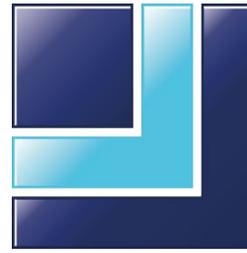




**RPEng**

Registered Professional Engineer  
of Professionals Australia



ASSOCIATION OF  
**Professional  
Engineers  
Australia**  
a division of Professionals Australia

# Non-Member By-Laws and Guidelines for the Professional Engineer Assessment Scheme (RPEQ Only)



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## Executive Summary

The standard of professionalism among engineers must be high to ensure competent practice, ethical conduct, economic benefit, environmental sustainability and most importantly the safety of the community. Therefore, a mechanism must be in place to assess and uphold the integrity of this standard.

These By-Laws outline the criteria used by Professionals Australia in the assessment of applicants seeking to achieve Registered Professional Engineer of Queensland (RPEQ) accreditation with the Board of Professional Engineers of Queensland (BPEQ).

To be successfully recommended for RPEQ accreditation, the applicant must:

1. Have completed an eligible engineering qualification covering at least one of the disciplines of engineering, the Guidelines for which are published herein.
2. Have at least five years relevant work experience in an area applicable to the discipline for which accreditation is sought. This work experience must have been gained within the last five to seven years. Examples of work experience per discipline are highlighted in Sections 5 to 13 of these By-Laws: the Guidelines for RPEng Accreditation.
3. Have provided the details of a minimum of three Professional Referees who can verify the applicant's work experience.
4. Have undertaken a total of 150 hours continuing professional development over the past three years immediately prior to the lodgement of the application. This is equivalent to 50 hours per annum.
5. Have satisfied the Assessor in the professional interview, and have had the Professional Referees provide adequate peer review of the applicant's professional competence.
6. Have had their assessment approved by the Assessment Committee.

Details of Professionals Australia's application and assessment process are provided in these By-Laws. The Guidelines are produced for the benefit of applicants and Assessors in guiding the application and assessment process and are subject to review and revision.

Applicants will need to submit the letter from Professionals Australia stating that they meet the accreditation requirements with their application to the Board of Professional Engineers of Queensland.

## 1. Introduction

The catastrophic consequences of engineering failure highlight the need for competent professional engineers. The standard of professionalism among engineers must be high to ensure competent practice, ethical conduct, maximum economic benefit and most importantly the safety of the community.

A mechanism must be in place to assess and uphold the integrity of this standard.

Applicants seeking registration as a RPEQ are assessed on their education qualifications, work experience and continuing professional development (CPD).

These By-Laws outline the criteria used by Professionals Australia in the assessment of applicants seeking accreditation in the disciplines of engineering contained in the Guidelines.

These By-Laws and Guidelines are established to ensure that people who hold accreditation have achieved such status through meeting well defined criteria developed in consultation with leaders in the engineering profession and that rigour, diligence and scrutiny have been applied by Professionals Australia in granting that status.

Contained in this document are:

- **By-Laws of Professionals Australia for assessment of engineers seeking registration as a RPEQ.** These provide the governance structures for the scheme, guiding principles, rules and regulations.
- **Guidelines.** These outline the eligibility criteria used to assess applicants in the disciplines for which Professionals Australia accredits.
- **Appendices.** These contain:
  - Professionals Australia Code of Ethics.

Any queries about the Professionals Australia assessment process should be referred to the Professionals Australia Registrar of the assessment scheme.

## 2. Responsibility of Professional Engineers Recommended for RPEQ Registration

Engineers who are recommended for registration as a RPEQ, will:

- Adhere to the Professionals Australia Code of Ethics.
- Undertake continuing professional development to ensure their professional knowledge in their disciplines of practice is current.
- Listen to stakeholders in order to gain an understanding of requirements and nature of problems requiring solutions.
- Devise possible engineering and/or managerial solutions to remedy frequently occurring problems encountered by society.
- Ensure solutions are fundamentally sound in terms of theory, concepts and principles, and satisfy the requirements of stakeholders.
- Devise solutions that can easily be re-applied or modified by themselves or colleagues to solve new problems thereby saving time and money.
- Produce work that provides beneficial outcomes to society, the economy and the environment.
- Understand the costs, limits and risks associated with proposed solutions and communicate these to appropriate stakeholders.
- Integrate relevant technical and non-technical aspects with their solutions.
- Understand the relevance of new developments applicable to their area of practice.
- Understand the relationship between their area of practice and other areas of engineering.
- Conduct research in order to advance their area of practice.
- Develop new concepts, principles and/or technologies.
- Create and update standards and codes.
- Adhere to applicable government legislation and regulations.
- Contribute to the amendment of applicable government legislation and regulations.
- Develop, mentor and educate other professionals in their area of accreditation.
- Ensure their integrity, transparency, good conduct and trustworthiness.
- Communicate to society to increase the community's awareness of their profession.
- Act in a manner that improves the image of their profession, as perceived by the community.

