

In the Matter of the Chartered  
Professional Engineers of New Zealand  
Act 2002

Appeal 4/15

AND

In the matter of an appeal to the  
Chartered Professional Engineers  
Council pursuant to Section 35

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From

Mr T  
Appellant

Against a decision of

IPENZ (as the Registration  
Authority under the Chartered  
Professional Engineers of New  
Zealand Act 2002)  
Respondent

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Decision of the Chartered Professional Engineers Council  
Dated 4 November 2015

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### The Legislation

1. Mr T ... appeals against an assessment by the Registration Authority being a decision of the Competence Assessment Board of the Registration Authority refusing his registration as a Chartered Professional Engineer (CPEng).
2. That right of appeal is contained in s35 of the Act and s37 of the Act sets out the scope of this Council's jurisdiction which is to deal with the matter by way of rehearing. For that purpose we have been provided with the complete file of the Registration Authority which has been paginated.

3. Under s8 of the Chartered Professional Engineers Act 2002 (“the Act”) the Registration Authority must register a person if he or she, amongst other matters, satisfies the Registration Authority that he or she meets the minimum standards for registration contained in the Rules.
4. The Rules are the Chartered Professional Engineers of New Zealand Rules (No.2) 2002 (“the Rules”). The Rules were passed pursuant to s40 of the Act as regulations.
5. Under the Rules minimum standards for registration as a Chartered Professional Engineer are set under Rule 6:

*“6 Minimum standard for registration as chartered professional engineer*

*(1) To meet the minimum standard for registration, a person must demonstrate that he or she is able to practise competently in his or her practice area to the standard of a reasonable professional engineer.*

*(2) The extent to which the person is able to do each of the following things in his or her practice area must be taken into account in assessing whether or not he or she meets the overall standard in subclause (1):*

- (a) comprehend, and apply his or her knowledge of, accepted principles underpinning—
  - (i) widely applied good practice for professional engineering; and*
  - (ii) good practice for professional engineering that is specific to New Zealand; and**
- (b) define, investigate, and analyse complex engineering problems in accordance with good practice for professional engineering; and*
- (c) design or develop solutions to complex engineering problems in accordance with good practice for professional engineering; and*
- (d) exercise sound professional engineering judgement; and*
- (e) be responsible for making decisions on part or all of 1 or more complex engineering activities; and*
- (f) manage part or all of 1 or more complex engineering activities in accordance with good engineering management practice; and*
- (g) identify, assess, and manage engineering risk; and*
- (h) conduct his or her professional engineering activities to an ethical standard at least equivalent to the code of ethical conduct; and*
- (i) recognise the reasonably foreseeable social, cultural, and environmental effects of professional engineering activities generally; and*

- (j) *communicate clearly to other engineers and others that he or she is likely to deal with in the course of his or her professional engineering activities; and*
- (k) *maintain the currency of his or her professional engineering knowledge and skills.*

6. Relevant to the interpretation of Rule 6 is Rule 7:

*For the purposes of rule 6,—*

*complex engineering activities means engineering activities or projects that have some or all of the following characteristics:*

- (a) *involve the use of diverse resources (and, for this purpose, resources includes people, money, equipment, materials, and technologies):*
- (b) *require resolution of significant problems arising from interactions between wide-ranging or conflicting technical, engineering, and other issues:*
- (c) *have significant consequences in a range of contexts:*
- (d) *involve the use of new materials, techniques, or processes or the use of existing materials, techniques, or processes in innovative ways*

*complex engineering problems means engineering problems that have some or all of the following characteristics:*

- (a) *involve wide-ranging or conflicting technical, engineering, and other issues:*
- (b) *have no obvious solution and require originality in analysis:*
- (c) *involve infrequently encountered issues:*
- (d) *are outside problems encompassed by standards and codes of practice for professional engineering:*
- (e) *involve diverse groups of stakeholders with widely varying needs:*
- (f) *have significant consequences in a range of contexts:*
- (g) *cannot be resolved without in-depth engineering knowledge.*

7. The overriding consideration is that expressed in Rule 6(1) that is that a Chartered Professional Engineer should be able to practise competently in his or her practice area to the standard of a reasonable professional engineer.

