WHY YOU SHOULD BE CHARTERED

If you’re working as an engineer and you’re a member of Engineering New Zealand, chances are you already have the knowledge and skills to show you’re competent and ethical in your engineering practice area. Our competence-based membership and registration are great ways to prove your competence to your peers, your employer and your community. They mark you out as a trusted professional and an expert in your practice area.

If you want to become a Chartered Member of Engineering New Zealand, we’ll assess your engineering knowledge against internationally-benchmarked educational, competence and ethical standards. If you meet the standard, you’ll join a select group of engineering professionals.

You can select one of four types of competence-assessed Membership:

- Chartered Member – CMEngNZ
- Chartered Member – CMEngNZ (Engineering Technologist)
- Chartered Member – CMEngNZ (Engineering Technician)
- Chartered Member – CMEngNZ (PEngGeol)

What’s the difference?

<table>
<thead>
<tr>
<th>CHARTED MEMBER (CMEngNZ)</th>
<th>REGISTRATION (CPEng)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General quality mark of competence and professionalism</td>
<td>Quality mark of current New Zealand specific competence</td>
</tr>
<tr>
<td>Benefits of Engineering New Zealand membership</td>
<td>Independent of Engineering New Zealand and governed by CPEng Act 2002</td>
</tr>
<tr>
<td>Assessed once, with annual commitment to ongoing professional development and ethics</td>
<td>Re-assessed at least every six years</td>
</tr>
<tr>
<td>Assesses general engineering competence to an internationally recognised standard</td>
<td>Assesses general engineering competence to an internationally recognised standard with New Zealand specific technical competence (must use work examples from the last six years)</td>
</tr>
<tr>
<td>Basis of eligibility for international registers (IntPE, IntET, IntETn)</td>
<td>May be required depending on your employer or type of work</td>
</tr>
</tbody>
</table>

You also have the option to join the Chartered Professional Engineer (CPEng) national register.

Once you’re a Chartered Professional Engineer and/or a Chartered Member, you can apply for equivalent international Registers – International Registered Professional Engineer (IntPE(NZ)) and International Engineering Technologist (IntET(NZ)) – which are assessed against the same standards. And, if you’re a Chartered Professional Engineer, you also have the option to apply to become a Design Verifier (for pressure equipment, cranes and passenger ropeways).

The assessment process is the same for first-time competence-based membership and CPEng

You’ll need to demonstrate your competence for independent practice against the appropriate standard. If you don’t have a relevant accredited qualification, you’ll take a Knowledge Assessment first.
Reassessment requirements are different

For Chartered Membership, you’ll do a one-time competence assessment then keep your knowledge and skills up to date by doing professional development activities throughout the year.

To keep your CPEng registration, you’ll be reassessed at least once every six years. Reassessment is your opportunity to provide evidence of your continued competence and to demonstrate New Zealand-specific good practice.

CHARTERED MEMBERSHIP AND CPENG REGISTRATION CAN HELP YOU ADVANCE YOUR CAREER

Taking that next step to getting professional recognition for your knowledge, skills and competence will improve your professional standing. Chartered Membership gives you all the benefits of Engineering New Zealand membership and a general quality mark of competence. To get it, you’ll complete an assessment and make an annual commitment to ongoing professional development and ethics.

We know it can be a daunting process on top of an already-busy professional life, but the benefits are worth it.

- Use your title and post nominal – CPEng, CMEngNZ – to establish your professional credibility.
- Give your peers and the public confidence through official recognition of your technical competence and professional skills.
- Show you’re committed to continuous improvement and excellence in your industry.
- Speed up your career advancement and increase your earning potential.
- Improve your marketability and job prospects in New Zealand and overseas.
- CPEng registration opens doors to work restricted by regulation.
FIND THE RIGHT CLASS OF RECOGNITION FOR YOU

Each class of recognition is benchmarked to an internationally-recognised qualification standard – Washington, Sydney or Dublin Accord – and defined by different levels of complexity.

CPEng and Chartered Member

If you want to be assessed for CPEng and/or Chartered Member or IntPE(NZ), you’ll need a Washington Accord-accredited qualification (four year BE (Hons) in New Zealand) or be able to show you’ve gained the equivalent level of knowledge.

You’ll need to show you can deal with complex engineering problems and carry out complex engineering activities.

Chartered Member (Engineering Technologist)

If you want to be assessed for Chartered Member (Engineering Technologist) or IntET, you’ll need a Sydney Accord-accredited qualification (three-year BEngTech degree in New Zealand) or be able to show you’ve gained the equivalent level of knowledge.

You’ll need to show you can deal with broadly-defined engineering problems and carry out broadly-defined engineering activities.

Chartered Member (Engineering Technician)

If you want to be assessed for Chartered Member (Engineering Technician), you’ll need a Dublin Accord-accredited qualification (two-year NZDE in New Zealand) or be able to show you’ve gained the equivalent level of knowledge.

You’ll need to show you can deal with well-defined engineering problems and carry out well-defined engineering activities.

