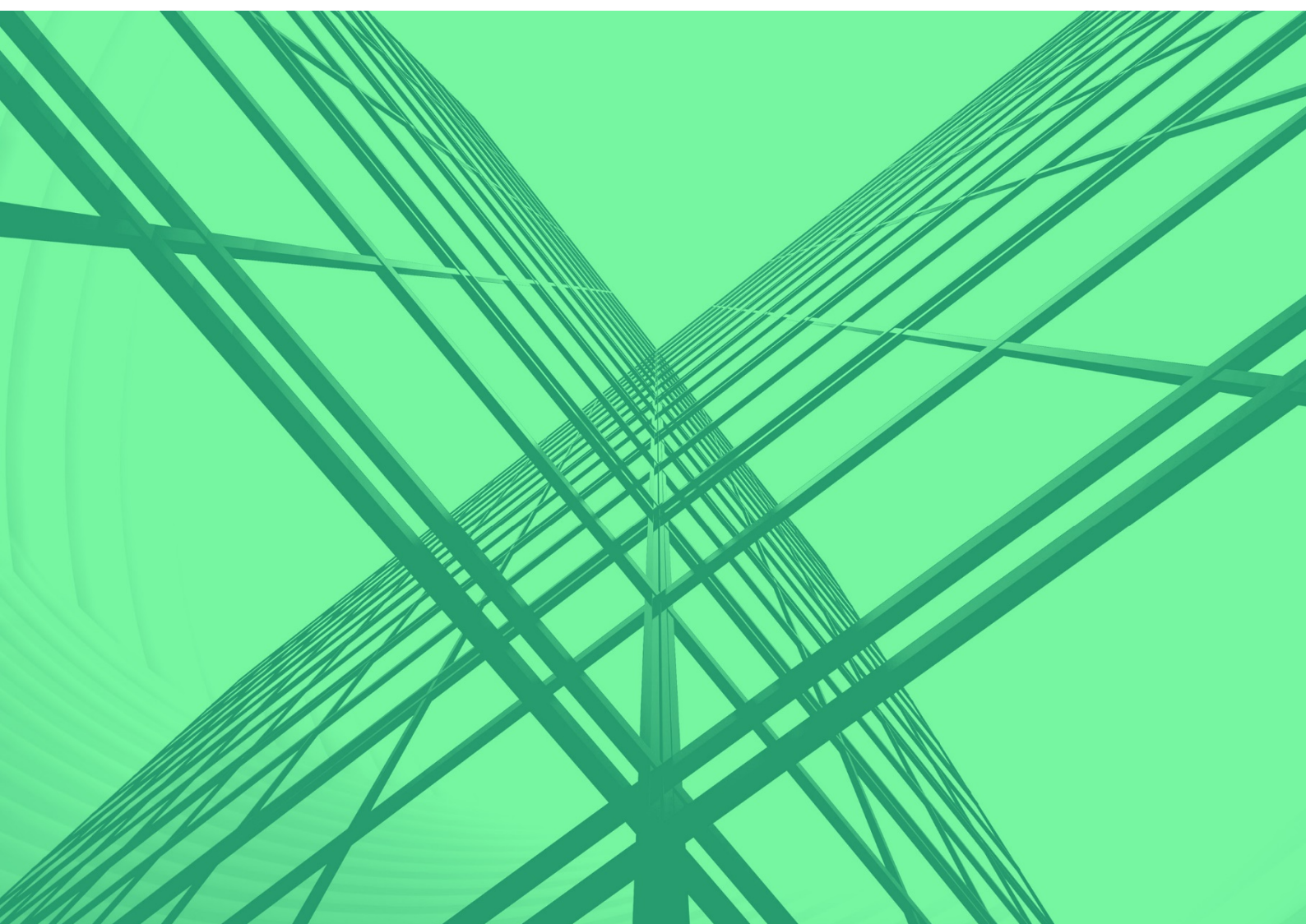


## BPEQ Assessment Scheme

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**For registration as RPEQ**

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### **Additional information:**

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## Introduction to the Institution of Structural Engineers

