REGISTRATION AUTHORITY
FOR CHARTERED PROFESSIONAL ENGINEERS

Knowledge Assessment

Applicant guidance

December 2023

Contents

Why you need a Knowledge Assessment

There are two reasons you may need a Knowledge Assessment.

1. You are planning to immigrate to New Zealand. Immigration New Zealand may ask you to provide a letter from us certifying you meet the benchmark requirements to apply for registration as a Chartered Professional Engineer in New Zealand. The benchmark is a Washington Accord-accredited qualification or equivalent knowledge. Before we can provide a letter, we'll need to check your credentials.
2. You would like to apply to become a Chartered Member or a Chartered Professional Engineer. To be eligible to apply to become Chartered you must have a Washington Accord-accredited qualification (In New Zealand this is an accredited 4-year Bachelor of Engineering (Honours)) or be able to demonstrate equivalent knowledge.

Whether you are immigrating or wanting to apply for CPEng, we'll need to determine whether you have a Washington Accord-accredited equivalent qualification. In both situations, your first step is to request a credential check. If your credential check finds that you don't have a Washington Accord-accredited qualification or recognised equivalent, we can then assess whether you've gained the equivalent level of knowledge.

To demonstrate you've gained the equivalent level of knowledge, you'll need to complete our 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 that of a Washington Accord-accredited qualification.

You'll need to demonstrate equivalent knowledge in eight areas, known as Elements. The Elements are determined by the knowledge profile expected of a graduate of Washington Accord-accredited qualification[1]. The Elements are:

1. Natural sciences knowledge
2. Mathematical knowledge
3. Engineering fundamental knowledge
4. Specialist engineering knowledge
5. Design process knowledge
6. Engineering practice knowledge
7. Engineering in society knowledge
8. Research-based knowledge

WARNING: Having your Knowledge Assessment written by another person or persons (this includes all hiring or use of any third-party professional writers/companies to assist with completing your documentation) constitutes unethical behaviour and may result in serious consequences including but not limited to:

1. immediate rejection of the application along with the imposition of a stand-down period before you can reapply and/or
2. reporting of your details to Immigration New Zealand.

1 The Elements are assessed against the NZQA level. You will need to reach NZQA level 8 in at least one of these areas in order to pass the assessment.

Knowledge Assessment pathways

When you request a Knowledge Assessment, you'll need to let us know:

a. whether you need the Knowledge Assessment for immigration purposes (so we know you need a letter for Immigration New Zealand), and
b. whether you need us to fast track your Knowledge Assessment. There is an extra charge for the fast tracked option.

There are two Knowledge Assessment pathways:

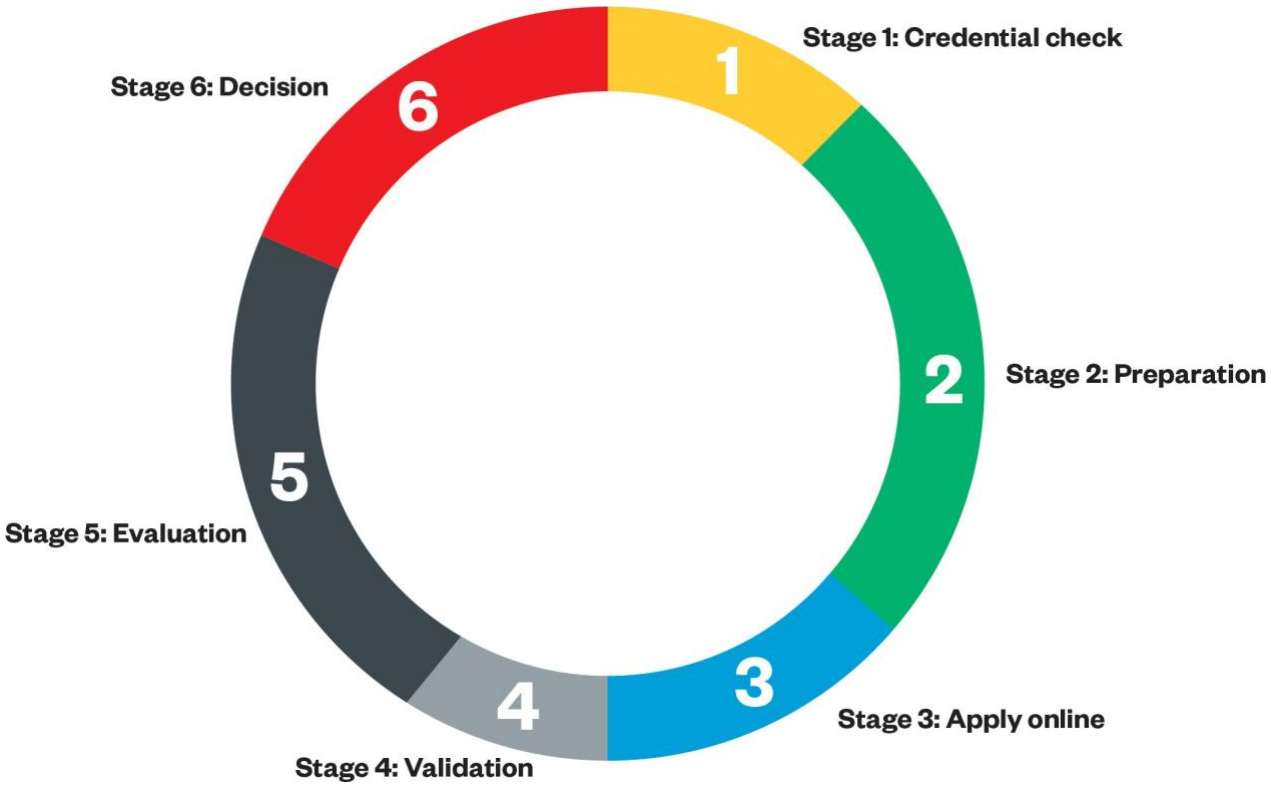
1. **Standard Knowledge Assessment:** This option is for all applicants who do not need their application fast tracked for immigration.
2. **Fast Tracked Knowledge Assessment:** This option is only available to applicants who need a Knowledge Assessment for immigration purposes.