Chartered Member (Engineering Geologist)

If you want to be assessed for Chartered Member (Engineering Geologist), you’ll need to show you can reliably predict the nature of the ground and often work closely with geotechnical engineers. You’ll need a geology degree at honours level, a postgraduate qualification in engineering geology or be able to demonstrate equivalent knowledge.

You’ll need to show you can deal with complex engineering geological problems and activities requiring specialist and in-depth geological engineering knowledge.

INTERNATIONAL REGISTERS HAVE THEIR OWN REQUIREMENTS

International Professional Engineer

As well as meeting the standard for Chartered Membership, you’ll need:

• a Washington Accord-accredited qualification
• two years in charge of engineering work
• seven years’ professional engineering experience after graduation.

International Engineering Technologist

As well as meeting the standard for Chartered Member (Eng. Technologist), you’ll need:
• a Sydney Accord-accredited qualification
• two years in charge of engineering work
• seven years’ engineering experience after graduation.

ONLINE REGISTERS
Once you become a Chartered Member or a Chartered Professional Engineer, you’ll be included in our searchable public lists on our website.

ENGINEERING NEW ZEALAND OFFERS DIFFERENT TYPES OF ASSESSMENT

First-time Assessment
If you haven’t applied for assessment before, you’ll need to complete a First-time Assessment for the CPEng register or Chartered Membership. There’s a single assessment process for competence-based membership and registration applications, so you can choose to be assessed for CPEng and Chartered Membership at the same time.

If you already have overseas registration and/or memberships with one of our recognised international partners, your overseas recognition may be taken into account as part of the Engineering New Zealand assessment process.

Knowledge Assessment
You can become registered even if you don’t hold a recognised qualification by completing a Knowledge Assessment.

You’ll need to show you have a level of technical knowledge and understanding gained through your work and learning that is equivalent to an Accord-accredited engineering qualification.

If your Knowledge Assessment is successful, you can complete a First-time Assessment.
THE ASSESSMENT PROCESS

If you’re taking a first-time assessment, or being reassessed for CPEng, you’ll complete all five stages of the process.

STAGE 1 – PREPARATION

Go to My Membership on the Engineering New Zealand website to document your work and learning experiences and prepare your assessment application. Make sure you provide evidence that demonstrates you have the minimum standard of competence in your Practice Area.

Your evidence should include:

- an engineering qualification or equivalent knowledge
- four to six Work Records
- Learning Records (approximately 40 hours CPD per year from the last six years)
- two referees
- a description of your Practice Area and which field of engineering your practice area aligns with
- a self-review demonstrating your competence against the competence standard

STAGE 2 – VALIDATION

When your application is ready, submit it for validation. We’ll allocate you a Competence Assessment Advisor who’ll look after your application from start to finish.

Your advisor will check the information you’ve provided and will aim to give you feedback within 10 working days. They’ll let you know if you need to make any changes before submitting your application.

If you do need to make changes, try to get them done as soon as possible and then resubmit for validation.
Once we’ve validated it, you’ll be able to submit your application. When you submit your application, you’ll make an ethical declaration and pay your First-time Assessment fee.

**STAGE 3 – EVALUATION**

Your advisor will organise your assessment panel, which will usually include a Lead Assessor and a Practice Area Assessor.

Your Lead Assessor will be your main point of contact. They’re responsible for scheduling an interactive assessment. For first time assessments, your interactive assessment will be held face-to-face. Think of it as a professional conversation. If you’re being reassessed, you’ll normally have your interactive assessment via video chat or over the phone.

Your Practice Area Assessor will be the technical expert on your panel. They’ll have knowledge in an area of engineering relevant to your practice area.

The panel will use the evidence you submit and the information from your interactive assessment to evaluate your submission. They might set a written assignment or ask you for additional information.

**STAGE 4 – RECOMMENDATION**

Once they’ve got all the information they need, the panel will make a recommendation to the Competency Assessment Board (CAB) about whether to approve your application. Your Lead Assessor will let you know their recommendation.

The CAB will consider the panel’s recommendation and make a decision on your application at their monthly meeting. Occasionally the CAB asks for additional information. Your advisor will let you know if that happens.

**STAGE 5 – DECISION**

Your advisor will let you know the outcome of your application. If successful, your name will appear on the online register or membership search.

If your application is unsuccessful or the CAB made an alternative decision, you can respond. Your advisor will talk you through your options.
STARTING YOUR ASSESSMENT

GETTING STARTED

There are two stages to building your application: creating your Work and Learning Records and completing an assessment application in My Membership on our website.

If you’re an Engineering New Zealand member, you already have access. If you’re not a member, you can ask for temporary access for six months. Or why not join us as a member?

There are two sections you’ll need to use in My Membership. My Experience is where you record your qualifications, build a record of your work history (Work Records) and keep track of your learning activities (Learning Records). Assessments is where you create and submit your application for Chartered Membership and/or CPEng Registration.