1. The Institution of Structural Engineers is the world's leading professional body for qualifications and standards in structural engineering. We are proud of our members; the best thinkers, designers and innovators who have met our exacting requirements. We are proud of our standards; thriving for excellence, safety and innovation. We are proud of being influential; shaping policy and academia on key issues affecting the industry.
2. The Institution was founded in 1908 as the Concrete Institute. It was renamed the Institution of Structural Engineers in 1922 when its areas of interest were extended to cover structures of all kinds. The Institution was incorporated by Royal Charter in 1934.
3. The Institution has over 31,500 members in over 100 countries and is recognised internationally for the technical and professional competence of its members. The members are supported through a network of local Regional Groups, some of which were formed in the 1920s.
4. Qualifying examinations for membership were introduced in 1920 and the Institution continues to administer examinations for Associate and Chartered membership. Additionally, the Institution requires Chartered, Associate and Technician Members to pass a Professional Review Interview based on the standards of UK-SPEC. The Institution qualification is accepted in many countries as a licence to practice structural engineering.
5. The Institution is the appropriate source of relevant and considered opinion on all structural engineering and public safety issues in the built environment. Its image is one of safety, efficiency and excellence both in its operations and in the standards of its members.
6. The Institution undertakes a broad range of technical activities which keeps it at the forefront of worldwide structural engineering practice. This ensures that structural engineers, wherever they are working, have access to the most up to date thinking and guidance from within the profession. Government and code drafting bodies regularly ask for comment and input from the Institution when developing building regulation, standards and codes of practice. The Institution produces a wide range of technical publications covering aspects of structural engineering, from Eurocode manuals and structural robustness/progressive collapse, to recommendations for multi-storey/underground carparks and sustainability issues
7. To support members with their continuing professional development the Institution offers an extensive programme of courses that are designed to expand and reinforce their structural engineering knowledge, to improve management skills and provide relevant health and safety training.
8. As part of its learned society role the Institution holds regular evening technical meetings that help members and others to update their knowledge and understanding. The programme of meetings encompasses debates on government policy, climate change, new design codes, the future of the profession, the design of well-known structures, use of materials, and autobiographical lectures from high profile structural engineers. The Institution has also invested in online courses and the production of webinars to ensure that members around the world can benefit from technical meetings held in other regional groups.
9. The Institution's flagship publication *The Structural Engineer*, is published monthly. It contains information of technical and professional interest. Each issue contains news, features, Verulam (a forum for comments and discussion), technical papers, and a products and services section, as well as display and job advertising. Electronic access to all papers published in the Journal since 1923 is available free to all Institution members.
10. The Institution library contains over 35,000 records relating to various aspects of structural engineering. The collection contains textbooks dating back to the 1800s to the present, a number of industry reports and research publications, a good collection of standards and other useful codes from outside the UK, journals and audio/visual material.

11. The website ([istructe.org](http://istructe.org)) contains information on all Institution activities. Information on current news, forthcoming events and conferences, guidance on applying for all grades of membership and online student application forms, careers advice and how to join are all easily accessed. Members of the public are able to locate structural engineering firms within their area by using a database known as 'Findanengineer.com'.
12. The Institution's annual Structural Awards distinguish excellence in structural engineering throughout the world. The Institution also awards a Gold Medal which is the highest individual award and is made for personal contributions to the advancement of structural engineering. Additionally, the Institution has a Young Structural Engineer of the Year Award and gives service awards to individual members for their significant contribution to the Institution.
13. The Institution has 31 Regional Groups in the UK and throughout the world. These are run by committees which arrange programmes of meetings and social events, provide networking opportunities for members and prospective members and assist individuals to update their professional knowledge by running seminars and courses. Additionally, around 30 members act as representatives in countries outside the UK assisting with Membership Professional Reviews and liaising with local organisations.
14. The Institution's administration is conducted from its new international headquarters at 47-58 Bastwick Street, London EC1V 3PS, where there are meeting rooms and the library.
15. The Institution's activities are funded through the annual subscriptions paid by members and through commercial activities.
16. The President and the members of the Executive Board (who are drawn from the Institution membership) are responsible for the management and administration of Institution affairs. There is also an elected Council which determines the Institution's core values and strategic aims. A number of committees take responsibility for the more detailed aspects of business – they meet periodically and report to the Executive Board. Under the direction of the Chief Executive, the staff support the membership through the provision of existing services and increasingly are charged with developing and implementing new services to better support members in a dynamic profession.
17. The Institution of Structural Engineers has a Mutual Recognition Agreement with Engineers Australia regarding the qualifying process for Chartered membership. Engineers Australia has confirmed that MIStructE members will be eligible for entry to MIEAust, CPEng and registration on NPER in the General Area of Practice of Structural Engineering without the need for further assessment. This is a reciprocal arrangement whereby MIEAust members of the EA Structural College are exempt from the Institution's PRI, but will still sit the seven-hour Chartered Membership Exam.
18. By submitting this application for approval, the Institution of Structural Engineers is confirming that it will not vary the scheme, as stated in the document below, without prior approval for variation by the Minister.

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**Note on assessment application terminology:**

The application for approval as an assessment entity is based on the application and assessment requirements for the Institution's Chartered Member grade, and reference to 'Chartered Membership' or 'MIStructE' is made in this document. Whilst this is the assessment standard, candidates applying via this scheme will not be required to join the Institution as a member. Once they have successfully completed the assessment processes, a candidate will be advised of the option to join the Institution as MIStructE (and registration with the Engineering Council as CEng) if they so wish.