### 3. By-Laws

#### 3.1 Terms and Definitions

*Applicant* – engineer seeking assessment for recommendation for Registered Professional Engineer of Queensland (RPEQ) status

*Approved List (the)* - the internal list maintained by Professionals Australia, detailing all applicants successfully recommended for registration with a state or federally legislated scheme.

*Assessment Committee* –At least three Assessors appointed by the Professional Engineers Division Committee supported by the Professionals Australia Registrar to administer the assessment scheme and the appellate body for any objections to the assessment scheme.

*Assessor* – person appointed by the Professional Engineers Division Committee, based on their experience and qualifications and the satisfaction of procedures outlined herein, for the purpose of determining whether or not an applicant meets the requirements for successful assessment. Section 3.17 lists the training and qualification requirements of an Assessor.

*By-Laws* – provide the governance structures for the scheme, guiding principles, rules and regulations.

*CEng* – Chartered Engineer as awarded by the British Engineering Council.

*Conferral Date* – day, month and year the applicant is successfully recommended for registration.

*CP* – Chartered Professional, as granted by The Australasian Institute of Mining and Metallurgy.

*CPEng* – Chartered Professional Engineer, as granted by Engineers Australia.

*Expiration Date* – day, month and year that an individual’s recommendation for registration expires. The expiration date is three years after the Conferral Date or three years after the date the Professionals Australia Registrar advises a successful review of ongoing compliance has been granted.

*Guidelines* – outline the eligibility criteria used to assess applicants for registration in the disciplines for which Professionals Australia accredits.

*Professional Engineers Division Committee* – the governing body elected under the Association of Professional Engineers, Scientists and Managers, Australia (APESMA) rules from an electorate of the professional engineer members. APESMA is a registered organisation under the Fair Work (Registered Organisations) Act 2009, operating as Professionals Australia.

*Professional Referee* – person nominated by the applicant to support and verify their work experience claims. The Professional Referee shall be called upon by the Assessor in order to provide a verbal statement that supports the applicant’s work experience. Section 3.8 lists the qualification requirements of a Professional Referee.

*Proposal* – applicant’s application for assessment. This shall consist of the application form; a certified copy of their Professional Engineering qualification; examples of their work experience over the past five years (detailed curriculum vitae), names and contact details of three Professional Referees who can testify as to the applicant’s work experience claims, and a record of continuing professional development activities.

*Professionals Australia Registrar* – staff member appointed by the Professionals Australia CEO to have responsibility for the effective administration of the accreditation processes detailed in these By-Laws and ensure the maintenance of the Approved List.

*Renewal Date* – day, month and year that current applicants recommended for registration are advised by the Professionals Australia Registrar that they need to supply details for review of continuing professional development and compliance with the By-Laws and guidelines. The Professionals Australia Registrar shall notify participants of upcoming review at least three months prior to the Expiration Date.

*RPEng* – Registered Professional Engineer of Professionals Australia. This is the registration post-nominal granted to Professionals Australia members on successful assessment.

*RPEQ* – Registered Professional Engineer of Queensland, as granted by the Board of Professional Engineers of Queensland.

*The Washington Accord* – A series of agreements relating to the recognition of equivalence of professional engineering qualifications and competence. Qualifications under this scheme are recognised as fitness to practice as a professional engineer across the signatory jurisdictions.

### **3.2 Governance of the Assessment Process**

The Professional Engineers Division Committee is to oversee the assessment program with the purpose to:

1. Uphold the wellbeing of our society, economy and environment – the “triple bottom line”.
2. Ensure the assessment process effectively assesses whether or not an engineer is qualified to practice independently (unsupervised) within their specific engineering discipline.
3. Ensure that the assessment and accreditation program continues to fulfil the objectives outlined herein.
4. Facilitate a high standard of professional education, work experience, professional development and ethical conduct among Professional Engineers through the enforcement of these By-Laws.
5. Promote a high standard of national and global recognition and respect for Professional Engineers.
6. Communicate the importance of the engineering profession and the registration of Engineers to industry, private business, government agencies and the community generally.