HINTS AND TIPS

• Write in the first person, eg ‘I’ or ‘me’.
• Keep your Work Records and Learning Records up to date to make it quicker and easier to complete your application.
• Spend some time getting to know the Assessment Criteria before you start completing your application. Take a look at page 10 if you’re doing your first time assessment or page 19 for Continued Registration.
• Talk to people who have been through the process.
• Get in touch with us and ask for a Competence Assessment Advisor, who can help you create your Work and Learning Records.
CREATING WORK AND LEARNING RECORDS

Developing your engineering knowledge and skills throughout your career is a key part of gaining and keeping professional recognition. Track your progress through the Work and Learning Records on our website. Getting into the habit of recording your work and learning activities as you go will make it easier to assess your competence.

QUALIFICATIONS

Add your qualification details into the My Experience section before starting your application for assessment. If your qualification isn’t recognised under the relevant international Accord, provide copies of your academic transcript with information on each qualification at a course level. Make sure you have copies of your verified qualifications validated by the membership team before you submit your application.

Once your qualifications have been validated, the Membership team will set your Accord status. If it’s not recognised, get in touch with the Competence Assessment team, who’ll confirm if you need to take a Knowledge Assessment before starting an assessment.

WORK RECORDS

Use your Work Records to capture information about your engineering work. We use these records as evidence of your practical application of engineering knowledge and skills for your First-time Assessment or your reassessment. You can’t complete your assessment without these records, as they’ll be your evidence to show you meet a particular competency.

Include details about specific projects or activities you’ve worked on, including your personal role or responsibilities. Attach a couple of files as sample evidence to support your Work Record.

Set aside some time on a regular basis to create and update your Work and Learning Records

Your Work Records should include:

- the project or activity name
- a “big picture” overview, including:
  - who the work was for
  - scope and purpose
  - expected outcomes
  - other stakeholders
  - specific requirements, eg regulatory constraints
  - any other information that will help the assessors understand the nature of this work
- your role
- details about your role and contribution to the work, such as:
  - personal responsibilities
  - tasks you performed
  - the contribution you made or pieces of work you were involved with if this was part of a larger project or activity
• start date and end date
• the organisation you were working for
• sample evidence that provides evidence of your personal involvement.

Your sample evidence could include:

• designs, schematics and drawings
• calculations
• tendering documents, project plans or reports
• communications – letters/emails, notes, reviews, records of meetings or site visits, photos, more detailed project/activity write up etc.

Aim to write two to three paragraphs for each Work Record. This should be enough to outline the work and explain your involvement.

LEARNING RECORDS

Your up-to-date Learning Records will show your commitment to professional development. Create Learning Records that outline the new knowledge and skills you developed and the learning outcomes you gained. Aim for a range of learning activities that show the breadth and depth of your professional development.

Your Learning Records should include:

• the record name
• activity type, eg private reading/research, short courses/workshops, formal education and on-the-job training, technical meetings, etc
• when you completed the activity
• a brief description of what you did and what you learnt
• information about how you applied your new knowledge or how it changed the way you work
• how long you spent on the activity
• who ran the activity
• any documents that provide evidence of your learning activity, such as:
  o slides from a presentation or pages from a workbook (with notes)
  o extracts from a technical paper you read as part of research for a project.

One paragraph should be enough to provide a brief outline of each learning activity. The maximum file size for supporting documents is 20MB per file. File types you can use are jpg, jpeg, png, gif, doc, docx, xls, xlsx, ppt, pptx and pdf.
COMPETENCE STANDARDS FOR CHARTERED MEMBERSHIP AND CPENG

When you’re applying for Chartered Membership and/or CPEng, the information you supply in your Work and Learning Records will be assessed against criteria within four competence groupings.

You need to demonstrate you can carry out engineering work at a particular level of complexity. This is different depending on whether you’re applying for CPEng or one of our Chartered Memberships.

- CPEng – complex
- Chartered Member – complex
- Chartered Member (Engineering Technologist) – broadly-defined
- Chartered Member (Engineering Technician) – well-defined

Learn more about how we define complexity at the end of this guidance

ASSESSMENT CRITERIA

Assessment criteria vary slightly, depending on complexity and the overall standard and extent to which they can be demonstrated in the four competence areas.

- Competence grouping one: engineering knowledge
- Competence grouping two: developing technical solutions
- Competence grouping three: managing engineering work
- Competence grouping four: professional acumen

Aim to write about 500 words in your statement for each competence grouping while not specifically referencing your Work Records at this point.

In the fifth section, Work Items, you will be required to link your four to six Work Records that you have chosen to use in the assessment. This is where you will need to state why you have chosen these and which of the four groups these are showing evidence of.

You will also need to select two to three work files for each of these Work Records to show the assessment panel how you meet the standard of competence as this is an evidence-based assessment.

Engineering knowledge

All engineers need a solid foundation in engineering knowledge. Within your practice area, demonstrate you:

- understand and apply your knowledge of accepted principles that support:
  - widely applied good practice for professional engineering
  - good practice and local knowledge for professional engineering in the country where you work

1 See page 16 if applying for Chartered Member (Engineering Geologist).
2 If applying for CPEng and PEngGeol this knowledge needs to be in a New Zealand-specific context.
• continually update your professional engineering knowledge and skills to make sure they remain relevant.