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## Qualifications and Competencies and Consistency with National and International Standards

19. This section will focus solely on the criteria pertaining to registration as a Chartered Member (MIStructE) which are the criteria that will be used for anyone wishing to undergo the assessment for RPEQ registration, however, details of the requirements for other membership grades can be found on the website ([istructe.org/membership](http://istructe.org/membership)). Whilst candidates are assessed against the Chartered Membership criteria they will not be required to join the Institution on successful completion of this process, unless they wish to do so. At the point of completion, candidates will be advised of their options.
20. The objects and aims of the Institution are contained within the Royal Charter. The objects can be summarised as being:
  - ▶ To promote the advancement of structural engineering, and
  - ▶ To facilitate the exchange of information and ideas relating to structural engineering.
21. The Institution's aim is to accredit and support a corps of highly qualified structural engineers for the safe, sustainable, effective and efficient design, adaptation, maintenance and refurbishment of buildings, bridges, and other structures throughout the world.
22. There are seven main grades of membership within the Institution of Structural Engineers. The routes to each grade of membership and registration depend on the education and experience of the applicant.
23. There are normally three steps to becoming professionally qualified with the Institution:
  - i. Applicants must satisfy the Institution's academic requirements
  - ii. Applicants must satisfy the Institution's Initial Professional Development requirements, or the equivalent
  - iii. Applicants must pass the Professional Review including the Professional Review Interview (PRI) and the Examination
24. Occasionally candidates may apply through a different route which will not involve all three of the stages above, for example, the Research and Development Route. Details of these other routes is not included in this submission since they will not be applicable for RPEQ registration route candidates, however further information can be provided on request.

### Qualifications

25. The review of an applicant's academic qualifications is initially undertaken by a member of the Membership Department secretariat. The secretariat, in processing an application, will ensure that the candidate meets the academic requirements for registration as an RPEQ.
26. The minimum academic requirement for Chartered membership and Engineering Council CEng registration is an accredited MEng degree or the equivalent. There are many candidates who will have studied accredited BEng(Hons) degrees and will be required to undertake a period of Further Learning to bridge the gap between BEng(Hons) degree at 360 CATs points and the MEng at 480 CATs points in order to satisfy the IStructE's academic requirements for registration.
27. For candidates applying for registration with the BPEQ we will only accept those who satisfy the requirement of holding a four-year undergraduate engineering degree accredited or recognised by a body responsible for accreditation or recognised via the Washington Accord since 1989. Candidates who have previously undergone an assessment of equivalency with Engineers Australia would also be permitted to use this route.

## Competencies

### Initial Professional Development:

28. IPD comprises the acquisition and development of the specialist knowledge and skills, and their practical application, that are needed to practise as a structural engineer or technician. Applicants are required to satisfy all Learning Outcomes which are set out in the Institution's IPD Regulations. More information about IPD is provided on page 8 of this submission.
29. All applicants via the BPEQ route will be required to demonstrate that they have achieved a minimum of four years' industrial experience, post-graduation.

### The Professional Review:

30. Upon completion of the academic and IPD requirements, candidates may apply for a Professional Review. This is a two-stage process involving the Professional Review Interview and a seven-hour written examination to ensure the candidate meets the minimum competency requirements for registration. Candidates are given the flexibility to choose the order in which they sit each element of the Professional Review, but BPEQ candidates will be able to follow a speedier route to sit their PRI in the period while their exam is being marked:

#### Professional Review Interview:

31. At the interview candidates will be expected to bring evidence of IPD by means of a portfolio of work. The relevant forms and an experience report must be submitted when applying for approval to sit the Review. During the hour-long interview, candidates are questioned on the training and experience evidenced in their commitment to the profession. Unsuccessful candidates will be told where their IPD falls short and encouraged to reapply once the gaps have been filled. There is no limit to the number of times a candidate can apply for the Professional Review Interview. Where a candidate has already passed the Exam before sitting their PRI this result will not be considered as part of their interview: the exam and the interview test two different skill sets, in two different ways and success in one does not automatically confer success in the other.
32. Candidates who are also applying for BPEQ registration as part of their Professional Review with the IStructE will be interviewed by an RPEQ-registered assessor, which will be administered by the Australia Regional Group. Candidates will also be required to provide a written reference from their supporter to attest to their abilities within their area of engineering. This reference will be corroborated by the assessors in the Australia Regional Group.
33. Members of the IStructE secretariat team will process applications from BPEQ candidates in accordance with checklist 'CM BPEQ'. This lists both the IStructE application forms and the evidential documents required in order for a candidate to follow the BPEQ route, as well as stating the academic qualification criteria that need to be met. Evidential documents provided by candidates, such as degree certificates or transcripts, will need to be appropriately certified as a true copy of the original. The checklist is completed by IStructE Membership Team staff as the application is processed and will stay 'attached' to the application for auditing purposes. If one of the check-list items is missing from the application, IStructE staff will contact them to seek the missing documentation before their application can progress to the next assessment stage.
34. Any documents that are in a language other than English will be required to be translated in accordance with the following guidelines:  
if the documents are translated within Australia:
  - The translator must be accredited by the National Accreditation Authority for Translators and Interpreters (NAATI) – [www.naati.com.au](http://www.naati.com.au).
  - The Australian Institute for Interpreters and Translators (AUSIT) Directory of Translators provide a current list of qualified, active AUSIT members who have NAATI accreditation in translating – [www.ausit.org](http://www.ausit.org).

if the documents are translated in a country outside Australia:

- The translator must be approved by the authorities in the country where the translation is made. The International Federation of Translators (IFT) – [www.fit-ift.org](http://www.fit-ift.org) – provide a list of translation associations, some approved by authorities to provide certified translation.