Our team will open the correct option for you depending on your credentials and requirements. The table below indicates the cost and timing for the Knowledge Assessment pathways:

Pathway	Cost (excl. GST)	Approximate Processing time[2]	Eligibility
Standard	$1,292.50	Approximately 50 working days	All applicants
Fast tracked	$1,792.50	Approximately 25 working days	Applicants needing a Knowledge Assessment for immigration.

Our process

Your Knowledge Assessment application will go through the following stages:



2 These timeframes are based on current workloads, and are subject to change.

Stage 1: Credential check

We use the credential check process to check your academic qualification(s) and/or credentials against the global standard defined through the Washington Accord. Credential checks are a way to recognise formal engineering qualifications and credentials that we are able to benchmark through the Washington Accord or other bilateral and multilateral recognition agreements that we are signatories to.

If your credential check outcome does not meet the Washington Accord status, it does not mean that you are ineligible for CPEng, or immigration. It just means we were unable to determine the level of your engineering knowledge through our international benchmarking networks. If this is the case, you'll have the option to complete a more detailed Knowledge Assessment to demonstrate the required level of engineering knowledge needed to satisfy your CPEng eligibility criteria or immigration requirements.

Find out more about credential checks.

Stage 2: Preparation

Defining the standard

You'll need to demonstrate your equivalent knowledge in eight areas, known as Elements. The Elements are determined by the knowledge profile expected of a graduate of a Washington Accord-accredited qualification.

Each Element is described below, together with the performance indicators we're looking for. You'll need to provide evidence for at least a majority of each Element's performance indicators.

NOTE: Assessment of Elements 1–4 draws particularly on your formal academic study. Make sure you include written statements about what papers you studied in these areas.

ELEMENT 1 - Natural sciences knowledge

DESCRIPTION

A systematic, theory-based understanding of the natural sciences applicable to the discipline eg calculus-based physics.

PERFORMANCE INDICATORS

- Fundamental quantitative knowledge underpinning nature and its phenomena.
- Knowledge of the physical world including physics, chemistry, and other areas of physical or biological science relevant to your discipline.
- Knowledge of key concepts of the scientific method and other inquiry and problem-solving processes.

ELEMENT 2 – Mathematical knowledge

Mathematical knowledge is the most difficult area to bridge using on-the-job training. If you hold a Dublin Accord qualification and you're attempting to apply through study of a Dublin Accord qualification followed by purely on-the-job training, this is unlikely to be bridged without some level of further study. Knowledge at an NZQA level 6 in Mathematics is required for all fields of engineering in the Knowledge Assessment.

DESCRIPTION

Conceptually based mathematics, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modelling applicable to the discipline.

PERFORMANCE INDICATORS

- Knowledge of mathematics, statistics and numerical methods that supports the development or application of models that replicate 'real world' behaviours.
- An understanding of the assumptions behind theoretical models and their impacts in the development and use of those models.
- Ability to organise and analyse a data set to determine its statistical variability.
- Knowledge of trigonometry, probability and statistics, differential and integral calculus, and multivariate calculus that supports the solving of engineering problems.
- Basic knowledge of computer programming

ELEMENT 3 – Engineering fundamental knowledge

DESCRIPTION

A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.

PERFORMANCE INDICATORS

- Ability to define key factual information in core areas of fundamental engineering knowledge relevant to your engineering discipline.
- Evidence of sufficient depth of knowledge of engineering fundamentals to demonstrate an ability to think rationally and independently within and outside a chosen field of specialisation.
- Evidence of sufficient breadth of knowledge of engineering concepts and principles to allow subsequent professional development across a broad spectrum of engineering.
- Ability to apply knowledge of engineering fundamentals to solve complex engineering problems relevant to your discipline.

ELEMENT 4 – Specialist engineering knowledge

DESCRIPTION

Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline, much is at the forefront of the discipline.

PERFORMANCE INDICATORS

- Evidence of sufficient depth of knowledge to support practice within one or more recognised field of engineering.
- Evidence of a systematic understanding of the coherent body of knowledge related to a particular field of engineering; its underlying principles and concepts; its usage and applications; and analytical and problem-solving techniques.
- Ability to apply specialist engineering knowledge to solve complex engineering problems.

NOTE: Assessment for Elements 5–8 focus on the design process. Make sure you include a design example and an analysis example for each of these Elements.

ELEMENT 5 - Design process knowledge

DESCRIPTION

Knowledge that supports engineering design in a practice area.

PERFORMANCE INDICATORS

- Ability to undertake research and analysis to support the design process.
- Ability to investigate a situation or the behaviour of a system and identify relevant causes and effects.
- Ability to develop from first principles and construct mathematical, physical and conceptual models of situations, systems and devices, with a clear understanding of the assumptions made in development of such models.
- Application of technical knowledge, design methods and appropriate tools and resources to design components, systems, or processes to meet specified criteria.
- Ability to analyse the advantages and disadvantages of alternative design options to support the development of an optimised design alternative.
- Ability to analyse the constructability or manufacturing feasibility of a project or product.
- Experience of personally conducting a significant design exercise, providing evidence of the consideration of various realistic constraints, such as safety, reliability, ethics, economic factors, aesthetics and social impact.
- Ability to apply appropriate design methods in solving complex engineering problems.

ELEMENT 6 - Engineering practice knowledge

DESCRIPTION

Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.