### **3.3 Role of Professional Engineers Division Committee in the Assessment Scheme**

The Professional Engineers Division Committee shall:

1. Appoint Assessors to conduct assessments of eligibility for recommendation for registration under the scheme, subject to their meeting stringent requirements for competence outlined herein.
2. Appoint an Assessment Committee, comprised of at least three Assessors deemed of the highest standing to oversee the assessment process and to develop and publish Guidelines for the guidance of applicants and administration of the process.
3. Propose fees for undertaking assessment for obtaining and retaining assessment to the National Board of Professionals Australia for approval each year. The scheme shall be run on a cost-recovery basis.
4. Conduct periodic surveys of the membership, employers and other stakeholder groups on the adequacy of Guidelines published within the By-Laws.
5. To recommend changes to these By-Laws to the National Board of Professionals Australia.
6. Consider, accept or reject recommended changes to the Guidelines by the Assessment Committee.

### **3.4 Disciplines**

The details of eligibility criteria and assessment for the disciplines of accreditation are outlined in these By-Laws and Guidelines approved and published by the Assessment Committee.

### 3.5 Fees

Fees are set annually and listed on the Professionals Australia website.

### 3.6 Eligibility

In order for a person to be recommended for approval of registration they must satisfy the following requirements:

1. Have completed a qualification in one of the disciplines of engineering, the Guidelines for which are published herein. The qualification must meet one of the following requirements:
  - a) a four-year full-time engineering Bachelor Degree or a Master of Engineering from an accredited Australian university that meets the Washington Accord. The Assessment Committee can consider a statement issued by an accredited university as to qualification suitability in terms of meeting the Washington Accord,
  - b) or a part time equivalent degree,
  - c) or a previously recognised historical equivalent qualification,
    - i. For applicants seeking assessment in IT&T engineering where there were no formal qualifications until the 1990's, consideration will be given to practitioners who hold a 3 year degree or diploma in computing and can demonstrate additional training, development and experience in software or hardware computer engineering, or a statement from Engineers Australia that the applicant has met the current academic and competency requirements for standing as a professional Engineer.
  - d) or a qualification gained elsewhere that satisfies the requirements of "the Washington Accord" for recognition as a Professional Engineer.
2. Have at least five years relevant work experience in an area applicable to the discipline for which accreditation is sought. This work experience must have been gained within the last five to seven years. Examples of work experience per discipline are highlighted in Sections 5 to 13 of these By-Laws and Guidelines.
3. Have provided the details of a minimum of three Professional Referees who can verify the applicant's work experience.
4. Have undertaken a total of 150 hours continuing professional development over the past three years immediately prior to the lodgement of the application. This is equivalent to 50 hours per annum. Examples of continuing professional development per discipline are provided in the Guidelines.

Where assessment is sought in an engineering discipline other than in the discipline of the original engineering qualification, applicants must provide details of training undertaken and experience gained in their desired area of practice.

The management discipline is available to applicants who not only meet the educational and experience requirements as a professional engineer and have obtained additional formal qualifications not less than a Diploma of Management or a Diploma of Project Management, have moved to a management position and satisfy the additional requirements listed for the management discipline.

Individuals wishing to also apply for Registered Professional Engineer of Professionals Australia (RPEng) accreditation must be members of Professionals Australia.

### **3.7 How to Apply**

The applicant's proposal for assessment shall consist of the following documents:

1. A certified copy of your eligible engineering qualification as detailed in Section 3.6 The Guidelines may contain additional requirements for specific disciplines.
2. A detailed curriculum vitae highlighting at least five years' relevant work experience relevant to the discipline for which accreditation is sought. Examples of work experience per discipline are provided in the Guidelines. The curriculum vitae must highlight the organisation name, brief summary of the service or product provided by the organisation, the job title, length of employment, brief description of the role and examples of work experience activities for each organisation for which the applicant has been employed. The work experience activities shall outline examples of the applicant's use of theories, concepts and practices to solve real-world problems related to the discipline for which accreditation is sought.
3. The names, telephone numbers and email addresses of at least three Professional Referees who can testify as to the valid nature of the applicant's five years of work experience. This referee page may be the final page of the curriculum vitae. The Professional Referees are qualified to testify as to the applicant's work experience claims only if they satisfy the requirements of Section 3.8. In order to improve the chances of success, applicants must ensure Professional Referee details are current. Furthermore, applicants must ensure the Professional Referees are aware of the applicant's nomination of the referee to testify in relation to the application for assessment. Prior to submitting a proposal, applicants are advised to ensure that the nominated Professional Referees have read the applicant's curriculum vitae and are familiar with the work experience cited in the application.
4. A record of continuing professional development. A total of 150 hours must be accumulated over the past three years immediately prior to the lodgement of the application (50 hours per annum). An applicant may be asked to support these claims using copies of certificates from short courses and/or copies of academic transcripts from postgraduate study. An Assessor will verify all claims made. Applicants are advised to not include original documents in their application.
5. Completed application form.