**Examination:**

35. The Examination is a demanding test of a candidate's competence in structural design and problem solving. If a candidate has passed their PRI before attempting the Exam they may be subject to additional checks of their IPD via the submission of experience reports if more than a year has elapsed between passing the PRI and taking the Exam. Furthermore, candidates who have passed their PRI but then go on to fail the examination on more than five occasions will be required to undergo a further Professional Review Interview before they can be elected. Examinations are held globally every January and July.
36. Candidates must pass both the PRI and Exam before they can be elected as a Chartered Member. We do not offer any 'interim' or partial membership based on success in just one element.

**Consistent with National and International Standards**

37. The Institution is granted a licence by the Engineering Council (the UK's engineering regulatory body) to award Chartered Engineer registration (as well as IEng and EngTech registrations). This licence is awarded on a five-yearly cycle, involving an in-depth audit of all processes and procedures connected with the membership process, as well as an interim review between full audit periods.
38. The Institution's Learning Outcomes satisfy the standards outlined in the Australian Engineering Competency Standards, Stage 2 – Experience Professional Engineer requirements, which have been mapped via the Mutual Recognition Agreement between the Institution and Engineers Australia.
39. The Institution is also a signatory of the Washington Accord (since 1989) by virtue of representation through the Engineering Council. The Washington Accord is an international agreement among bodies responsible for accrediting engineering degree programs. It recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry to the practice of engineering.
40. The Institution ensures that its international activities are closely monitored and relies on Council where representatives from each international group meet at least three times per year. Additionally, the Institution has created an International Interest Group which is a subset of Council which meets to discuss matters of detail and reports directly to council.
41. The Institution is recognised by the EU Directive as the competent authority for structural engineering in the UK.

## Assessment in an Independent and Professional Manner

### Procedures for Assessment in a Professional Manner

42. The assessment of applicants for Chartered membership with the Institution can be broken down into the following constituent parts:

#### Accreditation

43. Accreditation is the primary quality assurance process used by the Institution, via the Joint Board of Moderators (JBM), to ensure the suitability of an accreditation programme as an entry route to the engineering profession.
44. The Institution of Civil Engineers (ICE), Institution of Structural Engineers (IStructE), Institute of Highway Engineers (IHE) and Chartered Institution of Highways and Transportation (CIHT) formed a Joint Board of Moderators to accredit courses in civil, structural and transportation engineering. The JBM debates and recommends the accreditation/non-accreditation of courses for the decision and approval of the ICE, IStructE, IHE and CIHT. The Institutions and Engineering Council publish and keep up to date a list of qualifications which will be accepted as providing the educational base for different grades of membership/registration. The institutions also maintain and strengthen links with universities and colleges on all matters concerned with civil, structural and transportation engineering.
45. The Board issues a set of accreditation guidelines which interpret the base framework for accreditation specified within UK-SPEC. The guidelines are not intended to be prescriptive, but instead to provide departments with the opportunity to tailor their particular educational provision to best reflect the particular strengths of their staff, the characteristics of their student entry, the place of that department within its university structure etc.
46. The Board operates a five-yearly cycle of accreditation visits to each university department requesting institution accreditation. In certain cases, for example where an accreditation is subject to certain conditions, the Board will make an interim review visit.

#### IPD

47. The Initial Professional Development regulations were introduced in 2001 and became mandatory from 1 January 2003. The regulations define the learning outcomes that are tested through the combination of a Professional Review Interview and a written examination. The Institution's IPD Regulations are publicly available on our website. The pertinent section to BPEQ is Section 1.4 which states that successful applicants for professional registration at the Chartered Level will be able to demonstrate:
  - A sound understanding of core structural engineering principles.
  - The ability to use relevant existing technology coupled with the ability to locate and use new research and development to benefit their work and structural engineering generally.
  - The ability to solve complex structural engineering problems and produce viable structural design solutions using appropriate methods of analysis.
  - The ability to exercise independent judgement in the application of structural engineering science and knowledge.
  - Technical, management and leadership skills to plan, manage and direct human, material and financial resources.
  - Commitment to the public interest in all aspects of their work, including health, safety, risk, financial, commercial, legal, environmental, social, energy conservation and sustainability.
  - Effective communication and interpersonal skills.
  - Knowledge of the statutory and other regulations affecting current practice in structural engineering.
  - A significant base of information technology skills.



