

Engineering Geologist guidance

June 2024

If you're an engineering geologist, use this additional guidance to complete your Chartered assessment.

You'll need to demonstrate your competence at managing complex engineering geological problems and activities that require in-depth engineering geological knowledge, across the four competencies:

1. Engineering knowledge
2. Managing engineering work
3. Professional acumen
4. Developing technical solutions

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:

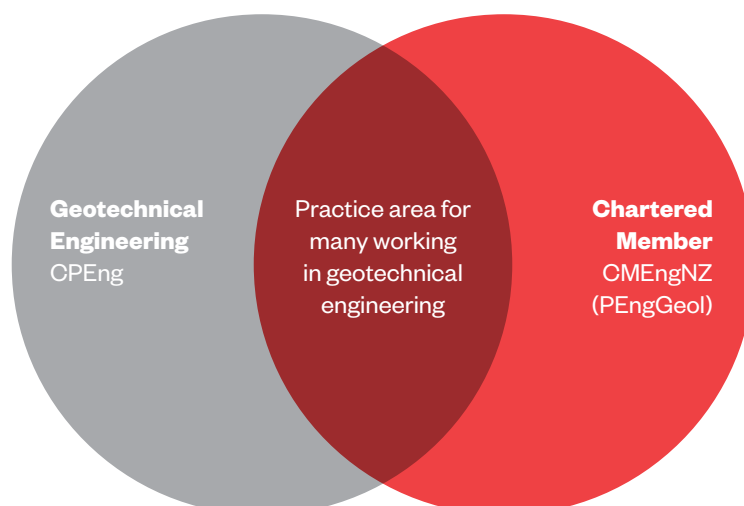
- » a general description of the engineering geology knowledge demands in your practice area
- » an understanding of the knowledge demands that support good practice in the jurisdiction in which you practice, eg principles, practices, standards, codes and regulations.

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.



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

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.



**REGISTRATION
AUTHORITY**
FOR CHARTERED PROFESSIONAL ENGINEERS



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The Registration Authority under the Chartered Professional Engineers of New Zealand Act 2002 is the Institution of Professional Engineers New Zealand (trading as Engineering New Zealand).