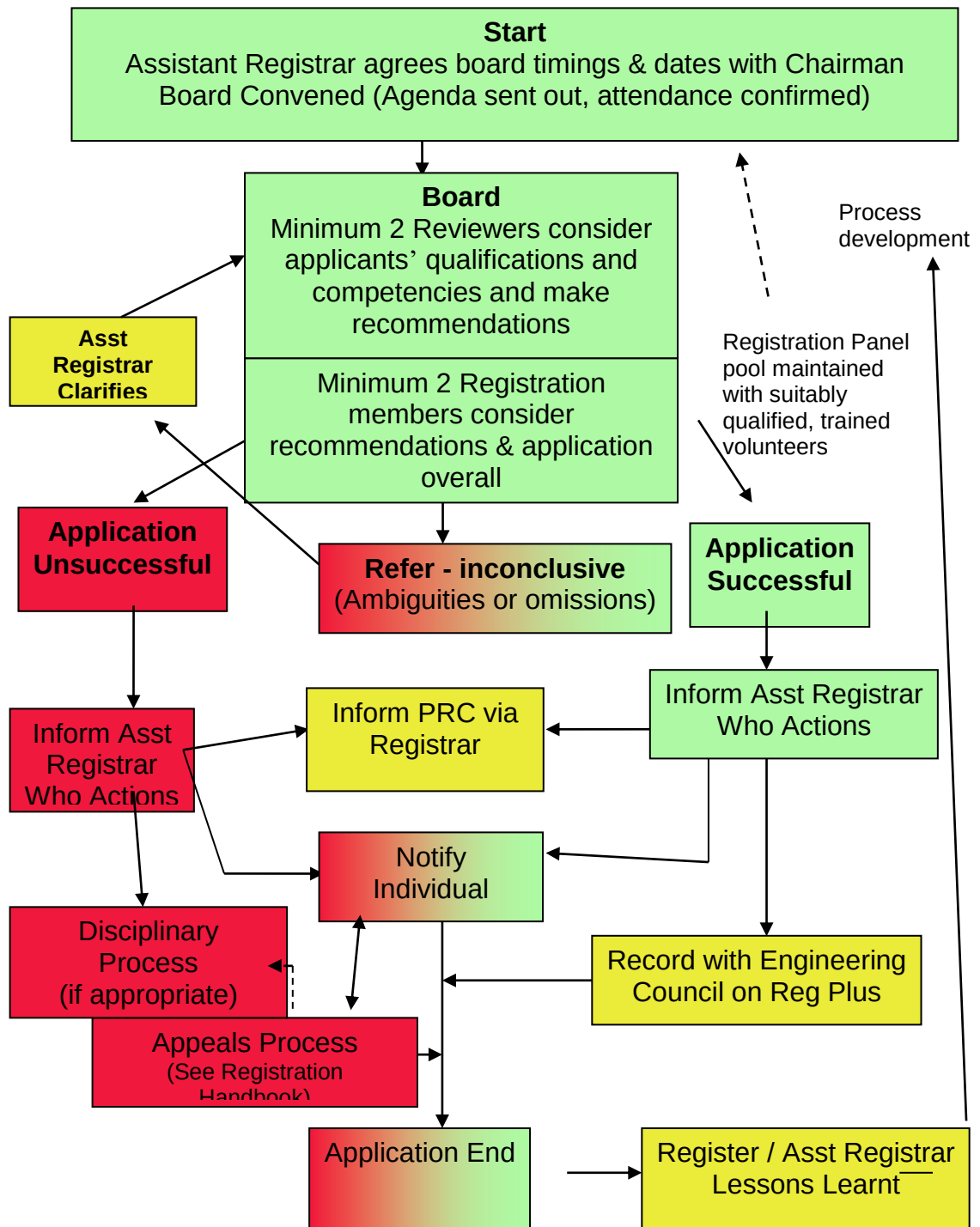
24. Referral. Applications may be referred at any time by the reviewers or by those charged with the registration function and are usually made to the Assistant Registrar who normally attends each board as Secretary. The referral may be informal – a question – or formal with written evidence as to why the referral has taken place. In most cases the referral may arise from a simple misunderstanding that is easily resolved. Thus a referral may be made and the issue resolved within a single convened board. In some circumstances there will be a need to gather further information and resubmit the application at a subsequent board. If not resolved in such a manner, then the matter should be referred up to the Board Chairman. Resolution should be through consensus and agreement. If that cannot be achieved then the issue should be elevated to the Professional Registration Committee, although it is difficult to imagine the circumstances under which that might occur. The normal circumstances for a referral are:

- a. The application is incomplete.
- b. The application is unclear.
- c. Those charged with the registration function disagree with the recommendations of the reviewers or with each other.
- d. Evidence of impropriety or fraud.