Documents may be forwarded in electronic or hardcopy format to the Professionals Australia Registrar. If an application does not contain all of the required documentation and information outlined in this Section 3.7, the applicant shall be given a time period to rectify any deficiency and if not completed in that time period shall be given notification that the application has been unsuccessful in accordance with Section 3.10.

### **3.8 Professional Referee Qualifications**

Professional Referees may be either the applicant's supervisors or colleagues who are familiar with the work experience activities highlighted in the applicant's curriculum vitae and must have known the applicant for a period of at least 12 months. At least two of the Professional Referees must be able to attest to having observed the applicant's professional work in Australia. Professional Referees must satisfy one of the following requirements:

1. Registered Professional Engineer of Professionals Australia. The referee's accreditation must be in the discipline for which the applicant is seeking accreditation.
2. CPEng, CP, RPEQ or equivalent status as outlined in Section 3.6. The referee's accreditation must be in the discipline or similar discipline to which the applicant is seeking accreditation.
3. Engineer with a Bachelor degree (or other historically or internationally recognised equivalent or higher qualification under the Washington Accord) in the discipline or similar discipline to which the applicant is seeking accreditation, and has seven or more years of work experience in the discipline or similar discipline in which the applicant is seeking accreditation.

### **3.9 Successful Applicants**

Applicants shall be notified by the Professionals Australia Registrar on the successful outcome of their application. Successful applicants shall be provided with a letter for submission to the BPEQ stating that they meet the

requirements for registration and will be included on the Approved List as complying with assessment requirements in these By-Laws.

### **3.10 Unsuccessful Applicants**

Applicants shall be notified as to the reason(s) why their application was unsuccessful and be given the opportunity to rectify any deficiency that may be able to be rectified within such a period as advised in the notification, being no greater than 12 months, or to appeal against the decision or alternatively re-apply for accreditation after 12 months.

Appeals must be made within one calendar month of the date of notification of the applicant being unsuccessful. Appeals shall be addressed to “ RPEng Appeals” and sent to the Professionals Australia Registrar.

Appeals should detail:

1. The reason the applicant believes the Assessor’s decision warrants appeal,
2. In specificity, how the applicant believes the Assessor has failed to properly apply the By-Laws and Guidelines to the consideration of their application,
3. Any additional information which could provide further information to support application.

Applicants are permitted to make one appeal per application. If unsuccessful, the applicant is encouraged to re-apply in 12 months using the procedure highlighted in Section 3.7.

The Professionals Australia Registrar shall advise the Assessment Committee of every appeal. The Assessment Committee shall consider the substance of any appeal and shall, if the appeal has merit, appoint a different Assessor in consultation with the Professionals Australia Registrar to assess the appeal.

If the Assessment Committee does not consider that the appeal has merit, the Committee shall afford the applicant an opportunity to provide a verbal presentation to the Assessment Committee to further support the appeal. If the appeal is not upheld the Assessment Committee shall communicate the determination to the applicant.

### **3.11 Continuing professional development and Compliance with By-Laws and Guidelines**

To remain on the Professionals Australia Approved List as having maintained the eligibility requirements, the successfully assessed engineer is required to maintain adherence to the Code of Ethics, continue to practice as a professional engineer and meet the Continuing Professional Development requirements over the previous 3 year period. Engineers recommended for registration will be reviewed every three years from the date of initial recommendation, or subsequent review, in regard to their continued professional development and compliance with the Professionals Australia By-Laws and Guidelines.

To remain on the Professionals Australia Approved List, the engineer must provide current details of employment and continuing professional to Professionals Australia for assessment before the Expiration Date.

Engineers wishing to provide evidence of their continuing compliance must submit a written proposal consisting of:

1. Current contact details and employment position;
2. A detailed curriculum vitae highlighting three years of work experience in the engineering discipline in which the engineer has been assessed and wishes to continue your accreditation;
3. One Professional Referee who can support the work experience claims. This referee need not be a supervisor;
4. A record of continuing professional development averaging no less than 50 hours per annum over three years An Assessor will review all claims made.

An Assessor appointed by the Professionals Australia Registrar will review the submission and make a recommendation on the outcome to the Assessment Committee.

### **3.12 Review of on going compliance**

Persons recommended for registration must provide evidence of continuing compliance no later than three months after receiving notice from the Professionals Australia Registrar. If they fail to provide evidence within this time frame Professionals Australia will advise BPEQ.

### **3.13 Removal from Approved List**

Listing on the Approved List shall be cancelled by the Assessment Committee where the engineer:

1. Provides written notification that they wish to no longer be on the Approved List;
2. Fails to provide details required in Section 3.11 within the timeline outlined in Section 3.12;
3. Does not meet the compliance requirements of the By-Laws and Guidelines as determined by the Assessment Committee;
4. Has been found to have engaged in unprofessional conduct through the processes detailed in Section 3.16.