PERFORMANCE INDICATORS

Tools and technologies

- Awareness of critical issues affecting current technical and professional practice.
- A
    - Applies such tools to simulate behaviour or model outcomes that might resolve a complex engineering problem, checks the results for validity, evaluates results and recognises the limitations on those results
- Appreciation of the accuracy and limitations of such tools and the assumptions inherent in their use.
- Knowledge of materials and resources relevant to the discipline and their main properties and ability to select appropriate materials and techniques for particular objectives.
- Knowledge of a wide range of laboratory procedures relevant to the discipline and a clear understanding of the principles and practices of laboratory safety.
- Knowledge of current types of systems, equipment, information technology, and specifications that accomplish specific design objectives.

Communication

- Write correspondence that clearly and concisely communicates facts and circumstances related to a project, product, or process
- Plan, prepare and deliver an oral presentation, with appropriate visual aids and other supporting materials
- Communicate effectively with both technical and non-technical individuals and audiences.

Engineering management principles and economic decision making

- Apply appropriate tools and techniques to monitor project schedules and costs.

Teamwork

- Operate as an effective team member or leader of a multidisciplinary team.

ELEMENT 7 - Engineering In society knowledge

DESCRIPTION

Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development represented by the 17 UNSDGs.

PERFORMANCE INDICATORS

- Demonstration of ethical behaviour in accordance with ethical codes of conduct and established norms of professional conduct.
- Evidence of making ethical decisions and regulating one's own professional conduct in accordance with a relevant code of ethical conduct.
- Implementation of appropriate health and safety practices.
- Application of safe practices in laboratory, test and experimental procedures.
- Awareness of the social, cultural and environmental effects of their engineering activities.
- Awareness of sustainable technologies and sustainable development methodologies.
- Ability to identify risks as a consequence of engineering compromises made as a result of project or business constraints, and understanding of techniques to mitigate, eliminate or minimise risk.
- Knowledge of appropriate risk management techniques used to assess the accuracy, reliability, and authenticity of information.
- Understanding of the role of quality management systems tools and processes.

ELEMENT 8 - Research based knowledge

DESCRIPTION

Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues

PERFORMANCE INDICATORS

- Advanced knowledge in at least one area within your discipline, to a level that engages with current developments in that area.
- Understanding of how new developments relate to established theory and practice and to other disciplines with which they interact.
- Describe advancements in engineering research and technology and science in a particular area of engineering practice.
- Commitment to lifelong learning/Continuing Professional Development demonstrates their professional development within their practice area.

How to prepare

Read through the guidance document

Familiarise yourself with the requirements set out in this guidance document before you start compiling your application.

Summary statement form

Appendix A is a summary statement form. Use it to track your progress against the Elements, and think about the evidence you could use to demonstrate you meet the standard. We encourage you to check your summary statement with your manager or mentor and discuss potential development areas to focus on as you prepare for your application.

Your completed summary statement form will need to be uploaded as part of your application. Please upload this document in the CV area of the application portal.

Read through the application form

Appendix B provides an offline version of the online application to help you prepare. This will help ensure there are no surprises when you start completing your real application online.

Prepare your CV

Where possible, your CV should be no more than three pages and should allow an Assessor to see your work history since you graduated.

- ✓ Provide the name, location and contact details of employing organisations, as well as the dates and duration of employment, the title of your position, details of your role and how your work demonstrates your Washington-Accord equivalent knowledge in accordance with the 8 Elements.
- ✓ Clearly list your qualifications, year the qualification was obtained, and awarding education institution(s).

- ✗ A list of projects you have worked on with no information on your roles and responsibilities.

Note: Your CV may be verified by Engineering New Zealand through our partner, Qualification Check. Please be sure to provide accurate information, as inaccuracies may result in your application being rejected and/or reporting of your details to Immigration New Zealand.

Continuing Professional Development (CPD)

CPD is not required as part of the Knowledge Assessment application, but we encourage you to keep track of your CPD records and have them ready when you're ready to register as a Chartered Professional Engineer (CPEng).

Stage 3: Application

a) Profile: Check and update your information

During your credential check, you would have already signed up for an account to be able to access the application portal and upload your credentials. Please ensure all the credentials you wish to include in your Knowledge Assessment are uploaded to your profile.

The credentials you upload should include:

- academic transcripts for all engineering qualifications, and any other significant tertiary qualifications (or parts thereof). If your original transcript(s) are not in English, a certified English translation[3] is required
- a single PDF file for each of your qualifications, giving a brief description (20–30 words) of the content of each paper/unit of the qualification. Remember, assessment of Elements 1–4 is almost entirely based on your academic transcripts, supplemented by work sample evidence where academic equivalence has not been achieved
- a copy of your CV that includes all the information required.

b) Request a Knowledge Assessment

In the portal, request a Knowledge Assessment. You'll need to let us know if you require your applicationto be fast tracked. The fast track option is only available to applications that are required for immigration.

c) Complete and upload your summary statement form

You need to complete the summary statement form (Appendix A) to explain how your studies and/or work experience demonstrate you meet the requirements for Washington Accord equivalence. You need to include references to the evidence you have provided in step a) and write about how your qualifications, together with your work samples meet the standard for Washington Accord equivalence on each of the 8 Elements. Upload this form in the 'CV and summary statement' area of the application form.

d) Self-assessment

In this section you need to provide statements of self-review explaining how you meet the standard for Washington Accord equivalence. The work you have already done on your summary statement form will enable you to complete this section easily. Make sure you reference your evidence (your qualifications and work samples) including specific sections and page numbers, to back up your statements. Aim for 500 words per Element.

It will help your Assessor if you can directly link each piece of evidence to specific Performance Indicators. For example.

In work sample 1, file xxx, I calculated xxx indicating my use of "knowledge of trigonometry, probability and statistics, differential and integral calculus, and multivariate calculus that supports the solving of engineering problems".