8. The matters listed in Rule 6(2) (a) to (k) *must be taken into account* in making an overall assessment required by Rule 6(1). However the Rules do not provide for a mandatory “pass mark” for these matters, and nor could they. Ultimately, taking the matters in (6)(2) into account, an objective decision still needs to be made as to whether an applicant meets the overall standard prescribed in Rule (6)(1).
9. The Registration Authority has recast the Regulations into a summary of 12 Elements. It is helpful to refer to these elements since that is what the Registration Authority refers to in its assessments, though we note that the actual test is that listed in Rule 6(1).

### Background

10. The Appellant applied to the Registration Authority seeking registration as a Chartered Professional Engineer in January 2014.
11. The Appellant provided his practice area as:  
*Electrical engineering, Planning, design, programming, commissioning and project management of electrical systems, instrumentation and controls for water and waste water facilities.*
12. The practice field applied for was electrical engineering.
13. The application was accompanied by additional documents:
  - a. Form CA03 - Competence Self Review;
  - b. Form CA04 - Work History Summary;
  - c. Continuing professional development records;
  - d. Work examples 1-7.
14. An interactive assessment was undertaken on 25 March 2014. At that interactive assessment the Appellant was requested to provide further information. An email was sent to the Appellant on 31 March 2014 requesting information that would support, in particular, whether the examples demonstrated that the Appellant was undertaking *complex*

*engineering activities and complex problems* within the meaning of Rule 7.

15. The Appellant provided a more detailed commentary on 4 April 2014 which focused more on the work examples already provided. This was noted by the Assessors as Work Example 8.
16. On 7 April the Appellant provided two further work examples:
  - a. Work Example 9 was an As-built drawing
  - b. Work Example 10 was documentation relating to the electrical installation of a control box for monitoring water flow and pressure at St Marks Rd.
17. After deliberating the Assessors made a recommendation that the Appellant not be registered. A final assessment report was made (page 172) and a letter sent to the Appellant dated 13 October 2014 (page 181) advising him of the outcome. The final assessment report indicated that the Appellant "*did not demonstrate competence*" to the standard of a "*Professional Engineer (PE)*" in Elements 1, 3, 4, 5, and 6. We note that the Appellant was said to "*demonstrate marginal competence*" to the standard of a "*Professional Engineer (PE)*" in respect of Elements 7, 9, 10 and 12.
18. We note that the Registration Authority's letter of 13 October 2014 to the Appellant stated that "the evidence provided did not show that he could consistently meet the requirements" in respect of the above Elements, including Elements 7, 9, 10 and 12.
19. The Appellant went through the natural justice process envisaged by the rules. He made a natural justice submission and submitted this on 15 January 2015 (page 266-332).
20. On 23 April 2015 the Competence Assessment Board met and determined to decline the Appellant's application for registration. The Appellant was notified by letter dated 7 May 2015. Attached was a revised CA07

which had an single paragraph added stating that the panel had reviewed the Appellant's natural justice submission but concluded that no new evidence had been submitted that would cause the panel to change its view.

21. The Appellant filed his appeal by email dated 12 May 2015. In the body of his appeal he states that:

*Large amounts of extra work sample evidence submitted under natural justice have not been reviewed at all, either overlooked or ignored by the assessment panel and CAB.*

*The final CA07 - Competence Assessment Report Form confirms these mistakes of the assessment panel and CAB. The CA07 was also overall unprofessional, inferior and inadequate for me to make a natural justice response and the final version remains unprofessional, inferior and inadequate as a concluding document.*

22. Ultimately the Appellant sought that the CAB's decision be overturned and that he be assessed as competent in all elements.

#### **Procedural Steps**

23. On 20 May 2015 the Appellant and the Registration Authority were informed that an appeal panel had been formed, and requested the Registration Authority to provide paginated bundles of documentation. We drew the parties' attention to the Appeal Practice Note.
24. On 19 June 2015 the Panel Chair advised that the Council had a particularly heavy workload, and that he was overseas until 20 July, but asked the parties to advise of availability for the month of August.
25. On 13 July 2015 the Registration Authority provided paginated documentation and a copy of the submission that it wished to speak to at the hearing. A copy of the documentation was couriered to Mr Tapp. There was a slight delay in doing this because also on 13 July the Registration Authority made an application to the Panel to keep the references provided to the Registration Authority for the Appellant confidential.