25. Concluding Activities. On the conclusion of the Board the Chairman/Secretary/Assistant Registrar:

- a. Records the findings of the Board including any lessons identified or training issues and observations from board members. Informs registrar, who in turn informs the PRC when it meets.
- b. Informs applicants of their success or otherwise, giving reasons and feedback for the latter and drawing their attention to the institution's appeals procedure if appropriate.
- c. Follows up outstanding referrals.
- d. Collects registration fees and completes professional registration.

Engineering Technician Board Process Flowchart



INSTITUTION OF ROYAL ENGINEERS

TERMS OF REFERENCE FOR THE ENGINEERING TECHNICIAN QUALIFICATIONS AND APPRENTICESHIPS PANEL (EQAAP) AND CRITERIA AND PROCEDURES FOR THE APPROVAL OF QUALIFICATIONS AND APPRENTICESHIPS

Reference:

A. Engineering Council Approval of Qualifications and Apprenticeships Handbook First Edition.

Preamble

1. InstRE has been licenced to conduct an integrated assessment of candidates for EngTech since 2007. This licence entitles InstRE to approve qualifications and apprenticeships that meet the high standards set by the Engineering Council.
2. The relevant Engineers Council standards and requirements for obtaining approval are set out in Reference A which should be read in conjunction with this document.
3. Once approved, such qualifications and apprenticeships are listed on the Engineering Council Technician Database. They are recognised both nationally and internationally¹ and provide both training providers and employers with a clear standard by which they can be confident in the education, competence and professionalism of the engineers and technicians involved.

Outline Process

4. The outline process is in essence a simple one:
 - a. The training provider RSME² identified in Reference A as “the applicant” puts forward courses, qualifications and apprenticeships for approval together with appropriate evidence gathered by itself and the awarding bodies. This would include mapping the training and educational outputs to the relevant engineering knowledge, competence and commitment standards set by the Engineering Council
 - b. The professional engineering institution (PEI) in this case InstRE reviews the evidence to ensure that the appropriate standards are met, approves the qualification or apprenticeship and places it on the

¹ Recognition is achieved through the Dublin Accord – an agreement for the international recognition of the educational base for Engineering Technicians.

² RSME is a Partnership between the MOD and a number of training partners operating as Holdfast Training Services. Some training remains led by the MOD and is designated as Authority-led. Other training is led by the partner organisations. These partners may be separately accredited as training providers in their own right.

Engineering Council Technician Database.

5. The review of evidence is carried out by a process of Peer Review. InstRE members who are experienced and trained registrants are constituted into a panel known as the InstRE Engineering Technician Qualification and Apprenticeships Panel (EQAAP).
6. Approval lasts for a fixed period of not more than 5 years, with re-approval to the required standards.
7. Where InstRE is itself the awarding body, an application for approval must first be submitted to the Engineering Council's Registration Standards Committee, with supporting evidence as to why it should be approved. InstRE currently has no plans to be an awarding body.
8. In practice, InstRE staffs would work closely with RSME to identify qualifications likely to meet the standard and may contribute to the mapping process.

Difference between Approval of Qualifications and Apprenticeships

9. The distinction between qualifications and apprenticeships can be a narrow and often somewhat artificial one. For the purposes of approval InstRE deems that:
 - a. Qualifications attest solely to meeting the academic base for EngTech. As such the outputs of qualifications must be mapped against the underpinning knowledge and understanding standards set by the Engineering council. These are listed at page 10 & 11 of Reference A and cover the 6 key areas of learning:
 - 1) Science & Mathematics
 - 2) Engineering Analysis
 - 3) Design
 - 4) Economic, Legal, Social, ethical & environmental context
 - 5) Engineering Practice
 - 6) Additional general skills
 - b. Apprenticeships attest to meeting both the output standards for the academic base as well as the engineering competency and commitment standards set out by the Engineering Council in the UK-SPEC³. The evidence presented for apprenticeships must therefore be mapped across to both these standards. ME 1 training by its nature

³ UK Standard for Professional Engineering Competence

and performance assessment process is more closely matched in character to an apprenticeship than a qualification.

