

**In the matter of the Chartered
Professional Engineers of New Zealand
Act 2002**

Appeal 03/16

AND

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

From

**Mr D
Appellant**

Against a decision of

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

**Decision of the Chartered Professional Engineers Council
Dated 29 September 2016**

The Legislation

1. Mr D appealed against an assessment by the Registration Authority (RA) being a decision of a Competence Assessment Board (CAB) of the RA declining his application for continued 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 a rehearing. For that purpose, we have been provided with the complete file of the RA relating to the case, which has been paginated.

3. Under s11 of the Chartered Professional Engineers Act 2002 (“the Act”) the Registration Authority must assess whether or not a registered person meets the minimum standards for continued 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 enacted pursuant to s40 of the Act.
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:

“7 Definitions for the purpose of minimum standard for registration

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 subsection 6(2) (a) to (k) of the Rules 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).

Background

9. The Appellant applied to the RA seeking continued registration as a Chartered Professional Engineer on 15 June 2015 in the following practice fields:
- (a) Management
 - (b) Environmental
- and with practice areas of “Project Management; Stormwater engineering”.

10. The application included:
 - (a) Work History Summary (21 work history records)
 - (b) Four work samples, being:
 - (i) Catchment Planning
 - (ii) Supporting Growth
 - (iii) Renewals Programme
 - (iv) Corridor Management Plans
 - (c) 33 Continuing Professional Development records covering the period 2010 to 2015 inclusive
 - (d) Two referee reports dated 15 and 20 June 2015 respectively were received by the RA from Mr Larry Shui MIPENZ, and Ms Dukessa Blackburn-Huettner MIPENZ, CPEng. (Form CA26 - CRA)
11. On 18 September 2015 an Assessment Panel consisting of Mr David Bridges (Staff Assessor) and Mr Paul May (Practice Area Assessor) was assigned to assess Mr D's application.
12. The Assessment Panel reviewed Mr D's portfolio of evidence and prepared for an interactive assessment.
13. On 16 November 2015 Mr Bridges emailed Mr D outlining the proposed structure for the interactive interview, advising Mr D that *'Our focus as a panel is on understanding where you have applied your expertise and where you have had to exercise judgement.'*
14. The interactive interview was conducted on 17 November 2015 by video conference.
15. On 25 November 2015 Mr Bridges emailed Mr D requesting further information. In particular the panel requested three further work examples as evidence of the work that Mr D was personally undertaking, and which demonstrated complex engineering. Mr Bridges also referred to the definition of 'Engineering Management' and stated *'as discussed in*

terms of your practice fields the evidence will not support management ... the panel believes it may read as follows; 'Investigation, planning and programme management of stormwater infrastructure'.

16. On 30 November 2015 Mr D provided the three additional work samples being:
 - (a) Future Urban Land Supply Strategy
 - (b) Stormwater Unit Strategic Direction 2015-2018
 - (c) Stormwater Asset Management Plan
17. The Panel reviewed the three additional work examples and on 8 December 2015 Mr Bridges emailed Mr D and stated: *'As discussed with you (the additional evidence) does not assist the panel greatly in terms of evidence as to the specific engineering activities that you are undertaking and what represents engineering complexity in terms of those activities.'* Mr Bridges went on to state *'To support your application for renewal the panel requires specific evidence of engineering work you have personally undertaken which may be in the form of reports, analysis or policy development.'* To that end Mr Bridges requested that Mr D provide three further work examples and advised Mr D that the Panel would like to undertake a further interactive assessment with him.
18. On 9 December 2015 Mr D emailed Mr Bridges and stated: *'It appears that the panel might not have a full understanding of my role, the nature of my job and the type of organisation that I am working for (these were never discussed at my interview). The additional requirements suggest that the panel is looking for specific evidence of me undertaking specific complex steps such as hydraulic calculations or model build etc. While such work may have previously formed part of my everyday routine and my capability, I am now in a management role responsible for overseeing an annual planning budget of \$6-8M per annum and a team of 8 engineers as well as contractors ... It is simply not my job or is it (sic) required of me to carry out these tasks.'*