- Commitment to the profession of structural engineering, particularly with regard to the Institution's Code of Conduct and the requirement for Continuing Professional Development.
48. The Applications and Professional Review Panel (A&PR) is responsible for monitoring and reviewing the IPD processes and procedures and reports to the Institution's Membership Committee.
49. A series of Core Objectives are derived from the list of Learning Outcomes required from successful candidates. The core objectives are compulsory and outline the basic competence required of candidates pursuing professional membership of the Institution. The core objectives are set out in three sections:
- Personal:** effective communication and interpersonal skills, leadership and professional commitment.
- Engineering:** identification and solution of engineering problems and the safe, economic and sustainable implementation of the solutions.
- Management and commercial:** efficient procurement and management of resources within economic and regulatory constraints to achieve the engineering objectives.
50. The Learning Outcomes satisfy the requirements that are set out in UK-SPEC v4 to ensure that successful applicants can also demonstrate the Engineering Council requirements for registration as a Chartered Engineer, again for BPEQ applicants they will be advised that they are eligible for this registration if they so wish, but it is optional. During periodical updates and amendments to UK-SPEC this mapping exercise is repeated to ensure that applicants are always asked to demonstrate IPD Core Objectives that fully meet the needs of UK-SPEC.
51. The IPD regulations are sufficiently flexible to accommodate candidates who either go through a formal training process, or are self-led in their training. Regardless of the route that the candidate takes for their IPD the assessment that they undertake is the same, ie. The Professional Review Interview and the Examination to test that the learning outcomes have been met.
52. Those who are applying for BPEQ registration will be required to submit a written reference from their supporter as part of their application paperwork. This will be independently corroborated by Assessors within the Australia Regional Group as part of the PRI process.

#### **Professional Review Interview**

53. At the Professional Review Interview candidates are required to demonstrate that they have satisfied the core objectives, thereby achieving the required competence and commitment to the profession. The Interview may be held anywhere in the world convenient to the applicant, subject to the availability of appropriately qualified Reviewers to conduct the interview, however, any candidate seeking registration with the BPEQ will be assessed by at least one RPEQ. The duration of the interview will normally be one hour, during which the candidate will be required to make an informal presentation of no more than 15 minutes.
54. The candidate will supply a portfolio of evidence to their interviewers to demonstrate how their experience meets the core objective requirements. The interview is tailored for each individual and will recognise the different backgrounds and career development of each individual, furthermore, candidates who are also seeking BPEQ registration will be interviewed by at least one RPEQ-registered assessor. The Reviewers will complete the Summary Report Form to show the standard achieved against each Core Objective as either satisfactory or unsatisfactory. A candidate must be deemed to be satisfactory in every one of the Core Objectives in order to pass the Professional Review Interview.
55. Typically, the pass rate at the interview stage is 80%.

56. Candidate identification: At the Professional Review Interview the candidate will be asked to supply proof of ID which satisfies the 100-point identification check utilised within State and Federal Government Agencies. Candidates will be advised that they must provide at least one of the documents which shows their date of birth from the primary list below, plus either another primary document or one from the secondary list with sufficient points to total 100:

Primary:

- Drivers licence (60 points)
- Passport (50 points)
- Birth certificate (50 points)

Secondary (all carry 40 points):

- Proof of citizenship document
- Change of name certificate
- Australian Visa
- Marriage certificate
- Medicare card

Candidates will be advised of this requirement prior to their interview.

### Examination

57. Chartered Member examinations are held in January and July each year.
58. The Examinations Panel controls and maintains the standards and content of the examination question papers and also reviews the relevance of the examinations to the practice of structural engineering. The Panel is responsible for appointing Chief Examiners and Marking Examiners as well as other activities associated with the examinations, such as providing feedback, guidance and advice to candidates. In turn, the Examinations Panel reports to the Membership Committee.
59. Chief Examiners are appointed by the Examinations Panel. They set the examination questions and attend the moderation of results meetings where they are involved with the process of deciding the results and adjudicating 'borderline' cases. Chief Examiners are promoted from the pool of Marking Examiners and are appointed for a four-year term, although this can be extended by mutual consent.
60. A pool of Marking Examiners is maintained, and new appointments are approved by the Panel to mark the Examination scripts. All new Marking Examiners are required to undertake appropriate training. It is recommended that Marking Examiners hold a senior position within their companies, have a broad measure of experience and have taken the examination within the last ten years. Past examination papers are publicly available via the Institution's website.
61. The pass-rate for the Chartered Examination sits at around 35%, year on year, which gives some indication of the robustness, consistency and high standards maintained by the Institution's Examinations Panel. The examination is unique amongst the engineering institutions in the UK. As a result of the rigorous test of competence, Chartered members of the Institution are recognised throughout the world as highly qualified and competent structural engineers.

## Independence of Assessors

62. The Institution ensures that assessments are carried out in an unbiased manner through the selection of independent assessors:

**Committee and Panel assessors:** members of the Committees and Panels associated with the assessment process operate under terms of reference which require them to highlight any conflicts of interest between themselves and a candidate. Those with a conflict will not take any part in the assessment of that candidate.

**Professional Review assessors:** The Professional Review Coordinator is responsible for ensuring there is no conflict of interest between candidates and their interviewers. Prior to the interviews being conducted, the interviewers will highlight if there are any potential conflicts of interest among their candidates, and they will be allocated to another reviewer.

**Examination assessors:** Exam scripts are marked double-blind, so that neither assessor can identify the candidate from the exam script. No distinguishing information is contained on the script, and it is only the Examinations Manager who holds this information. The assessor is not able to find out the identify of the candidate at any point throughout the marking process.

## Adequate Procedures for Monitoring and Improvement

### Annual Audit of Assessments

63. The Institution is subject to regular internal and external audits to ensure that processes are being carried out in accordance with our procedural documents. The Institution will ensure that at least 20% of BPEQ submissions are included in the audit process each year.