3 The translation must be done by a professional licensed/certified translator.

e) On-the-job training as evidence

If you're providing on-the-job training as evidence, you're required to submit a maximum of 4 work samples that demonstrate application of your knowledge. Work samples can be used as evidence for any of the 8 Elements, but the priority is that one or more should be evidence of the requirement of Element 5 to demonstrate the "ability to apply appropriate design methods in solving complex engineering problems." Complex problems are defined as having some or all of the following characteristics.

» Involve wide-ranging or conflicting technical,non-technical issues (such as ethical, sustainability, legal, political, economic, societal) and consideration of future requirements;

» Have no obvious solution and require originality in analysis;

» Involve infrequently encountered issues or novel problems;

» Address problems not encompassed by standards and codes of practice for professional engineering;

» Involve collaboration across engineering disciplines, other fields, and/or diverse groups of stakeholders with widely varying needs;

· Are high level problems including many component parts or sub-problems that may require a systems approach.

For each work sample, provide a statement as to how the work sample demonstrates evidence of a specific learning Element, giving examples and page numbers.

Provided work samples should be clear and professionally presented so an Assessor can easily confirm your engineering knowledge.

✓ Evidence statements clearly state how each file provided is relevant to the assessment, and which Element it relates to.

✓ The work samples provided clearly show this as being your own work.

✓ Evidence of use of calculations are supported, where appropriate, by computer modelling to predict the performance of an engineering system.

X Drawings or calculations only, with no supporting documentation.

X Pages of printed spreadsheets, with unclear calculations or derivations. Evidence that cannot be directly attributed to you as author

Tips for success

» When writing up your submission remember to talk about yourself using 'I', 'me' or 'my'. The Assessors don't want to know what the team did as part of a project – they're only interested in your involvement.

» Exercise judgement and submit your best evidence. Aim for no more than 4 work samples with 3 files per work sample.

Stage 4: Validation

The next step is to submit your application to our team for validation. We'll check the information you've provided and will aim to give you feedback within 10 working days. We'll let you know if you need to make any changes before your application is sent to an Assessor. Our advisors will check the completeness of your application and are not qualified to evaluate the content of the information you provide. Therefore, you may still be asked to submit additional information by your Assessor at the evaluation stage, which is the next stage of your assessment.

If your Advisor asks you to make changes, it's in your best interest to get them done as soon as possible and resubmit for validation. If you take longer than two weeks to do so, your application is likely to be delayed. You have a maximum of 30 days to provide the requested information; if this is not provided, your application will be closed with no refund.

When going through your application, our team go through the following validation checklist:

- ◯ All personal details have been provided
  - This includes employer, title and role
- ◯ Verified credentials have been provided
- ◯ Academic transcripts have been provided
- ◯ A single PDF file for each of the qualifications, giving a brief description (20-30 words) for the content of each paper/unit of the qualification have been provided
- ◯ An acceptable CV has been provided
- ◯ A completed self-assessment form has been provided
- ◯ Self-assessment statements explain how competency in the Element has been met, with references made to the evidence provided
- ◯ Work samples have been provided and are acceptable
  - The applicant's role in the work records provided is clear
  - No more than 4 work samples
- ◯ Evidence statements clearly state how files provided are relevant to the assessment, and which Element they relate to.

Stage 5: Evaluation

Once your application has been validated, an Assessor will be assigned to your application. They'll review your application and may contact you to ask for additional information. Your Assessor may also schedule a video meeting with you to discuss your application. This is called an 'Interactive' and is normally held via videoconference. Your Assessor will send you an agenda so you have an idea of the Elements you will need to focus on during the Interactive. The Interactive usually lasts around 60–90 minutes.

The Assessor will use the evidence you submit and the information from your Interactive to complete a report and recommendations on your application. Once they've got all the information they need, the Assessor will make a recommendation to Engineering New Zealand about whether to approve your application.

HOW TO PREPARE FOR THE INTERACTIVE

The Interactive lets your Assessor find out more about your qualifications and the engineering projects in which you've been involved. It's an opportunity to demonstrate your knowledge and understanding of the engineering behind the work examples submitted in your application. Be ready to talk your Assessor through your qualifications as well as the work samples you've provided, and think about how you might answer questions around the following:

- your formal study and the project(s) you've worked on, including what was involved, when was it done and who was involved
- how the study/project(s) demonstrate your engineering knowledge in relation to the 8 Elements.

Stage 6: Decision

We'll let you know the outcome of your application by email. If your Assessor decides you have not demonstrated you meet the requirements for Washington Accord equivalence, the report you receive will provide you with guidance on the Element(s) you fell short on, and provide you with suggestions as to how you might be able to bridge any knowledge gaps.

If your report states that you only need to bridge knowledge gaps on either one or two Elements, your subsequent Knowledge Assessment will be free if you provide evidence of activities you've undertaken within 12 months.

If you need to bridge knowledge gaps on 3 or more Elements, your subsequent Knowledge Assessment will be $500 (excl. GST) if you provide evidence of activities you've undertaken within 12 months.

If you wish to appeal the outcome of your Knowledge Assessment, you must write to us within 4 weeks of receiving your assessment outcome. Your request must include:

- the completed Decision Review Form (Appendix C)
- payment of $600 (excl. GST)[4]
- a cover letter explaining your reason(s) for appealing the assessment outcome.

Once your application for a decision review has been received, your request will be reviewed by our General Counsel and may be referred to a new Assessor. They will evaluate the evidence you have provided and decide whether or not the decision should be changed. You will not have the opportunity to present any new information during this process, and there will not be another interactive interview. This process takes around 8 weeks to complete.

4 This fee will be refunded to you if the original decision is changed.

Appendix A: Summary statement form

Knowledge Assessment

An editable Word version of this form is available for download on the Engineering New Zealand website.

Complete your summary statement on how you meet the competency standard.