26. We made a decision declining that application on 18 August 2015, and provided the Appellant with a copy of the application, our decision and the references referred to.
27. The Chair of the Panel advised by email of 27 August 2015 that the Council wished to set a date for the hearing.
28. In the meantime by an email dated 10 August 2015 the Appellant emailed complaining about the Registration Authority's submission. He stated:
- The Executive Summary contains fallacies, distractions, and warped, dubious and outdated (superseded by extra later submissions) texts.*
- ...
29. There were a references to matters being "falsely out of date" and:
- The Executive summary is blatantly majorly unjust negative spin. It reeks of dislike for me. Mr W fiercely opposes and oppresses me.*
30. The email also made various other complaints about the form and substance of the documentation and requesting copies of further documentation, which the Registration Authority subsequently provided.
31. On 30 August 2015 the Appellant requested that the retired Registrar who dealt with the administration provide a statement as to his discussions with the Appellant, which the retired Registrar did on 31 August 2015.
32. On 1 September 2015 the Chair of the Panel emailed the Appellant and the Registration Authority clearly spelling out the process that the hearing would follow:

*The Council is required to rehear this matter, which means that it will look at the material held by the RA and which was used as the basis for its original assessment decision, including the references which have now been passed to Mr T. We will only focus on those elements which the RA stated were not met. In its letter of 7 May 2015 these were listed as Elements 1, 3, 4, 5, 6, 7, 9, 10 and 12, though I note that the final version of the CA07 form states that in some instances marginal competence was demonstrated.*

*Hearings regarding assessment matters are less formal than disciplinary proceedings. The Council is keen to explore with Mr T and the RA the issues in relation to each element, so this can generate discussion, though we are always*

*mindful of the need to ensure fairness to both parties and for that reason we generally follow the following process.*

*Mr T will be free to take us through the material he submitted and which is in the bundle that has been provided by the RA. He can point out to us why he considers that he meets the Elements upon which the RA said competence was not demonstrated. This will be Mr T's opportunity to persuade us that the RA's assessment was incorrect either substantively or procedurally - though in this later regard I note that a procedural error can always be corrected on appeal. It is really the substance of why Mr T meets the registration requirements that will be critical.*

*Once Mr T has provided his submissions the RA can respond. It has already provided a summary for us at pages 2-12 of the bundle.*

*Mr T will then have a final opportunity to address any points in reply.*

*I hope this clarifies matters. If all parties could let me have availability dates, I will then set a hearing day.*

33. By reply of the same date the Appellant still requested further information, including a correction to the Registration Authority's executive summary (submissions). The Chair of the Panel provided directions on 1 September 2015 pointing out that the Council did not have power to require the Registration Authorities submissions to be amended, confirming that the Appellant was entitled to respond, and making directions relating to further documentation. Finally it was directed that if the parties could not advise on availability a hearing date would be set.
34. On 3 September 2015 the Appellant responded to the retired Registrar's email as follows:
- LOL. No mention of our phone chat... Totally written by minders Brett and Stephen I wonder? Thanks Jeff.*
35. On 3 September 2015, following the Registration Authority advising of its availability for the hearing, the Appellant responded:
- LOL. Assembling an army against me Charlie? Once upon a time I thought IPENZ was respectable, supportive and decent...*
- Now the words hateful, wasteful, seething, vicious, weird, contorted, paranoid, guilty and also SAD come to mind. For the record everyone,*
36. On 22 September 2015, following the Chair's absence from work due to illness a hearing date was set of 28 September 2015. It was agreed the

Appellant would appear by video link in Auckland with the Appeal Panel and Registration Authority attending in Wellington.