Terms of Reference of EQAAP

10. The EQAAP panel comprises a panel of the InstRE volunteer pool suitable trained and competent to complete the approval process. The panel should comprise a minimum of 6 volunteers to provide as wide a pool of experience across the military engineering disciplines as possible. EQAAP would be chaired by an experienced registrant appointed by the Professional registration Committee (PRC). Chairman of the EngTech Board is a standing member of EQAAP but need not chair it.

11. A minimum of two members would be required to approve a qualification, course or apprenticeship and the normal composition of a panel would be 3 or more.

12. It is inevitable that volunteer members of the panel may have professional connections with training providers and awarding bodies during the course of their employment and such connections do not disqualify them from membership. Members must however declare any connection to the EQAAP Chairman irrespective as to whether that connection generates a conflict of interest.

13. Secretariat. EQAAP is supported by a secretariat provided by the Registrar, Asst Registrar or an experienced member of staff.

14. Tenure. No limit. Approval and re-approval occurs approximately every 5 years so to set a period of tenure of 5 years or less would be likely to provide an unacceptable dilution of expertise.

15. Programme. EQAAP is to determine the most effective manner to conduct a programme of approval and re-approval which is to be submitted to PRC via Chairman EngTech Board – a member of PRC.

16. Co-opted Members. EQAAP may co-opt subject matter experts and other individuals with specialist expertise who need not be registrants. However as this is a process of Peer review, decisions affecting approval may only be made by registrant members.

17. Training. Chairman EQAAP in conjunction with the Registrar is to identify training requirements and InstRE is to provide training to panel members as necessary.

Applications & Evidence Requirements

18. The training provider who wishes the qualification or apprenticeship to be approved is called the applicant. A list covering the generic evidence required to be submitted by the applicant is set out on Page 17 of Reference A.