19. Mr D went on to state: *'In addition, Auckland Council operates very differently from other local authorities in the country because of its size and unique governance structure. Not all decisions are made and documented in 'reports' as decisions makers ... are always time-poor and there are strict guidance in placed (sic) on how and what information is presented. Often they just want to see a single map, not the myriads of reports prepared to produce that map.'*
20. Mr D also wrote: *'I also question the line of thinking that anyone (either engineer or non-engineer, CPEng or not-CPEng) can do what I do as it goes beyond co-ordination of work. It takes years of working experience to build up that knowledge base to give direction, review others work, provide constructive feedback, make judgement calls and seek alternative solutions' and 'The prospect of spending another year to 'collect evidence' to demonstrate what I do is complex and simply unreasonable... Even if I do produce such evidence, it will be just a signature on a report or business case that I have reviewed (and there will be many of them).'*
21. On 11 December 2015 Mr Bridges replied to Mr D; *'The evidence you have provided to the panel tells us what you are doing as opposed to providing evidence of what you have done to enable the panel to verify competence within your practice area. You have indicated you lead a small team, which we presume includes providing technical guidance and review of their work. We would also expect you to be preparing technical reports, preparing business cases, reviewing third party reports and presenting information to stakeholders. What the panel is seeking is three work samples of one or more technical reports, technical reviews, technical guidance or consultation which you have personally undertaken, which represents complex engineering and which enable the panel to verify your competency.'*

22. On 12 December 2015 Mr D provided three further work examples stating that they covered three typical milestones that he and his team were responsible for, being:
 - (a) Project Brief - University of Auckland
 - (b) Business Case - Celtic Crescent to Abbotts way
 - (c) Delivery - Hingaia South Integrated Catchment Management Plan.
23. On 14 December 2015 Mr Bridges emailed Mr D a proposed structure for the second interactive interview, reinforcing the need for Mr D to provide evidence of his involvement with the work examples provided. The second interactive interview took place (again by video conference) the following day.
24. On 26 January 2016 the Assessment Panel submitted its recommendation to the RA's Competence Assessment Board (CAB). The panel concluded that Mr D had failed to provide verifiable evidence which would support continued registration. The report stated; *'(T)he panel believes that he may be undertaking complex engineering work in his practice area, given his position and role within Auckland Council, but has not sighted verifiable evidence which would support continued registration.* The panel recommended that Mr D's registration be suspended.
25. On 3 February 2016 the CAB decided *'not to reject or vary panel's recommendation. Proceed with offer Natural Justice.'* and this was conveyed to Mr D.
26. Mr D responded on 16 March 2016. In his submission he disagreed with the panel's assessment that he had not provided sufficient verifiable evidence, disagreed that the evidence provided did not differentiate between his own work and that of his team and noted that in selecting work examples (particularly the final three) he had sought to differentiate between projects of complexity rather than scale, and provided a table that he believed demonstrated this complexity.

27. Mr D also raised concerns about the apparent lack of consistency in his assessment when he compared his experience with those of colleagues, the guidance provided for engineers in management roles, the timeliness of advice for his preparation for interactive interviews and suggested that the guidelines for preparing portfolios of evidence could be more specific.
28. Mr D's submission also included a letter of support from Mr Craig McIlroy, FIPENZ, the general manager of the stormwater group at Auckland Council, who strongly supported Mr D's application for continued registration, noting that *'Mr D definitely has one of the most complex and challenging roles in the (stormwater) organisation.'*
29. Mr D's natural justice submission was considered by the Assessment Panel and Mr Bridges advised Mr Fermanis the Registrar on 3 April 2016 that *'(T)he panel has not, to a standard that the CAB requires, been able to extract evidence of complex engineering work that the candidate has undertaken in respect of the work samples provided.'* Mr Bridges concluded: *'In my view the issue is one of evidence and it is of concern that Mr D does not appear to understand that work examples such as ASW2 Auckland Council Storm (W)ater Strategy do not tell us what complex engineering activities he has undertaken in the development of the document, and he has not provided us with any evidence.'*
30. The CAB considered Mr D's response on 4 May 2016 and having considered the information, declined his application and instructed that the suspension of his registration be implemented.
31. This decision was conveyed to Mr D by letter dated 13 May 2016.
32. On 18 May 2016 Mr D appealed the decision to this Council, listing disagreement with the following findings of RA as the grounds of appeal:
 - (a) That he did not provide verifiable evidence of complex engineering activities and application of new knowledge for continued registration.