### Hearing

37. The hearing took place on 28 September 2015 as envisaged. The appellant and the Registration Authority had the opportunity to make written submissions and to speak to those.
38. The Appellant appeared in person by video link. The Registration Authority was represented by Mrs Charlie Strivens (Acting Registrar), Mr Stephen Jenkins, Mr Mike Fermanis from the Registration Authority and Mr Jeffrey Wilson, one of the original assessors.
39. We are conscious of the fact that the Registration Authority appoints highly qualified Assessors to its assessment panel to whom training is provided on how to proceed with an assessment.
40. Mr Wilson is a Chartered Professional Engineer with many years' experience in the practice area of electrical engineering. This is set out in paragraph 1.3 of the Registration Authorities submissions.
41. The panel also has experience in electrical engineering with Mr Jon Williams being a Fellow of IPENZ and Chartered Professional Engineer, also with many years' experience in the practice area of electrical engineering. Mr Chris Harrison is a Chartered Professional Engineer and a Fellow of IPENZ, with a background in the design, management and direction of civil and marine infrastructure projects, and latterly engineering management, his current chartered practice field. Although not practicing in the field of electrical engineering Mr Harrison is familiar with concepts around project work involving electrical engineering, including cathodic protection, having been responsible for overall management of complex multi-disciplined projects including projects where such elements have been involved.

42. At the commencement of the hearing the Appellant provided the Appeal Panel with copies of further documentation. This consisted of:
- a. Further notes on the Appellant's previous summary of Complex Engineering Problems;
  - b. A summary of "Niggles" with the Registration Authority's "Executive Summary" (submissions).
  - c. Comments on the handwritten notes of Mr Wilson, Assessor.
  - d. A one page document entitled "Electrical Engineering".
  - e. A further page of notes, including a "complexity matrix" compiled by the Appellant.
43. The Registration Authority responded to the Appellant's submissions and the Appellant then had an opportunity to address any matters in reply.

#### The Assessment of the Registration Authority

44. The final assessment report following the natural justice process (page 452) indicates that the Appellant "*did not demonstrate competence*" to the standard of a "*Professional Engineer (PE)*" in Elements 1, 3, 4, 5, and 6. We note that the Appellant was said to "demonstrate marginal competence" to the standard of a "*Professional Engineer (PE)*" in respect of Elements 7, 9, 10 and 12.
45. We note that the Registration Authority's letter of 7 May 2015 to the Appellant stated that:
- "The applicant did not demonstrate competence to the standard of a Chartered Professional Engineer (CPEng) as per Rule 6(1). In reaching this decision the CAB took account of the following matters in respect to Rule 6 (2), namely that the evidence provided did not show that the applicant was able to meet the requirements of Elements 1, 3, 4, 5, 6, 7, 9, 10, and 12".*

46. To our mind if someone “demonstrates marginal competence” then this is a “pass”. A candidate should either be assessed as passing or failing to meet the threshold for registration against an element. Adding the term “marginal” introduces a grey area which is unnecessary. We appreciate that sometimes a candidate might “just pass”, or equally “just fail”, but once that assessment is made the outcome should be a “pass” or a “fail”.
47. Against this criteria we consider we should conclude that the Appellant has “passed” in respect of Elements 7, 9, 10 and 12, as assessed by the Assessors.

### **The Elements**

48. We therefore need to consider Elements 1, 3, 4, 5 and 6.

#### **Element 1 (Rule 6(2)(a))**

- (a) *comprehend, and apply his or her knowledge of, accepted principles underpinning—*
- (i) *widely applied good practice for professional engineering; and*

#### **Element 3 (Rule 6(2)(b))**

- (b) *define, investigate, and analyse complex engineering problems in accordance with good practice for professional engineering.*

#### **Element 4 (Rule 6(2)(c))**

- (c) *design or develop solutions to complex engineering problems in accordance with good practice for professional engineering.*

#### **Element 5 (Rule 6(2)(e)) - identify complex engineering activities (see Rule 7) and what work candidate did**

- (e) *be responsible for making decisions on part or all of 1 or more complex engineering activities;*

#### **Element 6 (Rule 6(2)(f))**

(f) *manage part or all of 1 or more complex engineering activities in accordance with good engineering management practice.*

49. Elements 3, 4, 5 and 6 have, at their heart, the issue of “complex engineering” and the extent to which the Appellant was able to demonstrate that he was responsible for complex engineering and activities as defined in Rule 7.
50. Element 1 refers to the comprehension and application of engineering knowledge to wider professional engineering practice.