The engineer shall be removed from the Approved List. If the person also holds RPEng status, the person must not represent themselves as a "Registered Professional Engineer of Professionals Australia" and cease the use of the post-nominal RPEng and any post-nominal associated with the discipline they held accreditation for. Notification of the cancellation shall be provided by the Assessment Committee stating the reasons for cancellation as well as any further obligations of the individual.

On removal of an engineer from the Approved List, Professionals Australia shall advise the Board of Professional Engineers of Queensland as soon as practicable.

### **3.14 Approved List of Engineers Recommended for Registration**

Engineers who have been assessed as meeting the requirements for registration will be included on the Approved List maintained by Professionals Australia. The Approved List shall include:

1. Title, first name and last name,
2. Contact details including, email address and residential/ mailing address,
3. Discipline for which they were assessed,
4. Conferral Date highlighting day, month, and year in which accreditation was approved,
5. Expiration Date highlighting the day, month, and year in which the accreditation was last recommended for approval or subsequent review as per clause 3.11

The engineer will be notified at least 3 months prior to the expiration date of the need to be re-assessed to remain on the Approved List. Failure to provide the required information or failure to meet the requirements for remaining on the Approved List as determined by the Assessment Committee will result in the person being taken off the Approved List following which the BPEQ will be notified that the person is no longer on the Professionals Australia Approved List as meeting the requirements for Registration.

### **3.15 Use of Post-nominals**

Professionals Australia is not responsible for granting the RPEQ post-nominal. Applicants who have been recommended for registration with the BPEQ must adhere to the BPEQ's policy for use of the RPEQ post-nominal.

### **3.16 Breaches and Disciplinary Action**

Any complaints of unprofessional conduct of a person currently listed on the Professionals Australia Approved List as meeting the eligibility requirements for registration as a RPEQ brought to the attention of Professionals Australia shall be referred to the BPEQ.

### **3.17 Assessors**

Assessors shall satisfy all of the following requirements:

1. They hold RPEng, CPEng, RPEQ or CP status;
2. They have demonstrated extensive experience and professional knowledge in the particular discipline, typically through more than 15 years' post-graduation work experience in the engineering discipline in which the applicant is applying for accreditation;
3. They possess a full understanding of the interpretation and application of the Professionals Australia Code of Ethics; and
4. They have successfully completed the training program developed by the Assessment Committee and complied with the annual Continuing Professional Development requirements of the Assessment Committee.

Assessors shall be allocated by the Professionals Australia Registrar.

Assessors shall, prior to undertaking any assessment:

- a) Disclose to the Professionals Australia Registrar if the applicant is known to them, and if so exclude themselves from any consideration of the application.
- b) Declare to the Professionals Australia Registrar any conflict of interest in considering applications.

Assessors shall, on completion of any assessment complete a declaration, stating that the assessment has been carried out in accordance with these By-Laws.

### **3.18 Assessment Committee**

The Assessment Committee administers the assessment scheme under these By-Laws. The composition of the Assessment Committee shall consist of at least three Assessors appointed by the Professional Engineers Division Committee supported by the Professionals Australia Registrar. The Assessment Committee shall:

1. Ensure that the Guidelines as published in these By-Laws are continually updated and remain best practice against domestic and international standards.
2. Consider and review assessment findings and recommendations of Assessors.
3. Manage appeals against unsuccessful assessments.
4. Maintain and publish a Roll of Professional Engineers registered under the RPEng scheme.
5. Produce induction materials for Assessors and conduct testing against those induction materials with those Assessors. These materials shall include matters which relate to these By-Laws, their operation and all relevant legislative requirements.
6. Prepare Continuing Professional Development activities to be completed by Assessors on an annual basis.
7. Prepare all materials necessary for the conduct of assessment, application and appeal, in particular the Guidelines and Appendices to these By-Laws.
8. Ensure the quality and competence of Assessors.
1. Provide and maintain a centralised recording mechanism for continuing professional development.
9. Ensure all applications for registration are responded to within four weeks of receipt and that all applications are assessed within eight weeks of receipt unless varied by notifying the applicant in relation to barriers to the processing of the application.
10. Undertake periodic review, at least every 12 months, of the assessment procedures and processes, materials, By-Laws, guidelines and appendices to ensure the scheme remains efficient and effective.
11. Maintain an Approved List of engineers assessed for RPEQ accreditation

### **3.19 Professionals Australia Registrar**

The role of the Professionals Australia Registrar is to:

1. Administer the day to day functions the assessment scheme;
2. Undertake an initial reviews of application documentation;
3. Provide information and advice to applicants;
4. Allocate applications to Assessors for assessment;
5. Monitor the progress of assessments with assessors;
6. Provide support to assessors during the assessment process;
7. Provide the recommendations from assessors to the Assessment Committee for review and confirmation;
8. Maintain the Approved List of applicants and the outcomes of assessments;
9. Communicate assessment outcomes to applicants, and where successful, issue letters for forwarding to BPEQ; and
10. Administer the appeal process.
11. Provide advice to the BPEQ at least every 12 months about engineers who have not maintained their eligibility for registration and have been removed from the Approved List in that period

### **3.20 Conflict between By-Laws**

Where there exists a conflict between these By-Laws and BPEQ regulations, the regulations of the BPEQ will prevail.

## 4. Guideline. Common requirements for assessment

These Guidelines highlight the eligibility criteria used by Professionals Australia in the assessment of applicants who are applying for assessment. For each discipline in which Professionals Australia provides assessment services, examples of experience common in that field of engineering that may be used toward assessment are provided, however these are not exhaustive or comprehensive. Professionals Australia understands many other examples from specialist areas exist in addition to those presented. Thus, other examples of work experience shall be considered in the assessment.

### 4.1 Eligibility Criteria for Recommendation for Registration

In order for a person to be recommended for registration they must satisfy the requirements of clause 3.6 of the By-Laws and have been recommended by an Assessor and the Assessment Committee.

### 4.2 Continuing Professional Development

Applicants are expected to have undertaken a breadth of Continuing Professional Development (CPD) activities. Continuing professional development may include:

- a) **Formal Postgraduate Education** – Formal postgraduate education aligned to your work which can attract an award on completion from a higher education institution. This may include individual units of postgraduate study, which may be on or off campus and can include lectures, tutorials, lab work, research, and must involve some form of assessment.
- b) **External or Employer provided training** - Education provided by your employer or by a provider that is not a higher education provider but that aligns with your work or profession.
- c) **Professional participation** – Attendance at a conference or technical society meeting. Activities associated with the applicant's contribution to the profession such as acting as a mentor, as an assessor for an engineer registration scheme, serving on board or committee related to the profession of engineering can be considered.
- d) **Presentations** - presenting at a conference or meeting outside of normal employment aligned to your work and profession and can include presentation and preparation of material.
- e) **Workplace/on the job training** – Workplace learning involving theories, concepts, practices, that extend your knowledge. Normal work activities using current knowledge cannot be claimed.
- f) **Published works** – Producing a published paper for a university, conference, engineering organisation relevant to the profession, can include research and preparation.
- g) **Private study** - Extension of your knowledge of legislation, regulations, codes, standards, practices and processes through work or private.

Please refer to Professionals Australia Continuing professional development Practice Notes for comprehensive notes detailing the expectations and eligibility criteria for acceptable CPD.

**Career break consideration** - in circumstances of career breaks, reduced or part-time work applicants must still provide evidence of 150 hours of professional development however, the Assessment committee is prepared to exercise discretion in regard to the limits imposed in the various categories and/or extend the period of time in gaining the 150 hours by the period of the break(s) in practice to no more than 5 years.

## **4.3 Application and Assessment**

### **4.3.1 Application**

Applicants must prepare and submit a written proposal in accordance with Section 3.7 for assessment in the approved form demonstrating they fulfil eligibility criteria 3.6.

A representative from Professionals Australia shall contact the applicant within four weeks of proposal submission in order to provide an overview of the assessment process and to answer any questions.

### **4.3.2 Assessment**

The Professionals Australia Registrar will appoint an assessor to conduct an assessment of the application.

Initially your curriculum vitae and record of continuing professional development will be reviewed and assessed. The Assessor will arrange an interview with the applicant to review professional experience and knowledge of a code of ethics, and will also contact Professional Referees to obtain a peer review of the applicant's professional work.

Please allow between four to eight weeks for the assessment process. This time may be longer depending on the availability of your referees.

Once completed, the Assessor will provide a recommendation to the Professionals Australia Registrar whether the assessment has been successful or not.

The recommendation is reviewed by the Assessment Committee and the outcome is then communicated to the applicant by the Professionals Australia Registrar.

An appeal for unsuccessful applicants is available under section 3.10.

## **5. Guideline. Definition of an Engineering Service**

### **5.1.1 Board of Professionals Engineers of Queensland (RPEQ) definitions**

Professionals Australia refers engineers seeking registration to the Board of Professionals Engineers of Queensland's (BPEQ) and the Professional Engineers Act 2002 (Qld) for information detailing:

- The requirements for engineers to seek registration;
- The definition of a professional engineering service; and
- The definition of a prescriptive standard.