Name of applicant _____

Membership number or date of birth _____

Knowledge Assessment Elements

You'll need to demonstrate your equivalent knowledge in eight areas, known as Elements. The Elements are determined by the knowledge profile expected of a graduate of Washington Accord-accredited qualification. Each Element is described below, together with the performance indicators we're looking for. You'll need to provide evidence for at least a majority of each Element's performance indicators. You can find more information about the whole process on the following assessment guidance.

WARNING: Having your Knowledge Assessment written by another person or persons (this includes all hiring or use of any third-party professional writers/companies to assist with completing your documentation) constitutes unethical behaviour and may result in serious consequences including but not limited to:

1. immediate rejection of the application along with the imposition of a stand-down period before you can reapply and/or
2. reporting of your details to Immigration New Zealand.

ELEMENT 1 - NATURAL SCIENCES KNOWLEDGE

A systematic, theory-based understanding of the natural sciences applicable to the discipline eg calculus-based physics.

Performance Indicators

- Fundamental quantitative knowledge underpinning nature and its phenomena.
- Knowledge of the physical world including physics, chemistry and other areas of physical or biological science relevant
- to your discipline.
- Knowledge of key concepts of the scientific method and other inquiry and problem-solving processes.

A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

ELEMENT 2 – MATHEMATICAL KNOWLEDGE

Conceptually-based mathematics, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modelling applicable to the discipline.

Performance Indicators

- Knowledge of mathematics, statistics and numerical methods that supports the development or application of models that replicate 'real world' behaviours.
- An understanding of the assumptions behind theoretical models and their impacts in the development and use of those models.
- Ability to organise and analyse a data set to determine its statistical variability.
- Knowledge of trigonometry, probability and statistics, differential and integral calculus, and multivariate calculus that supports the solving of engineering problems.
- Basic knowledge of computer programming.

A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

ELEMENT 3 – ENGINEERING FUNDAMENTAL KNOWLEDGE

A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.

Performance Indicators

- Ability to define key factual information in core areas of fundamental engineering knowledge relevant to your engineering discipline.
- Evidence of sufficient depth of knowledge of engineering fundamentals to demonstrate an ability to think rationally and independently within and outside a chosen field of specialisation.
- Evidence of sufficient breadth of knowledge of engineering concepts and principles to allow subsequent professional development across a broad spectrum of engineering.
- Ability to apply knowledge of engineering fundamentals to solve complex engineering problems relevant to your discipline.

A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

ELEMENT 4 – SPECIALIST ENGINEERING KNOWLEDGE

Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline, much is at the forefront of the discipline.

Performance Indicators

- Evidence of sufficient depth of knowledge to support practice within one or more recognised field of engineering.
- Evidence of a systematic understanding of the coherent body of knowledge related to a particular field of engineering; its underlying principles and concepts; its usage and applications; and analytical and problem-solving techniques.
- Ability to apply specialist engineering knowledge to solve complex engineering problems.

A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

ELEMENT 5 – DESIGN PROCESS KNOWLEDGE

Knowledge, including efficient resource use, environmental impacts, whole-life cost, re-use of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area

Performance Indicators

- Ability to undertake research and analysis to support the design process.
- Ability to investigate a situation or the behaviour of a system and identify relevant causes and effects.
- Ability to develop from first principles and construct mathematical, physical and conceptual models of situations, systems and devices, with a clear understanding of the assumptions made in development of such models.
- Application of technical knowledge, design methods and appropriate tools and resources to design components, systems or processes to meet specified criteria.
- Ability to analyse the advantages and disadvantages of alternative design options to support the development of an optimised design alternative.
- Ability to analyse the constructability or manufacturing feasibility of a project or product.
- Experience of personally conducting a significant design exercise, providing evidence of the consideration of various realistic constraints, such as safety, reliability, ethics, economic factors, aesthetics and social impact.
- Ability to apply appropriate design methods in solving complex engineering problems.

A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

ELEMENT 6 – ENGINEERING PRACTICE KNOWLEDGE

Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.

Performance Indicators

Tools and technologies

- Awareness of critical issues affecting current technical and professional practice.
- Awareness of current tools of analysis, simulation, visualisation, synthesis and design, particularly computer-based models and packages, and competence in the use of a representative selection of these.
- Appreciation of the accuracy and limitations of such tools and the assumptions inherent in their use.
- Knowledge of materials and resources relevant to the discipline and their main properties and ability to select appropriate materials and techniques for particular objectives.
- Knowledge of a wide range of laboratory procedures relevant to the discipline and a clear understanding of the principles and practices of laboratory safety.
- Knowledge of current types of systems, equipment, information technology, and specifications that accomplish specific design objectives.

Communication

- Write correspondence that clearly and concisely communicates facts and circumstances related to a project, product, or process.
- Plan, prepare and deliver an oral presentation, with appropriate visual aids and other supporting materials.
- Communicate effectively with both technical and non-technical individuals and audiences.

Engineering management principles and economic decision making

- Apply appropriate tools and techniques to monitor project schedules and costs.

Teamwork

- Operate as an effective team member or leader of a multidisciplinary team.

A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

ELEMENT 7 – ENGINEERING IN SOCIETY KNOWLEDGE

Comprehension of the role of engineering in society and identified issues in engineering practice in the discipline: ethics and the professional responsibility of an engineer to public safety; the impacts of engineering activity: economic, social, cultural, environmental and sustainability.

Performance Indicators

- Demonstration of ethical behaviour in accordance with ethical codes of conduct and established norms of professional conduct.
- Evidence of making ethical decisions and regulating one's own professional conduct in accordance with a relevant code of ethical conduct.
- Implementation of appropriate health and safety practices.
- Awareness of the social and environmental effects of their engineering activities.
- Awareness of sustainable technologies and sustainable development methodologies.
- Ability to identify risks as a consequence of engineering compromises made as a result of project or business constraints, and understanding of techniques to mitigate, eliminate or minimise risk.
- Knowledge of appropriate risk management techniques used to assess the accuracy, reliability and authenticity of information.
- Understanding of the role of quality management systems tools and processes.