- (b) That he had difficulty in differentiating the work his team does against the work he personally undertakes.
 - (c) That he had difficulty in differentiating complexity due to scale and stakeholders involved against complex engineering.
33. On receipt of the Appeal, the suspension of Mr D's registration was placed on hold.
 34. The Council appointed an Appeal Panel comprising Anthony Wilson (principal), Chris Harrison and Alan Winwood (members) at its meeting on 3 June 2015.
 35. The RA sent its paginated file to the Council and Mr D with a letter dated 21 July 2016.
 36. The process for progressing the appeal was confirmed by email on 9 August 2016.
 37. The Appellant provided his submission dated 22 August 2016.
 38. The Appeal hearing took place in Auckland on 9 September 2016.

The Hearing

39. Mr D represented himself and the RA was represented by Mr Mike Fermanis (Registrar), Ms Helen Davidson (General Counsel and Complaints Manager) and Mr Stephen Jenkins (Chairman of CAB).
40. Mr D reiterated his position that in his opinion he had provided ample evidence to demonstrate that he was undertaking complex engineering, and that he did not understand what else he could provide, particularly in the way of the sort of 'hard evidence' the Assessment Panel sought, given his work environment.
41. In response, the RA noted that it was not the role of an Assessment Panel to extract evidence, but rather to assess the evidence provided to it, and that the onus was on the applicant to prove that he or she meets the

appropriate standard for registration as a Chartered Professional Engineer.

42. Mr Jenkins noted that the CAB did get a sense of frustration by both the applicant and the panel in agreeing what constituted 'evidence' but also noted that the CAB was careful about overturning the recommendation of an Assessment Panel, without compelling reasons.
43. In response to questions about what constituted such evidence, the RA conceded that traditional forms such as signed reports or drawings attributable to a single individual were becoming less common in complex organisations, and as engineering became increasingly the work of teams with diverse specialisation. Instructions to assessment panels included the need to be aware of unconscious bias, particularly in favour of those working in multi-disciplinary practices compared to individuals practicing alone.
44. The Appeal Panel spent considerable time questioning Mr D on his day to day work and Auckland Council's structure and processes, with a particular focus on his personal influence, technical input and accountability.
45. Subsequent to the Hearing, the Appeal Panel Principal sought references from two of the referees to confirm the evidence presented by Mr D at the Hearing.

Discussion

46. It is the view of the Appeal Panel that despite genuine attempts by both parties there was a communication breakdown in the understanding of what evidence could or should have been provided for Mr D to demonstrate competence to the Assessment Panel.

47. It is also evident that traditional forms of evidence may increasingly not be available for potentially worthy applicants, particularly those working in large complex organisations.
48. While not stated in his appeal submission, Mr D confirmed in response to a question that continuation of his CPEng registration was an outcome that he was seeking through his appeal. This was also acknowledged by the RA.
49. Beyond the scope of these proceedings the RA may wish to:
 - (a) Give consideration to what constitutes evidence of competence in the modern work environment.
 - (b) Consider the mandatory use of face to face (rather than video conference) interactive interviews where there appear to be communication difficulties or where registration is at risk.
 - (c) Review the purpose of referee statements and the weight their evidence might be given, in situations such as this, where it may be appropriate.
50. The Appeal Panel agrees with the finding of the RA that Mr D does not currently demonstrate that he fits within the Management Practice Field.
51. During the hearing there was general acceptance by the parties that for Mr D the appropriate Practice Field is Environmental Engineering, and the appropriate Practice Area definition is 'Investigation, planning and programme management of stormwater infrastructure'.
52. On the basis of the in-depth questioning of Mr D, and the further referee feedback, the Appeals Panel is satisfied that Mr D is able to practise competently in his practice area to the standard of a reasonable professional engineer.

Findings

53. The Appeal is allowed.

54. Mr D's registration as a Chartered Professional Engineer is to be renewed for the standard period as follows:

Practice Field: Environmental Engineering

Practice Area: Investigation, planning and programme management of stormwater infrastructure

55. While we have the power to award costs we do not consider it appropriate in this case.

Dated 29 September 2016

Signed By the Appeals Panel

Anthony Wilson BE(Civil) CPEng, FIPENZ, FICE
Principal



Chris J Harrison, BE(Civil), CPEng, FIPENZ



Alan Winwood, BE(Civil), FIPENZ