In your statement, briefly summarise how you apply your knowledge and skills in your practice area, and how you develop them through ongoing professional development.

We want to see:

• a general description of the engineering knowledge demands in your practice area
• an understanding of the knowledge demands that support good practice in your jurisdiction, eg principles, practices, standards, codes and regulations.

Managing engineering work

All engineering professionals will manage people and projects in their career. Within your practice area, demonstrate how you:

• take responsibility for making decisions on one or more engineering activities
• manage one or more engineering activities in line with good engineering management practice
• make sound engineering judgements
• identify, assess and manage engineering risk.

In your statement, describe your engineering management and decision-making responsibilities. Tell us about how you make sound engineering judgements about the engineering activities you come across.

How do you manage engineering risk? Focus on your approach to safety, sustainability and quality management.

Professional acumen

Professionalism builds trust and instils confidence in the people you meet and work with during your engineering activities. Within your practice area, demonstrate how you:

• carry out your professional engineering activities to an ethical standard, at least equivalent to the Engineering New Zealand Code of Ethical Conduct
• recognise the likely social, cultural and environmental effects of your engineering activities
• communicate effectively with engineers and others.

In your statement, describe how your understanding of your ethical obligations influences how you carry out your engineering activities.

Make sure you show you have a clear understanding of the limits of your competence and you practise within these.

_______________________________

3 If applying for CPEng this knowledge needs to be in a New Zealand-specific context.

4 Complex, broadly-defined or well-defined activities (dependent on what assessment type you’re applying for, eg CPEng, Chartered Member, Chartered Member (Engineering Technologist) or Chartered Member (Engineering Technician)). See page 16 if you’re applying for Chartered Member (Engineering Geologist).

5 See page 16 if applying for Chartered Member (Engineering Geologist).
Summarise your general understanding of the potential social, cultural and environmental impacts of your work. Explain how your work improves the communities in which you work.

**Developing technical solutions**

Applying engineering principles to develop technical products or solutions that benefit society is a vital part of being an engineer. Within your practice area, demonstrate how you:

- define, investigate, and analyse problems in line with good practice for professional engineering
- design or develop solutions to engineering problems in line with good practice for professional engineering.

In your statement, describe the engineering activities you take part in and the engineering problems you come across. How do you analyse and resolve these problems?

Explain how you make sure the outcome is safe, sustainable and of the highest quality.

Developing a technical solution, product or outcome isn’t restricted to technical design. Engineers understand a range of activities that contribute to the development of technical solutions. The competence standard and assessment process are inclusive of all engineers working in all sorts of roles from Research and Development to design and product development, construction, production, management and leadership.

*If you’re a structural engineer, there’s some additional guidance on page 13. If you’re applying for assessment to become a Chartered Member (Engineering Geologist), use the guidance on page 16.*
ASSESSMENT CRITERIA FOR STRUCTURAL ENGINEERS

If you’re a structural engineer, this additional guidance will help you complete an application for first time assessment. Use it alongside the information on page 10 – Competence standards for Chartered Membership and CPEng.

You’ll need to provide evidence specific to your structural engineering activities for the four competence groupings in your First-time Assessment application.

ENGINEERING KNOWLEDGE

Show you understand and apply accepted principles underpinning widely-applied good practice for complex engineering.

Learn more about how we define complexity at the end of this guidance

Summarise your specialised knowledge of the behaviour of structures.

Attach two Work Records and link two or three relevant evidence sample files to these records, such as free body diagrams, engineering sketches (with appropriate annotation) and design features reports.

Make sure your evidence shows you can apply fundamental structural engineering principles and include clear, logical, handwritten calculations another engineer can easily follow. If you’re supplying solutions produced using software such as MathCAD, make sure they’re supported by evidence of your understanding and application of the structural engineering models underpinning the software used.

In the Sample Evidence box, summarise how these Work Records show you can:

- assess structural actions in typical beam and column structures, bridge structures, wall structures or in slabs, and when these are subjected to gravity and lateral loads, with and without using a computer. This is an essential skill for structural checking and analytical modelling
- assess the structural strengths and deflections of members quickly without using a computer
- define load paths (both vertical and lateral) through the overall structure and through structural details (such as in sample calculations)
- demonstrate knowledge of the properties of common structural materials
- define ductility levels and the basic failure hierarchy of a structure
- demonstrate understanding of relative stiffness and displacement compatibility.

NEW ZEALAND-SPECIFIC GOOD PRACTICE

Show you understand and apply accepted principles underpinning good practice for professional engineering that is specific to the jurisdiction in which you practice. For CPEng, you need to supply New Zealand-specific examples.

In the Statement box, explain how you take account of New Zealand’s seismicity and associated geotechnical considerations.