#### Engineering Council Audit

64. Each year, the Institution completes a Self-Assessment Questionnaire which is submitted to the Engineering Council which assists in preparation for the Engineering Council Licence Review and Interim Licence Review meetings.
65. The Engineering Council conducts an in-depth audit for licensing purposes every five years. For the purposes of the audit, the Institution compiles a comprehensive file of evidence which is submitted for review. This includes minutes of committees, terms of reference, a structural chart, details of staff roles, information on training volunteers, plus annual reports and accounts. The Institution adheres to the Engineering Council requirements for maintenance of records pertaining to registration and furthermore this is in accordance with Section 7 of the Public Records Act 2002 (Qld) which pertains to the making and keeping of public records.
66. The Engineering Council summarised the 2016 audit as follows:  
*“The IStructE demonstrated a commitment to creating well-run systems to maintain the standards of registration. It is for this reason that the Review Panel would recommend that all aspects of the licence covered at this review, be renewed for five years.”*
67. In addition to the five-yearly licence review, the Institution submits an annual assessment return to the Engineering Council which is reviewed in line with their risk-based approach to licensing. The result of the 2018 annual review (undertaken in May 2019) confirmed that the IStructE is a low-risk institution.
68. The Institution also engages in other activities that ensures that examples of best practice can be shared amongst other Professional Engineering Institutions (PEIs) and good practices can be adopted where appropriate. These activities include participation in workshops run by the Engineering Council which cover topics related to licensing and registration.

#### Engineering Accreditation Board

69. The Institution is represented on the Engineering Accreditation Board (EAB), which is made up of all PEIs that are licensed by the Engineering Council to accredit academic programmes. The aim of the EAB is to encourage consistent accreditation processes and practices as well as to provide a single point of contact to facilitate joint accreditation visits for member PEIs. The EAB also seeks to disseminate good practice in accreditation. The EAB meets three times a year to discuss accreditation related issues.

#### Professional Review Interview Seminar

70. The Institution holds an annual seminar where the PRI Co-ordinators from each of the regional groups are invited to attend and exchange best practice so that a fair and consistent approach is adopted, irrespective of the regional group conducting the interviews.

#### Trial marking meetings

71. All the chief and marking examiners, along with members of the examinations panel, will attend a day-long session to set the standard for the marking process that will then take place. The underlying purpose of the meeting is for the chief examiners to present their examination question to the marking examiners and explain what the question is looking to test. Examples of suitable solutions are given and a suitable strategy for assessing the examination papers is discussed, thus ensuring a consistent approach.

## Review of Assessments

72. Candidates have the right to appeal any decision regarding their Professional Review (Exam or Interview). Grounds for appeal include either extenuating circumstances occurring immediately before or during the application process, interview or exam, or, departure from the Institution's application, interview or exam procedures. The Institution does not charge a fee for the appeal process.
73. Any candidate wishing to submit an appeal must write to the Deputy Chief Executive of the Institution within 30 days of receipt of the result, which may include supporting evidence. The Deputy Chief Executive will carry out a review to decide whether a case exists to review the decision. If a case exists the appeal will be referred to the relevant panel for consideration at its next scheduled meeting, and the decision is then considered by the Membership Committee which will make the final decision. Candidates will be informed of the result in writing.
74. A candidate has the right to a second appeal. They must write to the Chief Executive within 30 days of the receipt of the result of their first appeal, detailing their grounds for another appeal. They may not make an appeal on different grounds from the original appeal or put forward new evidence at this stage. If the Chief Executive deems that a case exists, he will appoint an Appeals Panel to review the appeal. The panel will consist of three Fellows who are unconnected with the interview, exam or application process and who have no prior knowledge of the candidate or their application. The decision of the Appeals Panel will be reported to the Membership Committee.
75. There is no fee charged for the appeals procedure. The outcome of any appeal will be considered by the secretariat such that any re-training of assessors or review of procedures is undertaken as appropriate.

## Review of Scheme

76. An internal audit is conducted annually at the end of each year. The audit examines the effectiveness of the implementation of Institution procedures and covers all types of membership applications, reviews of academic qualifications, and the IPD and PRI process.
77. The Membership Committee is responsible for appointing two auditors from its membership to audit the processes of the Academic Qualifications Panel, the Applications and Professional Review Panel, and the Examinations Panel – this is in addition to the standard checking which takes place during the quarterly meetings. The report of the auditors is presented to the Membership Committee for consideration and action, as appropriate.
78. The Examinations Panel is responsible for examining the Institution's examination procedures. To monitor the progress of the examination from concept to fruition a checklist for each examination cycle is produced by the Examinations Manager and reported to the Panel.
79. The Applications and Professional Review Panel is responsible for checking the procedures for the operation of the IPD and the Professional Review Interview arrangements. Members of the Panel examine all Professional Interview reports from the Reviewers where the candidate has failed and a further sample of reports where the candidate has passed all the requirements. A PRI Co-ordinator is responsible locally for ensuring consistent standards and may be required to submit a report to the Panel on the Interviews.
80. The JBM internal audit is carried out by a Panel comprising representatives and secretariat of the JBM member institutions. A member of the Institution's Membership Committee, who is not a JBM member, is appointed together with a staff member. A report of the audit is presented to the Membership Committee for consideration and action. Copies of both audit reports are forwarded to the Engineering Council as part of the annual risk assessment.