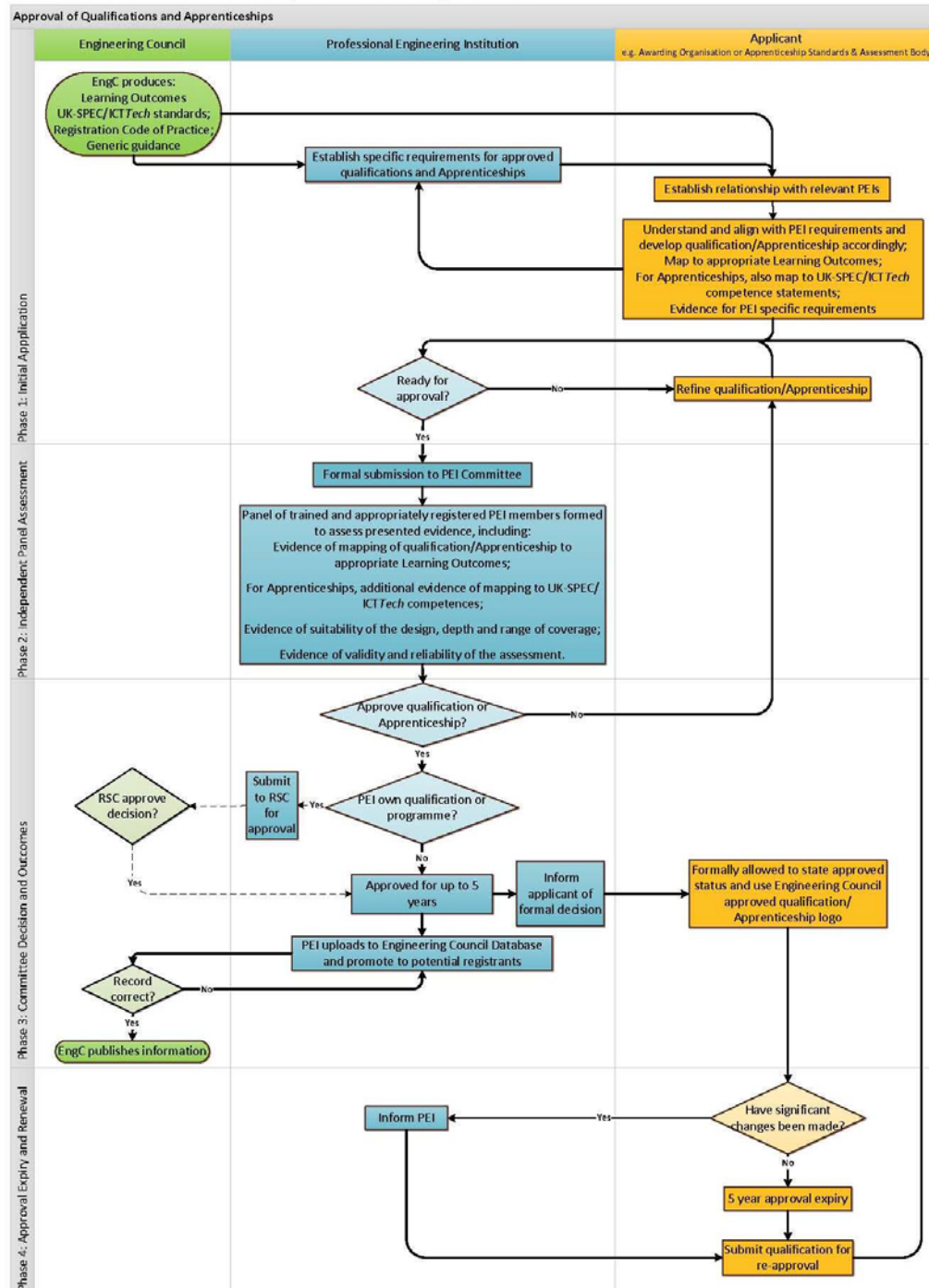
19. The Applicant's Formal Training Statement and Capability Scalar are key elements of evidence and provide the essential evidence against which are mapped both the underpinning knowledge standards *and* the competence and commitment standards.

Summary

20. A summary of the approval process is shown in the diagram below. It is essential that the applicant (training provider) and InstRE work closely to identify suitable qualifications and programmes and conduct a joint mapping exercise against the Engineering Council's standards for both underpinning knowledge and also for competence & commitment, *before* submitting such qualifications and programmes for formal approval.

Process for the approval of qualifications and Apprenticeships

Please note that this is a high-level diagram and that professional engineering institutions should be contacted for more detailed specifics of their processes.



Extract from Engineering Council Approval of Qualifications and Apprenticeships Handbook First Edition.

INSTITUTION OF ROYAL ENGINEERS

EVIDENCING MILITARY ENGINEERING TRAINING COURSES FOR APPROVAL

	Requirement	Evidence to be provided by the Applicant	Remarks
	Each PEI must publish details to ensure that:		
	The provision under consideration meets or exceeds the learning outcomes threshold standard set by the Engineering Council	Applicant's Formal Training Statement and Capability Scalar mapped against the underpinning knowledge and understanding set out in AQAH	It is assumed that this is the Output Standards set out at page 10 of AQAH. The 6 key areas of learning set out there need to be codified.
	The provision under consideration meets or exceeds the threshold level in the UK's framework for qualifications and credit, or if it lies outside these frameworks, is demonstrably at a comparable level.	Level listed in the Defence Awards Qualification Handbook or other recognised and approved awarding body	Demonstrating levels outside these frameworks is currently excluded and subject to further work
	There are clearly defined outcomes	Applicant's Formal Training Statement and Capability Scalar	
	The technical content is appropriate, which is demonstrated by mapping to the Engineering Council's output standards	Applicant's Formal Training Statement and Capability Scalar mapped against the EngTech competence and commitment standards set out in the UK-SPEC	Military Engineering encompasses a broad field and InstRE chooses to use generic competency standards set out in the UKSPEC
	The Quality Assurance Arrangements are satisfactory	A combination of: - the awarding body's own assurance arrangements - Ofsted Inspection of schools - ISO 9001 accreditation	ISO 9001 accreditation for Partner-delivered training where available.