Attach two Work Records and link two or three relevant sample evidence files to these records that show:
how you apply design guides, such as the New Zealand Society of Earthquake Engineering (NZSEE) Engineering Assessment Guidelines

how you comply with key legislation and standards, including:
- Engineering New Zealand practice notes and guidelines
- the Building Act and New Zealand Building Code, eg structural integrity during a fire.
- loading Standards, for example AS/NZS 1170, or the NZ Transport Agency Bridge Manual
- relevant structural materials standards, for example NZS 3101 for concrete structures, NZS 3603 for timber structures and NZS 3404 for structural steel
- Resource Management Act, Health and Safety at Work Act 2015 and the Construction Contracts Act where relevant

your knowledge of materials’ technical specifications, such as steel, cement, epoxies etc.

your knowledge of the skill base and capability of the New Zealand construction industry and its practices.

your knowledge of material durability and an accredited supply chain.

how you maintain currency

your knowledge and understanding of your practice field and where it connects with other fields.

In the Sample Evidence box, summarise why your Work Records are relevant for New Zealand-specific good practice. Explain how your samples provide evidence of critical detailing for seismic actions and structural earthquake engineering as practised in New Zealand.

INVESTIGATION AND ANALYSIS

Describe how you have defined, designed, investigated, analysed and developed solutions for complex engineering problems in line with good practice for professional engineering.

In the Statement box, summarise how you investigate and assess options, and define and analyse complex structural problems with only limited assistance from more senior engineers.

Attach two supporting samples from your Work Records and link two or three relevant sample files that show how you:

- define constraints for the designer to work within, such as building architecture, available materials, site constraints, operational requirements and budget
- identify missing or required information, for example
  - site related problems, such as ground conditions – is the structure likely to be affected by settlement?
  - wind analysis – are wind tunnel tests required?
- develop briefs for external consultants to gather missing information
- define loads
- define acceptance criteria for key parameters
- research material properties, eg reinforced concrete – shrinkage, early age strength, etc.

Modelling and analysis

- Selecting an appropriate analytical process – static vs. dynamic.
• Defining models including boundary conditions, eg soil structure interaction, staged construction considerations, diaphragm flexibility etc.
• Conducting analysis and correctly interpreting results, eg choosing an appropriate building period, correctly determining diaphragm design actions, etc.
• Verifying the authenticity and conducting sensitivity analysis of results.

If you’re a first-time applicant, the calculations you submit could include basic checks, eg to show you have checked the sum of reactions and the deflected shapes.

**Designing and developing solutions**

• How the structural form evolved to meet the constraints, eg constructability considerations, resources, etc.
• How load paths (vertical and lateral) are identified for gravity, seismic and wind loadings.
• How the materials used were suitable for the solution.
• How the subsystems were designed and how standardisation opportunities were considered.
• How size of members, reinforcing bars, length of welds, etc have been designed.
• How **constructability** has been considered.
• How an appropriate observation/monitoring schedule for critical parts of the construction process was developed.
• Recognition of the need for expert assistance and a proactive approach to peer review.

In the Sample Evidence box, summarise why the Work Records are relevant and how the files prove you analyse, define, investigate, design or develop solutions to complex engineering problems.

**How we define low, medium and high-rise structural engineering**

• Low rise construction: All buildings up to and including 3 stories
• Medium rise: All buildings from 4 to 20 stories
• High rise: All buildings 21 stories and over
When you’re applying for Chartered Membership, the information you supply in your Work and Learning Records will be assessed against assessment criteria within four competence groupings.

You’ll need to demonstrate your competence at managing complex engineering geological problems and activities that require in-depth engineering geological knowledge.

Learn more about how we define complexity at the end of this guidance

ASSESSMENT CRITERIA

To become a Chartered Member (Engineering Geologist), you need to meet four assessment criteria within an engineering geology context:

Engineering Geological Knowledge

All engineers need a solid foundation in engineering knowledge. Within your practice area, demonstrate you:

- understand and apply your knowledge of accepted principles that support:
  - widely-applied good practice for professional engineering geology
  - good practice and local knowledge for professional engineering geology in the country where you work
- continually update your professional engineering geology knowledge and skills to make sure they remain relevant.

In your statement, briefly summarise how you apply your knowledge and skills in your practice area, and how you develop them through ongoing professional development.

Make sure your summary includes:

- a general description of the engineering geology knowledge demands in your practice area
- an understanding of the knowledge demands that support good practice in the jurisdiction in which you practice, eg principles, practices, standards, codes and regulations.

Managing engineering work

All engineering geological professionals will manage people and projects in their career. Within your practice area, demonstrate how you:

- take responsibility for making decisions on one or more complex engineering geology activities
- manage one or more complex engineering geology activities in line with good engineering management practice
- make sound professional engineering judgements
- identify, assess and manage uncertainty and geotechnical risk
- consider safety, sustainability and quality when managing engineering geology work.
Many Chartered Members (Engineering Geologists) work in the overlapping area of the diagram. To be successful when applying to become a Chartered Member (Engineering Geologist), you’ll need to provide evidence that covers the full breadth of Engineering Geological activity.

![Diagram](image)

In your statement describe your engineering management and decision making responsibilities.

Tell us about the complex engineering geology activities you come across and how you make sound engineering judgements in these situations. How do you manage engineering risk? Focus on your approach to safety, sustainability and quality management.