81. In addition to the internal and Engineering Council audit requirements, the Institution will comply with reasonable audit requests from the BPEQ that are conducted within an appropriate timeframe, and with sufficient notice provided to supply the necessary documentation for review. The Institution understands that, as per SC12, the audit may take place at any time, but will usually be one audit within a three year approval period, or twice within a five year approval period. The Institution will make its best effort to cooperate with the auditor.
82. By no later than 30 March each year, the Institution will tell the BPEQ in writing, for the period starting at the beginning of March in the previous year and ending at the end of February in the current year:
- i. The following regarding audits of persons who were registered with the Institution for participation in the continuing registration requirements of the scheme:
    - a. How the Institution selected the persons for audit
    - b. The number that were audited
    - c. The results of the audits, and
  - ii. The following regarding audits of assessments against the scheme of the qualifications and competencies of applicants:
    - a. How the Institution selected assessments for audit
    - b. The number of assessments that were audited
    - c. The results of the audits.
83. The Institution will notify the BPEQ within seven days of becoming aware of any of the following situations:
- i. Regarding audits of persons registered with the entity for participation in the continuing registration requirements of the scheme for their compliance with the continuing registration requirements:
    - a. An audit found that the person has not complied with the continuing registration requirements of the scheme (to be accompanied with the results of the audit); or
    - b. A person did not participate in an audit within 30 days of being requested to do so; and
  - ii. Regarding audits of assessments undertaken against the scheme by the Institution's assessors of the qualifications and competencies of applicants:
    - a. The applicant was assessed as having the qualifications and competencies provided for under the scheme when the applicant did not; or
    - b. The applicant was assessed as having the qualifications and competencies provided for under the scheme because of fraud, dishonesty, deception, or similar; or if the Institution has any other concern about the assessment.

## Fees for Assessment

### Imposition of Fees

84. All candidates for assessment to become RPEQ are required to pay the following fees associated with the qualifying process, which are subject to review every year:

Assessment fees for Chartered Membership 2022	GBP	AUD
Professional Review application fee	£105	\$187
Professional Review Interview (PRI) fee	£185	\$330
Examination fee	£480	\$860

85. BPEQ candidates will be advised that, following successful completion of the assessment process, they are eligible to join the Institution as a Chartered Member if they so wish, and will be advised of the annual subscription charges that will apply. The annual subscription is determined by the Executive Board. The Executive Board decides the amounts of all fees payable by applicants or members. The fees are reviewed on an annual basis.

86. Section 3 of the Institution's Bye-laws, which are publicly available on the IStructE website, sets out expectations in regards to subscriptions and fees. This includes information about actions taken when subscriptions are not paid.

## Continuing Professional Development Requirements

### CPD Requirements

87. RPEQ members will be subject to CPD audits equivalent to those set by the BPEQ. They will be subject to a mandatory review of their CPD approximately once every five years (exceeding the BPEQ requirement of once every seven years), however members are invited to submit their CPD record to the Institution every year if they so wish.
88. BPEQ-registered members will be advised that they must undertake approximately 50 hours of CPD per year, equating to 150 hours over a three-year period. Furthermore, those members registered with the BPEQ will be advised that in order to comply with the Continuing Registration Requirements they must demonstrate that at least 75% of their CPD hours relate to technical matters in the area of engineering in which they operate; that a maximum 25% of hours can be non-technical; and that at least one hour must cover ethics and one hour on risk management.
89. The Institution routinely reviews its CPD requirements to ensure they reflect current industry practice and that our members are consistently maintaining and developing their competence. In 2019 the Institution's Board agreed that a mandatory element pertaining to structural safety should be added to our CPD policy. As such, from 2020 all practising members of the Institution will be required to demonstrate a commitment to structural engineering safety by engaging with CROSS updates via structural-safety.org.
90. The Institution's CPD guidance is available on its website.

### CPD Audit Program

91. The Institution introduced mandatory reporting of CPD in 2014 making it, at the time, the first professional engineering institution in the UK to have such a requirement. This policy has now been adopted by the Engineering Council, which implemented a requirement for all Professional Engineering Institutions to undertake mandatory sampling of CPD returns from 2019 onwards.
92. Each year, 20% of the professional membership of the Institution (approximately 2,000 members) is selected at random to submit their CPD records for mandatory review by the Professional Development Panel. As per paragraph above, RPEQs will be included in this mandatory review.
93. Non-compliance with the Institution's CPD regulations will result in the person being reported to the Membership Committee and removed from the register. On average, 98.5% of those who are selected for the mandatory CPD review engage with the process and submit their record for review. Failure to submit CPD reports will be noted against the person's record and made available to the public through the members' directory, if applicable.
94. The BPEQ will be notified of any registrant who does not participate in the mandatory CPD reporting scheme and is subsequently removed from the register for non-compliance within seven days of this action taking place.
95. Any person failing to meet the CPD requirements will be provided with feedback from the CPD assessors.