Any applicants requiring further information regarding their requirement to seek registration, should contact the BPEQ for clarification.

### **5.1.2 Description of engineering disciplines**

Descriptions of the various engineering disciplines for which Professionals Australia is an accredited assessment entity are described in clauses 6 to 14.

If an applicant is unclear as to the correct discipline, they are advised to contact the Professionals Australia Registrar who can provide additional advice, or when required, seek advice from the Assessment Committee.

## **6. Guideline. Civil Engineering**

Much of the physical infrastructure of our modern society is provided by Civil Engineers. Civil Engineers are concerned with all types of structure including dams, bridges, pipelines, roads, towers and building. They are responsible for the design and construction of all our transport systems, the design and management of our gas and water supply, sewerage systems, harbours, airports and railways. Civil Engineers plan, design and test the structures of private and public buildings and facilities.

They are also involved in many environmental areas such as the assessment of the impact large scale projects have on the environment and the collection and treatment of sewage and industrial wastes, pollution control, environmental control and resource protection and management.

A Civil Engineer will work from an architect's drawings and consider whether the chosen materials for a particular building will be strong enough to hold a structure of that height or design. At the same time, they would also think about how the structure might affect its surroundings. It is the responsibility of the civil engineer to produce safe, economical and environmentally-sound structures.

Civil Engineers may specialise as chief civil engineers, construction engineers, municipal engineers, structural engineers, transport engineers or water supply distribution engineers.

Civil and public health engineers may work in the private sector as consulting engineers, project managers or construction contractors or in a wide range of government departments.

## **7. Guideline. Information Technology & Telecommunications**

Information/Telecommunications professionals develop, modify, test and support computer software, hardware and communication technologies. Their work may encompass software application, databases, websites, mission critical systems, networks, servers, personal computers and peripheral devices (IBISWorld 2013). A vast number of roles are covered by RPEng accreditation in information and telecommunications. These include communications engineer, network engineer, software engineer, computer systems engineer, systems engineer, analyst programmer and software architect.

## **8. Guideline. – Management**

This category is for practitioners who undertake functions recognised as being managerial rather than technical in content. Such managerial activities might typically include general management in an engineering environment; policy development; quality assurance and total quality management; design and delivery of training programs; marketing of engineering products or services; financial or human resource management.

### **Additional qualifications**

Applicants for accreditation in the management discipline must provide additional information to support their application. You should provide:

- A certified copy of your management qualifications[s]
- Evidence of CPD in engineering and management areas.

## **9. Guideline. - Mechanical Engineering**

Mechanical Engineering is concerned with the design, development, research, evaluation, manufacture, installation, testing, operation, maintenance and management of machines, mechanical and mechatronic systems, automated systems and robotic devices, heat transfer processes, thermodynamic and combustion systems, fluid and thermal energy systems, materials and materials handling systems, manufacturing equipment and process plant.

Mechanical Engineering is applied in industry sectors such as mining; minerals processing; chemical processing; pharmaceutical; manufacturing; oil and gas; automotive; aviation; aerospace; bulk handling; communications; health; building; electrical power generation and distribution; water and waste; natural gas distribution; road transport; rail transport; shipping; shipbuilding; defence; agriculture; forestry; fishing and food processing.

## **10. Guideline. – Structural Engineering**

Structural Engineering is concerned with the research, planning, design, construction, inspection, monitoring, maintenance, rehabilitation and demolition of permanent and temporary structures, as well as structural systems and their components. It also considers the technical, economic, environmental, aesthetic and social aspects of structures.

Structures can include building, bridges, in-ground structures, footings, frameworks, and space frames, including those for motor vehicles, space vehicles, ships, aeroplanes and cranes. They can be composed of any structural material including composites and novel materials.

Structural engineering is a creative profession that makes a significant contribution to infrastructure, industry, as well as residential and recreational developments.

Structural engineers carry out strength calculations and prepare drawings of structures to ensure they are strong enough to avoid collapse when loaded. The most common structures dealt with are buildings and bridges, but tunnels, walls to hold back earth embankments, large tanks and silos as well as mining structures, also form part of a structural engineer's work. Specialist areas include oil drilling platforms and associated infrastructure, shipbuilding and aircraft design.

Structural engineers generally work in teams and look at the way a structure is to be built. They ensure buildings are strong enough to withstand natural forces and loads imposed by the nature of its use. Through research and the testing of both form and material, new solutions are developed which promote safer, more environmentally friendly buildings and structures.

Some structural engineers work in the design of structures (carrying out the strength calculations and supervising drawings), others specialise in the building of structures and some work in research. Structural engineers commonly work with architects, builders, mechanical, electrical and chemical engineers to ensure that all parts of the structure are safe and capable of fulfilling their intended function. They also make sure structures use appropriate materials efficiently.