**Professional acumen**

Professionalism builds trust and instils confidence in the people you meet and work with during your engineering activities. Within your practice area, demonstrate how you:

- carry out your professional engineering geology activities to an ethical standard, at least equivalent to the Engineering New Zealand Code of Ethical Conduct
- recognise the likely social, cultural and environmental effects of professional engineering geology and engineering activities
- communicate effectively with engineers and others.

In your statement, describe how your understanding of your ethical obligations influences how you carry out your engineering geology activities.

Make sure you show you have a clear understanding of the limits of your competence and you practise within these.

Summarise your understanding of the potential social, cultural and environmental impacts of your work. Explain how your work improves the communities in which you work.

**Developing technical solutions (general assessment)**

Applying engineering principles to develop technical products or solutions that benefit society is a vital part of being an engineer. Within your practice area, demonstrate how you:
• recognise, define, investigate and analyse complex geological engineering problems in line with good practice for professional engineering geologists
• analyse and communicate complex engineering geological problems in order to inform development of engineering solutions in line with good practice for professional engineering geologists

In your statement, describe the engineering activities you take part in and the complex engineering geology problems you come across. How do you analyse and resolve these problems?

Explain how you make sure the outcome is safe, sustainable and of the highest quality.

Developing a technical solution, product or outcome isn’t restricted to one task or activity. Engineering geologists take part in tasks which include, but aren’t confined to, researching, planning, investigating and supervising. The competence standard and assessment process are inclusive of all engineering geologists working in all sorts of roles.
REASSESSMENT FOR CONTINUED CPENG REGISTRATION

When you’re applying for reassessment, the information you need to supply will be assessed against specific work and learning outcomes for competence-based assessments.

As with first time assessment, you need to demonstrate your current competence to perform engineering work at a complex level in your application for reassessment.

REASSESSMENT CRITERIA

We need to see two annotated Work Records that show your continued competence as a practicing engineer.

In your statement:

• describe how you maintain your skills as a professional engineer
• explain what makes your engineering work complex
• identify any New Zealand-specific regulatory, technological and good practice changes in your field since your last assessment. Explain how you address and apply these changes.
HOW WE DEFINE COMPLEXITY

When you’re applying for competence-based membership or registration, you need to show you’re competent to carry out engineering work at a particular level of complexity. The level will be different depending on which type of membership or register you’re applying for.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chartered Member and CPEng</strong>&lt;sup&gt;7&lt;/sup&gt;</td>
<td><strong>Complex engineering problems</strong>&lt;sup&gt;7&lt;/sup&gt;</td>
</tr>
<tr>
<td>Problems that include some or all of the following:</td>
<td></td>
</tr>
<tr>
<td>• Wide-ranging or conflicting technical, engineering, and other related issues</td>
<td>• Diverse resources, eg people, money, equipment, materials and technologies</td>
</tr>
<tr>
<td>• No obvious solution, which means an original method of analysis is needed.</td>
<td>• Resolving critical problems that occur when a variety of technical, engineering and other related issues interact</td>
</tr>
<tr>
<td>• Can’t be resolved without in-depth engineering knowledge</td>
<td>• New materials, techniques or processes, or the innovative use of existing materials, techniques, or processes</td>
</tr>
<tr>
<td>• Issues not often experienced</td>
<td>• Significant consequences in a range of contexts</td>
</tr>
<tr>
<td>• Aren’t covered by the standards and codes of practice for professional engineering</td>
<td></td>
</tr>
<tr>
<td>• Diverse groups of stakeholders with a wide range of needs</td>
<td></td>
</tr>
<tr>
<td>• Significant consequences in a range of contexts</td>
<td></td>
</tr>
</tbody>
</table>

| Chartered Member (Engineering Technologist)<sup>8</sup> | **Broadly-defined engineering problems**<sup>8</sup> | **Broadly-defined engineering activities**<sup>8</sup> |
| Problems that include some or all of the following: | Activities or projects that include some or all of the following: |
| • A variety of factors that may create conflicting constraints | • A variety of resources, eg people, money, equipment, materials, information and technologies |
| • Can be solved by applying proven analysis techniques | • Resolving occasional interactions between limited technical, engineering and other related issues where only a few conflict |
| • Knowledge of principles and applied procedures or methods | • Using new materials, techniques or processes in innovative ways |
| • Belong to groups of familiar problems that are solved in well-accepted ways | |

<sup>7</sup> The wording of these definitions has been slightly simplified from the original Definitions for purpose of minimum standard for registration in the Chartered Professional Engineers of New Zealand Rules (No 2) 2002. Read them in their original form.