A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

ELEMENT 8 – RESEARCH BASED KNOWLEDGE

Engagement with selected knowledge in the research literature of the discipline.

Performance Indicators

- Advanced knowledge in at least one area within your discipline, to a level that engages with current developments in that area.
- Understanding of how new developments relate to established theory and practice and to other disciplines with which they interact.
- Describe advancements in engineering research and technology and science in a particular area of engineering practice.
- Commitment to lifelong learning.

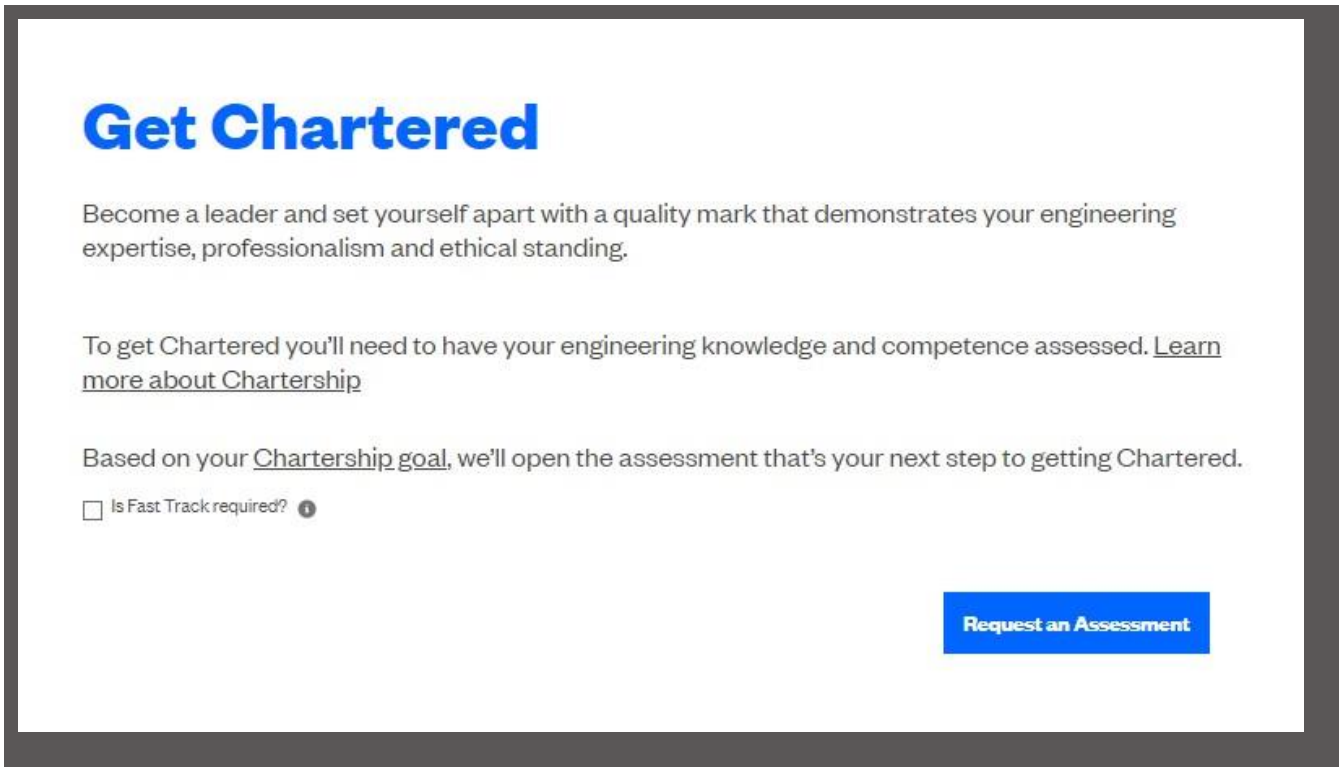
A brief summary of how you meet the requirements under this Element

Please reference the evidence you wish to provide for this Element (name of evidence; page number)

Appendix B: Online application form

The system automatically detects your current status with Engineering New Zealand. It states which application you are eligible to complete.

Click 'Request an assessment.' Our team will then open an assessment for you and an automated email will be sent with a link to get started. You can select the Fast Track Knowledge Assessment option here.



Work your way through each section individually. You will be unable to submit your application until all sections are completed.

Knowledge Assessment

You're on the way to getting Chartered! Complete each section before submitting to our team.
Check out our assessment guidance.

Download PDF copy

Profile

Check your personal details and contact information.

100% complete

CV

Upload your CV.

0% complete

Self-assessment

Show how you meet the areas of competency.

0% complete

Evidence

Attach work evidence which backs up the answers in your self-assessment.

0% complete

Back

Submit

Profile

Check your personal details and contact information. Make any changes before submitting your assessment application.

First name
Jung

Last name
Johnson

Preferred name

Customer number
2002945

Title

Employer

Role

Email
ipenzcmsuat+jung@gmail.com

Mobile

Other phone

Back | Edit

Your CV needs to be PDF format. You should also upload your completed self-assessment form (Appendix A) in this area.

CV

Upload a current version of your CV that includes your work roles, responsibilities, career progression and projects.

CV (0) | Upload files | Prev | Next

Title	Last modified	Size

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Explain how you meet each Element in your self-assessment.

Self-assessment

Complete your self-assessment on how you meet the competency standard. Each answer should be around 500 words.
Check out our assessment guidance.