### **Issues of Process**

51. The Appellant was frustrated by a number of procedural issues. We have set out the communication exchanges that were had on this issue above.
52. It is appropriate that issues of process are brought to our attention, and in relevant cases, this could result in us taking some corrective action, for example sending an appeal back to the Registration Authority for reconsideration.
53. The Appellant’s concerns fall into three areas:
  - a. The reporting generally and specifically in the CA07; and
  - b. The perceived lack of consideration of additional material submitted as part of the Appellant’s natural justice review; and
  - c. The submissions made by the Registration Authority as part of its “Executive Summary”.
54. We went to some lengths to explain to the Appellant that the appeal process allowed him to take the Council through his material and to address the issues of competence Element by Element. His additional material delivered on the day did this.
55. We consider that the reporting in the CA07 was sufficient for the Registration Authority to rely upon.

56. We find, having heard the Registration Authority at the appeal, including responses to direct questions, that the additional information provided by the Appellant as part of his natural justice submission was fully considered by the Assessors, but that the Assessors were not persuaded to change their minds on their assessment. In future it might prevent the sort of frustrations expressed by the Appellant if there were to be some fuller explanation recorded in a CA07 following a natural justice submission as to the reasons for maintaining, or changing, a recommendation.
57. We consider that the Registration Authority was entitled, and indeed, bound to put its position as it did in its submissions. There was “new” information in these submissions about why the Registration Authority considered the Appellant should not be registered. For example, in paragraphs 5.16 and 5.17 the Registration Authority provided additional reasoning for its decision which the Appellant had not previously seen. However, this is the very reason for filing such a submission in good time prior to the hearing, in order that the Appellant could properly respond to this information. We found nothing wrong in the way that the Registration Authority advanced its position.

#### Evidence

58. Rule 6 requires that a person must demonstrate that he or she is able to practice competently. The evidence that the assessment panel uses is the CA03 competence self review form (page 15) and work samples submitted by the applicant. The guidance notes on the CA03 state that for an AFA “comprehensive” supporting work samples are required.
59. S37 (2) and (3) of the Act require that an appeal is a rehearing of the evidence before the Registration Authority. The Appeal Panel has reviewed the documentation that was available to the assessment panel and the CAB. Subsequent submissions by the Appellant are to direct the Appeal Panel to specific parts of the documentation that the Appellant considers provides evidence of meeting competence standards.

60. We agree with the Assessment Panel that the original work samples (pages 54-69) contained inadequate detail for a full and proper consideration of whether they demonstrated the Appellant's competence to be registered.
  - a. Work Example 1 consisted of a one page description of the design of a cathodic protection system.
  - b. Work Example 2 was an Electrical Workers Registration Board certificate, which itself does not demonstrate competence to a Chartered Professional standard.
  - c. Work Example 3 consisted of two plans related to the civil works associated with the West Harbour Branch Sewer.
  - d. Work Example 4 was the Appellant's performance review completed by his employer, which itself does not demonstrate competence to a Chartered Professional standard.
  - e. Work Example 5 consisted of a single page of software code. With no context or description
  - f. Work Example 6 was a two page extract from manufacturers literature with some annotations relating to the supply and installation of a pump at Harrisville Road.
  - g. Work Example 7 was a plan illustrating radio sites considered by the Appellant as part of an investigation into link viability.
61. As we note work examples 2 and 4 are not relevant to whether an applicant meets the standards set out in the Rules.
62. The Appellant does refer in his self-assessment form CA03 to the work examples, but again with little detail.
63. The additional information submitted by the Applicant (page 83-108) provided some more explanation of the projects referenced in the work

samples. There is however little evidence provided and none that we consider to be of a complex nature.

- a. 1) EMF Exposure. Mr T engaged the services of a specialist Approved Radio Engineer to review the compliance of the sites. His role was to take their findings and propose solutions. The concepts of reducing exposure via either increased separation (moving the aerials higher) or limiting transmission times (programming of the Ready to Send input) are "broadly defined" rather than "complex" engineering.
- b. 2) PLC Software. It is unclear which work sample this refers to. PLC programming and debugging is a structured task following predefined rules. PLC programming may be a complex task if the controlled systems are large or complex. General motor/pump control linked to level or flow sensors is a standard application of a PLC and would not be categorised as complex engineering.
- c. 3) Wastewater Pump station. As noted above the pump control linked to level sensors is a standard PLC application and would not be categorised as complex engineering. Consideration of failure scenarios (i.e. what the system does if a sensor signal is lost) and ensuring that they are "safe" (keeping one pump running) is standard industrial programming procedure.
- d. 4) Cathodic protection. The application of DC blocking devices (de-couplers) is a standard solution for applications where AC conduction is required while DC must be blocked. The addition of the AC resistance into the earth fault path and confirming compliance with NZS 3000 is a "broadly defined" task and not "complex engineering".
- e. 5) RTU Alternatives. Implementation of low powered localised radio monitoring of simple systems (limited inputs/outputs/controls) is a standard process common to many industrial or rural

applications. These are standard solutions and thus this is not in the complex spectrum of work. The interaction between the cathodic protection systems of Watercare and Vector may be complex but no evidence or detail is provided.