<sup>8</sup> These definitions are a simplified version of those found in Schedule 1 of the Regulations for Election or Transfer to Engineering New Zealand Membership Classes. Read them in their original form.
<table>
<thead>
<tr>
<th>Chartered Member (Engineering Technician)²</th>
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</thead>
<tbody>
<tr>
<td><strong>Well-defined engineering problems</strong></td>
</tr>
<tr>
<td>Problems that include some or all of the following:</td>
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<tr>
<td>• Several issues, but only a few that result in conflicting constraints</td>
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<tr>
<td>• Can be solved using a systematic approach</td>
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<tr>
<td>• Resolved with limited theory but extensive practical knowledge</td>
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<tr>
<td>• Frequently experienced and so familiar to most practitioners in the practice area</td>
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<tr>
<td>• Covered by standards and/or documented codes of practice</td>
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<tr>
<td>• Limited range of stakeholders with differing needs</td>
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<tr>
<td>• Consequences that are important locally but aren’t far-reaching</td>
</tr>
<tr>
<td>• Discrete components of engineering systems</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Chartered Member (PEngGeol)²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Complex engineering geological problems</strong></td>
</tr>
<tr>
<td>Problems that include some or all of the following:</td>
</tr>
<tr>
<td>• Wide-ranging or conflicting engineering, engineering geological and other related issues</td>
</tr>
<tr>
<td>• Not easily recognised, understood or solved, which means an original method of analysis is needed</td>
</tr>
<tr>
<td>• A wide range of issues that might be in an unfamiliar setting</td>
</tr>
<tr>
<td>• Aren’t covered by guidelines, standards and codes of practice for professional engineering geology</td>
</tr>
</tbody>
</table>
• Diverse groups of stakeholders with a wide range of needs
• Significant consequences in a range of contexts
GLOSSARY OF COMMON TERMS

Assessment criteria: the standard we use to assess engineers on their competence.

First time assessment: a competence-based evaluation process for engineers applying for a national or international Register or for Chartered Membership for the first time.

Reassessment: a competence-based evaluation process for engineers who wish to maintain registration on a national or international Register.

Assessment panel: usually made up of a Lead Assessor and a Practice Area Assessor, the panel evaluates your submission by reviewing your assessment application and the information you give during your interactive assessment, before providing recommendations to the Competency Assessment Board.

Chartered Membership: the Engineering New Zealand class of membership for engineering professionals who have demonstrated their engineering competence to an internationally-recognised benchmark.

Chartered Member CMEngNZ: solves complex engineering problems and activities by applying specialist engineering knowledge and first principles to their work.

Chartered Member CMEngNZ [PEngGeol]: solves complex engineering geological problems and activities by applying in-depth engineering geology knowledge.

Chartered Member CMEngNZ [Engineering Technologist]: solves broadly-defined engineering problems and activities by applying knowledge of engineering principles.

Chartered Member CMEngNZ [Engineering Technician]: solves well-defined engineering problems and activities through knowledge and use of established analytical techniques and procedures.

Chartered Professional Engineer CPEng: solves complex engineering problems and activities, which requires applying specialist engineering knowledge and first principles to their work.

Competence Assessment Advisor: a member of the Engineering New Zealand Professional Standards team assigned to your application and your main point of contact once you submit your application for validation.

Competence Assessment team: members of the Engineering New Zealand Professional Standards team responsible for the assessment process. The team is made up of advisers and assessors.

Competency Assessment Board: the group of senior engineers that accepts or rejects recommendations made by the assessment panel.

Complexity: one of the key ways we differentiate between the competence registers. Learn more about how we define complexity

Dublin Accord: the agreement for the international recognition of Engineering Technician qualifications.

Educational accord: an agreement that benchmarks educational standards. If you hold an Accord-accredited qualification, you’ll benefit from mutual recognition of your qualification between signatory countries.
**Engineering Geologist:** deals with complex engineering geological problems and activities requiring specialist and in-depth geological engineering knowledge.

**Engineering Professional:** deals with complex engineering problems and activities requiring the application of specialist engineering knowledge and work from first principles.

**Engineering Technologist:** deals with broadly-defined engineering problems and activities that require knowledge and use of principles and applied procedures.

**Engineering Technician:** deals with well-defined engineering problems and activities requiring knowledge and use of established analytical techniques and procedures.

Interactive Assessment: professional conversations held face-to-face for first time assessments, and by video chat or over the phone for reassessment.

**Knowledge Assessment:** evaluates if you have gained an appropriate level of technical knowledge and understanding through your work or study to practice at the level of a professional engineer.

**Lead Assessor:** Chartered Professional Engineer in charge of managing the assessment process.

**Learning Record:** details of the continuing professional development activities you’ve completed to provide evidence of your commitment to professional development.

**My Membership:** a secure area of the Engineering New Zealand website where you create Work and Learning Records and build your application for assessment.

**Practice Area:** a combination of the area in which you hold specialised engineering knowledge and the nature of the activities you perform. These may change over the course of your career but your competence will be assessed for your current area of engineering practice.

**Practice Area Assessor:** the technical expert on your assessment panel who has knowledge in an area of engineering relevant to your own practice area/field.

**Practice Field:** indicates the nature of your engineering work.

**Recognised external authorities:** overseas engineering registration authorities that are signatories of International Engineering Agreements.

**Sydney Accord:** the agreement for the international recognition of Engineering Technologist qualifications.

**Washington Accord:** the agreement for the international recognition of engineering qualifications.

**Sample evidence:** documents you include in your Work Record to provide evidence of your personal involvement in a project or activity.

**Work Record:** information about the projects and/or activities you’ve carried out in your engineering work, used in competence assessments to demonstrate the practical application of your engineering knowledge and skills.