Group	Progress	Actions
Natural Sciences Knowledge	0%	View/Edit
Mathematical Knowledge	0%	View/Edit
Engineering Fundamental Knowledge	0%	View/Edit
Specialised Engineering Knowledge	0%	View/Edit
Design Process Knowledge	0%	View/Edit
Engineering Practice Knowledge	0%	View/Edit
Engineering in Society Knowledge	0%	View/Edit
Research Based Knowledge	0%	View/Edit

Back

In this section, you'll be required to add work records with supporting evidence. Attachments (preferably reports, drawings, calculations that explain the design process). Select the 'Add evidence' button to add a new record.

Evidence

Attach evidence which supports your responses in the self-assessment and reflects your practice area description.

To support your general self-review statements provide 4 work samples that demonstrate your Engineering Knowledge across the 8 groups

Suggested Evidence for Groups 1 to 4

Ensure all relevant evidence is available to your assessor:
1. Upload academic transcripts for all your engineering qualifications.
2. Upload a single pdf file for each qualification that gives a brief description of the content of each paper/unit of the qualification. We suggest 20-30 words for each description.
3. Upload four work samples in total that demonstrate application of your knowledge. For each work sample, limit the number of pdf files to no more than three in total. Your work samples should give evidence of use of calculations or computer modelling to predict the performance of an engineering system.
4. In the commentary for these groups, give brief notes on any other work or study experiences that add to your knowledge for the element. We suggest two or three paragraphs for each element.

Suggested Evidence for Elements 5 to 8

Simply write brief notes to address the performance indicators for each group. Add your notes in the commentary boxes for each group.

There is no requirement to provide work samples for these groups

Evidence records

Activity name	Record type	Progress	Actions

You haven't added any evidence records.

Add Evidence | Back

Once you click on 'Add evidence', choose which type of evidence you wish to add – CPD or work records.

Add evidence

Attach evidence from your work and CPD records which supports your responses in the self-assessment and reflects your practice area description.

To support your general self-review statements provide 4 work samples that demonstrate your Engineering Knowledge across the 8 groups

Suggested Evidence for Groups 1 to 4

Ensure all relevant evidence is available to your assessor:
1. Upload academic transcripts for all your engineering qualifications.
2. Upload a single pdf file for each qualification that gives a brief description of the content of each paper/unit of the qualification. We suggest 20-30 words for each description.
3. Upload four work samples in total that demonstrate application of your knowledge. For each work sample, limit the number of pdf files to no more than three in total. Your work samples should give evidence of use of calculations or computer modelling to predict the performance of an engineering system.
4. In the commentary for these groups, give brief notes on any other work or study experiences that add to your knowledge for the element. We suggest two or three paragraphs for each element.

Suggested Evidence for Elements 5 to 8

Simply write brief notes to address the performance indicators for each group. Add your notes in the commentary boxes for each group.

There is no requirement to provide work samples for these groups

***Choose evidence type**

- ◯ **CPD record**
- ◯ **Work record**

Continue

CPD RECORDS

If you already have the CPD record present, please click on the 'Select' button. If not, click on 'Add CPD Record'.

Continuing professional development (CPD)

Add CPD record

CPD records Select an Option

Activity name	Activity type	Start date ↓	Hours	Actions	
test	Online learning	6/02/2022	10.0	View/Edit	**Select**

If you select 'Add CPD record', you'll need to complete the section below.

Add CPD record

Enter your CPD record details and select 'add record'. Then you will be able to upload your CPD files. How to record your CPD.

*Activity name

*Activity type

--None--

CPD provider

*Start date

End date

*Hours

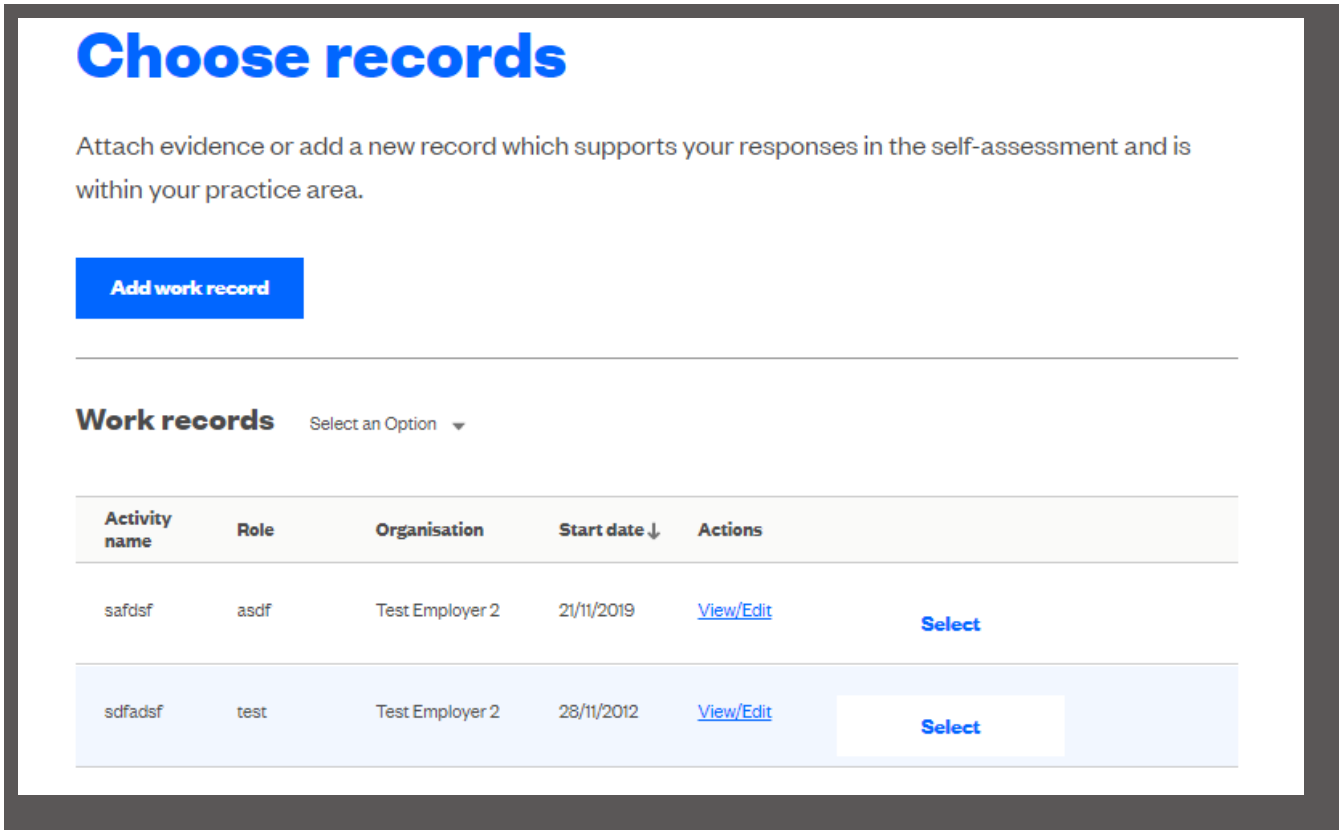
Activity description & learning outcomes