## Assessors

### Assessor Competencies

96. Reviewers are appointed from a variety of membership and registration grades; however, they must be at least the same grade as that for which the applicant is applying. Reviewers should have at least five years' experience at the appropriate level and be able to demonstrate a good CPD record. They are appointed on a three-year basis and may continue in this capacity by mutual agreement. Reviewers will not normally hold the office for more than three years after retiring from practice. Each Regional Group is responsible for ensuring that there is a selection of Reviewers with experience across a wide range of specialisms/disciplines.
97. The Australia Regional Group keeps a record of which of their Assessors are also RPEQ registrants. This enables the PRI Co-Ordinator to ensure that at least one of the Assessors for applicants who are seeking BPEQ registration is a current RPEQ.
98. The PRI Co-Ordinator will also ensure that the Assessors are sufficiently experienced in the same specialism as the applicant to be able to carry out an objective review of their competence.

### Assessor training and accreditation

99. The various roles associated with the process for registration of professional engineers each have ongoing training requirements attached to them:

#### **JBM appointment and training**

100. The Institution of Structural Engineers appoints five nominees and, jointly with the Institution of Civil Engineers, another ten nominees to sit on the JBM. The Chair of the JBM is normally a member of both the Institution of Structural Engineers and ICE and is appointed for a three-year term by the Institution Presidents. The Chair meets with the Presidents and Chief Executives annually to report on activities during the year and to raise any issues of policy on accreditation.
101. All JBM members are trained in JBM procedures before undertaking an accreditation visit. This involves attendance at a training seminar which includes presentations from experienced Board members. Training continues 'on the job' and new moderators attend their first visit as an observer. New moderators are usually accompanied by an experienced moderator during their first visit to explain procedures. All JBM members are provided with a Briefing File which includes information about the JBM, its membership, the JBM Guidelines for Accreditation and Engineering Council documentation.
102. The members of the Moderators Panel normally meet on an annual basis to receive an update on policy matters and issues relating to accreditation. They also receive minutes of JBM meetings and attend meetings for discussion of an accreditation report on a moderation visit that they have attended.

#### **Professional Reviewers appointment and training**

103. As part of the training requirements for reviewers a Reviewer Training Pack has been developed providing guidance to reviewers related to the PRI process. New assessors are able to observe interviews and will always be paired with an experienced Reviewer who offers support and feedback on their performance.
104. Senior Reviewers will observe interviews in neighbouring Regional Groups to provide feedback regarding consistency and to promote examples of best practice. The Institution hosts an annual PRI Seminar which is scheduled so that international reviewers are also able to attend and review practices with their peers in the UK. Records of training undertaken by reviewers are maintained so that additional support can be provided where necessary.

**Examiners**

105. There are a variety of roles that make up the Examination Panel and are responsible for setting the exam questions and marking the completed examinations. All are appointed based on their knowledge and experience and are required to attend annual assessment meetings. The Examinations Panel has a Training Mentor and Assistant who are appointed from within the Panel. Newly appointed examiners will have to undergo formal training based on the marking of some trial scripts before being allowed to take part in the live marking of examination scripts. All marking examiners must attend a trial marking meeting to agree on marking schemes with each Chief Examiner and to practice and develop general marking skills and techniques.

## Proven capacity to undertake assessments

### Timeframe for assessments

106. The Institution's committees and panels associated with each stage of the assessment and application process meet regularly each year, usually quarterly, to ensure that timely decisions can be made regarding the outcome of any assessment.
107. Candidates who are applying to the Institution for assessment as an RPEQ will be following the Chartered Membership assessment process, however, the Institution has adapted the standard timeframe, which sees a typical candidate complete the process in between 9 to 14 months, such that it can be completed in approximately five months for the BPEQ candidates.
108. The examination is an essential part of the IStructE's assessment process as we believe that there is a difference between the candidate's submission of a portfolio of work that they are very familiar with (PRI process), and an unseen exam question that tests their independent judgement. The examination dictates the timeframe for the assessment as it is held twice per year.
109. BPEQ candidates will be advised that they can apply to sit their exam in either January or July, and the deadline for applications is usually a month/six weeks prior to the exam date. Once they have taken the exam, and whilst it is being marked and verified, they will be able to take their Professional Review Interview outside of the normal PRI schedule for standard candidates. We will then seek concurrent ratification of the exam and interview results by the appropriate panels and committees. The overall process, from submission of application to notification of the result, will take around five months.
110. BPEQ candidates will be notified in writing that they have successfully completed their application and their details have been passed to the BPEQ for registration. At this point they will also be advised that they are now eligible to join the Institution as a Chartered Member, and the Engineering Council as a CEng if they wish, but it will be made clear that this is an optional step.

## **Professional conduct**

111. All members of the Institution agree to abide by the Code of Conduct. Any complaints received against a member that contravene the Code of Conduct are investigated in accordance with the Institution's disciplinary procedures. Subject to a disciplinary care resulting in an adverse finding against a member we would advise the BPEQ accordingly.
112. The disciplinary process only applies to members of the Institution, and we have no jurisdiction to take action against anyone who is not a member as they will not have signed up to the Code of Conduct.