**Online access:** an option for non-members to gain access to the My Membership online area for six months to complete an application for assessment.
FREQUENTLY ASKED QUESTIONS

What's the difference between Chartered Membership and Chartered Professional Engineer registration (CPEng)?

Chartered Members belong to Engineering New Zealand and get all the perks of being part of our community. CPEng is different from membership and is a registration under the CPEng Act 2002.

CPEng is only open to professional engineers, who must demonstrate an ability to deal with complex engineering problems and activities. Chartered Membership is also available to professional engineers, but additional categories provide recognition for engineering technologists, engineering technicians and engineering geologists.

Both require a similar assessment. The competence standard for both are effectively the same, but CPEng registration requires evidence of New Zealand-specific good practice and reassessment at least every 6 years. This makes Chartered Membership more accessible for engineers practising overseas, and provides direct entry for engineers who have been assessed in an equivalent overseas jurisdiction, eg CEng (UK) or CPEng (Australia). Chartered Membership isn't reassessed because you'll be doing ongoing professional development to stay current.

Both CPEng and Chartered Membership are underpinned by the same Code of Ethical Conduct and a fair, robust and proportionate complaints and disciplinary process.

How many hours of professional development activity do I need to do each year?

You need to complete 40 hours of continuing professional development (CPD) each year to demonstrate you’re actively keeping your engineering knowledge and skills up to date.

What should I include in the “complexity” box? How long should my answer be?

In one or two paragraphs, describe how each of your sample Work Records relates to two or three of the 11 bullet points in the Engineering New Zealand definition of complexity for the relevant Register.

I can’t attach any documents because my work is highly confidential/the property of my employer. What should I do?

We take confidentiality seriously and have put processes in place to protect your application.

- Engineering New Zealand assessors sign a confidentiality agreement prohibiting them from disclosing any aspect of your assessment to anyone except the relevant Practice Area Assessor(s), Knowledge Assessor(s), Competency Assessment Board members or Engineering New Zealand staff.
- We accept Work Record files that have been redacted to protect confidential information.
- You’ll be given the opportunity to review who we’ve assigned to your assessment panel before you start your assessment. If you have any concerns, we’ll be happy to assign an alternative panel member.

What if I don’t have any files to attach to my work records?

Because our competence assessments are evidence-based, you need to provide files as evidence of your experience. Email correspondence can be used as evidence.
How many evidence files can I attach?
Our general guidance is quality over quantity. One to four files are usually enough to provide sufficient evidence of your work. Give your assessors only the relevant information and/or be specific about where your evidence is in the Work Record files. For example, specify page numbers, sections, calculations, photograph titles, chart details etc.

When am I due to submit? Can I extend the due date?
You’ll receive a reminder email three to six months before your reassessment is due. If you don’t hear from us, get in touch and we’ll confirm the date. Extensions are determined on a case by case basis.

How much does assessment, membership and registration cost?
You can find the latest prices on our website. There’s a one-time charge for first-time assessments and Knowledge Assessments. The fee for reassessment is included in your annual registration fee.

What’s the process after I submit for validation?
Our Competence Assessment team will aim to get back to you within five working days. They’ll provide comments and give you a call or email to let you know if you need to make any changes before submitting your application for assessment. Try to make any changes as soon as possible, so you can submit your application.

What’s expected of me at the interview? How can I prepare?
The interview is a professional conversation and is your chance to show you have a clear understanding of the work you’re presenting. The Practice Area Assessor will ask you questions about the evidence you submitted in your application to verify your technical expertise. You can prepare by reviewing your application and being confident about the work you are presenting.

If I’m successful, when will my name appear on the register?
Your Competence Assessment Advisor will add your name to the relevant register as soon as possible after the Competency Assessment Board (CAB) has approved your application.

How long is the assessment process likely to take?
Once you’ve completed the validation stage and submitted your final application to us, it will take around 30 days to assign you an assessment panel. After that, it’s likely to take 30 to 60 days to complete the process.

I’m on an overseas register. How do I gain mutual recognition?
If your Registration is recognised under the International Engineering Alliance (IEA), you’ll be eligible for automatic Chartered Member status. From here, you’ll need to complete a shortened assessment to become CPEng. In that assessment, you’ll need to demonstrate your knowledge of New Zealand-specific standards. Email assessment@engineeringnz.org for further information.

I don’t have two equivalent referees. Can I still apply?
You need to provide CPEng/CMEngNZ referees with your application, although they don’t have to be in your practice field. If you’re struggling to find referees, try attending Engineering New Zealand events and branch meetings and start networking now. Find the latest events on our website.
How many work records should I use in my application?
For a first-time assessment, we recommend you use no more than four to six Work Records. You’ll need to attach two of these Work Records for each of the assessment criteria, so you’ll want to re-use some of your records across multiple criteria.

How do I access an assignment?
If your assessment panel requires any further information to help make their recommendation, they will likely request this through an assignment. You will be sent an email which will provide a link you can open to review the requested information. If this link does not work, or if it has not arrived, you are also able to open your current application where this will appear as one of the bullet point criteria within the application.