Salesforce Sans 12

Cancel Add record

WORK RECORDS

If you already have the work record present, please click on the 'Select' button. If not, click on 'Add work Record'.



If you select 'Add work record', you'll need to complete the section below.

Add work record

Enter your work record details and select 'add record'. Then you will be able to upload your work files.

*Activity name

Activity / project description

Salesforce Sans 12

*Organisation

*Role

Role description

Salesforce Sans 12

*Start date

End date

Cancel Add record

Once all the sections have been completed, you will be able to submit the application.

Knowledge Assessment

You're on the way to getting Chartered! Complete each section before submitting to our team.
Check out our assessment guidance.

Download PDF copy

Profile

Check your personal details and contact information.

100% complete

CV

Upload your CV.

100% complete

Self-assessment

Show how you meet the areas of competency.

100% complete

Evidence

Attach work evidence which backs up the answers in your self-assessment.

100% complete

Back

Submit

You will then be asked if you need an immigration report. Check the box if you need one.

Immigrating to New Zealand?

If you need to show Immigration New Zealand that your degree and further learning meet the benchmark requirements for Chartered Professional Engineer status in New Zealand, we can help. A successful Knowledge Assessment outcome means that you meet this benchmark requirement. We can provide you with a report about your Knowledge Assessment outcome for you to use in your visa application with Immigration New Zealand.

☐ I need a report for Immigration New Zealand.

Next

Appendix C: Decision review form

Application for Knowledge Assessment decision review

Contact us at assessment@engineeringnz.org for an editable version of this form.

Applicants who wish to seek a decision review of their Knowledge Assessment must complete this form.

- An application for a decision review must be lodged within 28 days of the date of the original assessment outcome letter.
- The lodging of a decision review does not allow for the submission of any new documents to support your claim, unless requested by the assessor.
- All necessary documentation will be forwarded to an independent assessor.

The decision review may take 6 weeks or more from the date of payment.

PERSONAL DETAILS

Full name _____

Date of original assessment _____

Address _____

Phone number _____

Mobile _____

Email _____

Signature _____

Date _____

REASON FOR REQUEST

Please provide the reason(s) you believe the decision made on your Knowledge Assessment was inappropriate.

Payment details

An invoice will be sent to you via email.

Frequently asked questions

What does my application status mean?

- **Started:** You're compiling your application.
- **Payment pending:** Awaiting payment by credit card or invoice.
- **Submitted:** With our team for checking and validation.
- **Editing:** Additional information required before being passed to an assessment panel (it is in your best interests to submit the required information within 2 weeks, to avoid any delays in the process).
- **Assessors being assigned:** We're finding your Assessor.
- **Assessment in progress:** Your assessment is being reviewed by the Assessor.
- **Complete:** Outcome of assessment finalised and shared with you.
- **Withdrawn:** Application has been withdrawn.

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 Assessors, Knowledge Assessors, 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. If you have any concerns, we'll be happy to assign an alternative panel member.

How many evidence files can I attach?

Our general guidance is quality over quantity. Give your Assessor relevant information and be specific about where your evidence is in the Work Record files. For example, specify page numbers, sections, calculations, photograph titles, chart details etc.

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

Chartered Members belong to Engineering New Zealand and receive the benefits 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. Professional engineers are those that are deemed to have engineering knowledge equivalent to that specified in the Washington Accord.

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 once 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.

Common terms

Assessor: the Assessor evaluates your application, before providing their recommendation to Engineering New Zealand.

Knowledge Assessment: Evaluates whether you have a level of technical knowledge and understanding gained through your work and learning that is equivalent to that of a Washington Accord-accredited qualification.

Chartered Assessment: evaluates if you meet the competence standard to become Chartered, either as a Chartered Member (CMEngNZ) of Engineering New Zealand or a Chartered Professional Engineer (CPEng).

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 (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 Member CMEngNZ (PEngGeol): solves complex engineering geological problems and activities by applying in-depth engineering geology knowledge.

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 team assigned to your application and your main point of contact once you submit your application for validation.

Competency Assessment Board (CAB): 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.

CPD record: information about the continuing professional development activities you've done to maintain currency as an engineer.

CPEng reassessment: evaluates if you have maintained current competence to meet the Chartered Professional Engineer standard.

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.

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.

Recognised external authorities: overseas engineering registration authorities that are signatories

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

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

Washington Accord: the agreement for the international recognition of Engineering Professional qualifications.

Work record: information about the projects 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.

REGISTRATION AUTHORITY
FOR CHARTERED PROFESSIONAL ENGINEERS

engineering new zealand
te ao rangahau

L6, 40 Taranaki St
Wellington 6011
assessment@engineeringnz.org
www.engineeringnz.org

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).