64. Appropriate evidence would be documents produced at the time the work was undertaken that illustrate the complex engineering nature of the task. These could include:
  - a. Reports showing options considered, risks evaluated and the basis for the decisions made.
  - b. Calculations based on engineering principles with relevant justification for their use, validation and verification.
  - c. Financial, resource or relationship challenges faced on a project along with the resolutions developed and reasoning behind them.
65. The candidate writing a narrative of what they did on a project as a part of the application for registration process is informative but is not sufficient evidence, unless it clearly links the individual's actions and responsibilities and amply demonstrates compliance with the element(s) concerned.
66. The Registration Authority has produced a document CA 30 - "Introduction to IPENZ Competence Based Quality Marks" that outlines the type of evidence required to be demonstrated for each of the 12 competencies.

### **Complex Engineering**

67. At the heart of our decision is that we are not convinced that Elements 3, 4, 5 and 6 have been met. These Elements all focus on complex engineering.

68. The material and submissions provided by the Appellant, either originally or at the appeal hearing did not, in the Council's assessment discharge the burden that the Appellant was under to prove competence.

#### **Wider Professional Engineering Practice**

69. The Applicant holds a Washington Accord level degree qualification. Element 1 requires that the candidate demonstrate how they have applied their knowledge at this level. As above, there has been insufficient evidence submitted to demonstrate this to the satisfaction of the panel.

#### **Findings**

70. Ultimately, the test of competency is an objective one made by the people making the assessment.
71. Having said that, the onus is always on an applicant to prove that he or she meets the appropriate standard for registration as a Chartered Professional Engineer.
72. In this case we conclude that the Appellant has not proven that he has met the requisite standard.

#### **Professional Engagement**

73. We also consider it necessary to mention the approach by the Appellant to this appeal. The Appellant's communication style, extracts of which we have set out in this decision, has not been professional, and possibly in conflict with the Code of Ethics which requires a Chartered Professional Engineer to act with objectivity and integrity. It is quite possible to be critical of the Registration Authority about issues of process without engaging in the sort of personal and unnecessary communication style that the Appellant chose to adopt.
74. This factor alone did not sway our decision, but does confirm to us that declining registration is an appropriate outcome.

**Outcome**

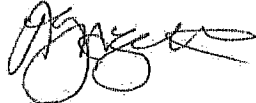
75. The Appeal is dismissed.

**Costs**

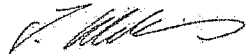
76. While we have the power to award costs we do not think that it is appropriate in a case such as this.

**Dated this 3rd day of November 2015**

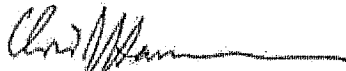
Signed By the Appeals Panel



Andrew Hazelton (Barrister & Solicitor) LLB(Hons), MSc(Lond).  
Principal



Jon Williams, BE, FIPENZ CPEng



Chris Harrison, BE(Hons), CPEng, IntPE(NZ), FIPENZ, MHKIE

**Outcome**

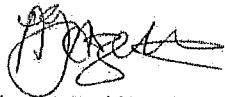
75. The Appeal is dismissed.

**Costs**

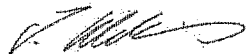
76. While we have the power to award costs we do not think that it is appropriate in a case such as this.

**Dated this 4<sup>th</sup> day of November 2015**

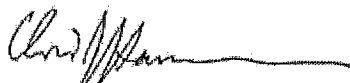
Signed By the Appeals Panel



Andrew Hazelton (Barrister & Solicitor) LLB(Hons), MSc(Lond).  
Principal



Jon Williams, BE, FIPENZ CPEng



Chris Harrison, BE(Hons), CPEng, IntPE(NZ), FIPENZ, MHKIE