## **11. Guideline. – Electrical Engineering**

Electrical Engineering is concerned with the research, design, development, manufacture, installation, operation, maintenance and management of equipment, plant and systems within the electrical, electronic, communication and computer systems areas.

These activities can apply to electricity generation, transmission, distribution, electrical installations in building and on industrial sites, electrical equipment manufacture, instrumentation and control systems applications in industry, communications networks, electronic plan and equipment, and also the integration and control of computer systems.

## **12. Guideline. – Chemical Engineering**

Chemical Engineering is concerned with the ways in which raw materials are changed into useful and commercial end products. This involves the research of raw materials and their properties, design and development of equipment and the evaluation of operating processes.

These skills are combined to extract raw materials which can then be refined and manufactured to produce such things as food, petrol, plastics, paints, paper, ceramics, minerals and metals. Often these processes are carried out at large scale plants – the safe operation of these plants is also part of chemical engineering.

Extracting raw materials without harming the environment is also a major area of work for chemical engineers. For example, new types of fuels which can be used safely to provide the energy we need, without having an adverse effect on the environment, are currently being developed and tested.

Chemical engineers are also involved in the production of pharmaceutical products as diverse as penicillin and shampoo.

Chemical engineers may work in companies involved in the production of such things as food, plastics, ceramics, pharmaceuticals, metals and glass. Many chemical engineers also find employment in environment protection and the reclamation or clean-up of contaminated sites, or in research laboratories, chemical plants and petroleum refineries. Other major employers of chemical engineers include manufacturers of basic iron and steel products, organic industrial chemicals and the mining industry.

Engineers working in this field may specialise as combustion engineers, petroleum engineers, principal chemical engineers, smelting engineering, water treatment engineers or environmental engineers. There is also scope for chemical engineers to move into related areas including biotechnology, food engineering and mineral engineering.

## **13. Guideline – Geotechnical Engineering**

Geotechnical engineers undertake the activities of site investigation, laboratory testing, supervision, data interpretation, analysis, design and monitoring for foundations, slopes, retaining structures, embankments, roadways, tunnels, levees, wharves, landfills, mines, nearshore/offshore oil and gas structures and other systems that are made of or are supported by soil or rock (DEEWR 2013, AusIMM 2013).

## **14. Guideline – Environmental Engineering**

Environmental engineers are concerned with protecting the environment by assessing the impact a project has on the air, water, soil and noise levels in its vicinity. This is done by studying the projects design, construction and operation, and minimising any adverse effects that it may have on the environment.

Environmental engineers are also involved in removing problems caused by past activity, such as cleaning contaminated industrial land so it can be used for housing.

They predict what problems may be caused by accidents, such as oil spills for example, and assess what may cause problems for the environment in the long term.

They also plan and design equipment and processes for the treatment and safe disposal of waste material and direct the conservation and wise use of natural resources.

They are involved in research and development of alternative energy sources, water reclamation, waste treatment and recycling.

Environmental engineers may work with government departments or in the private sector with resource processing companies as consulting engineers.

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## Appendix A: Code of Ethics

Our code of ethics demonstrates Professionals Australia members' responsibility and commitment to society and professional engineering. The code of ethics is not a behavioural guide or rulebook. It provides the foundations of an ethical culture, sets ethical benchmarks and inspires society's confidence in Professionals Australia members.

Registered Professional Engineers of Professionals Australia shall:

- At all times further the standing of the engineering profession through conducting themselves with professionalism and by displaying integrity, diligence and decency.
- Uphold the safety, health and wellbeing of the community.
- Practice solely in their areas of competence and communicate to relevant stakeholders when the scope of work falls outside their area of competence.
- Understand the environmental impact of their engineering services and adhere to environmentally sustainable practices.
- Provide engineering services beneficial to the economy.
- Communicate honestly and clearly to their employers and clients in relation to safety, risk, cost, time, fitness for purpose, quality, reliability, environmental impact and economic benefit.
- Put foremost the interests of public safety when there is a conflict of interest between the interests of the public and the instructions of your employer.
- Bring evidence of poor public and private decision-making to light to authorities or the public more generally when compelled by poor practice, instruction or negligence.
- Continue professional development in their chosen areas of competence and remain informed of major changes within their industry.
- Provide mentoring and training to ensure knowledge and skills are transferred to others.
- Not behave in a manner that would damage the reputation of themselves and others.
- Report unlawful/unethical behaviour and conflicts of interest.
- Promote ethical behaviour.
- Comply with relevant Government legislation and regulations.
- Abide by the rules of disclosure and use of classified information.
- Not misuse company, public and private property.