

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

Appeal 6/21

AND

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

Between

Mr A

Appellant

And

Mr B

CPEng, CEngNZ, IntPE(NZ)

Respondent

Decision of the Chartered Professional Engineers Council

Dated 19 July 2021

1. Mr Nick A has appealed a decision, made by a Chair of Investigating Committees acting as Adjudicator, to dismiss his complaint about Mr Graeme B, the principal of Company C Ltd [BOD 206-212].
2. The panel has been provided with a paginated Bundle of Documents file (BOD) held by the Registration Authority (RA) in relation to the case. References to specific documents within this file are annotated “[BOD nn]”.

The Legislation

3. The right of appeal is contained in s35 of the Chartered Professional Engineers Act 2002 ("the Act") and s37 of the Act sets out the how the hearing is to be conducted, including the scope of determinations that the Council is entitled to make.
4. The Rules are the Chartered Professional Engineers of New Zealand Rules (No.2) 2002 ("the Rules") and were enacted pursuant to s40 of the Act.
5. The Chartered Professional Engineers of New Zealand (Appeals) Regulations 2002 (“the Regulations”) set out the requirements pertaining, amongst other matters, to the hearing and deciding of appeals.
6. Appeals to the Council are by way of rehearing (s37(2) of the Act). The appeal panel is entitled to confirm, vary or reverse a decision (s37(5)(a)) and may make any decision that could have been made by the decision authority (s37(5)(c)). Following *Austin, Nichols & Co Inc. v Stichting Lodestar* [2008] 2 NZLR 141, the panel is entitled to take a different view from the RA, but the appellant carries the burden of satisfying the panel that it should do so.
7. s21 of the Act states:

“21 Grounds for discipline of chartered professional engineers

1. *The Registration Authority may (in relation to a matter raised by a complaint or by its own inquiries) make an order referred to in s22 if it is satisfied that a chartered professional engineer*

- (a) *Has been convicted, whether before or after he or she became registered, by any Court in New Zealand or elsewhere of any offence punishable by imprisonment for a term of 6 months or more if, in the Authority's opinion the commission of the offence reflects adversely on the person's fitness to practice engineering; or*
- (b) *Has breached the code of ethics contained in the rules; or*
- (c) *Has performed engineering services in a negligent or incompetent manner; or*
- (d) *Has, for the purpose of obtaining registration or a registration certificate (either for himself or herself or for any other person), -*
 - (i) *Either orally or in writing, made any declaration or representation knowing it to be false and misleading in a material particular; or*
 - (ii) *Produced to the authority or made use of any document knowing it to contain a declaration or representation referred to in sub paragraph (i); or*
 - (iii) *Produced to the Authority or made use of any document knowing that it was not genuine."*

8. The facts and evidence clearly demonstrate that the criteria established under sections 21(1)(a) and (d) of the Act do not apply in this case. The panel is therefore tasked with considering whether there is a prima facie case that Mr B:
- has breached an aspect of the code of ethical conduct set out in the rules 42(A)-42(I) as amended in 2016 (s21(1)(b) of the Act); and/or
 - has performed engineering services in a negligent or incompetent manner (s21(1)(c) of the Act).

Correspondence and submissions

9. Key correspondence, communications and submissions relating to this appeal are listed Schedule 1.

Grounds of appeal and outcome sought

10. The grounds for appeal as cited by Mr A in his notice of appeal dated 29 March 2021 are:

Ground of appeal A – *“Mr D has a background in local government and public health engineering (water supply and wastewater management). He has not been a structural design engineer with a working knowledge of the buckling provisions of the Steel Structures Standard, NZS 3404. In particular, he does not have the knowledge or experience to carry out a steel design using clause 5.6.4 “design by buckling analysis” Mr D is therefore ill-qualified to assess Mr B’s competency regarding the same”*

Ground of appeal B – *“Mr E, an experienced structural design engineer, has given ENZ an expert assessment in the matter regarding the Company F workshop building. The adjudicator ought not to have ignored Mr E’s assessment. Mr E’s expert assessment ought to have been given due weight.”*

Ground of appeal C – *“The Adjudicator has misrepresented the complaint. The essence of the complaint regards Mr B’s competency regarding all the buckling provisions of NZS 3404, the Steel Structures Standard. [The snow load used by Mr B for his assessment is correct and not in dispute. Snow loading is not the substance of the complaint.”]*

Ground of appeal D – *“There is a sevenfold (700%) difference between Mr B’s assessment and my own, which the Adjudicator describes as a “difference of engineering opinion”. The Adjudicator fails to appreciate the unnecessary stress & anguish that Mr B’s advice has had on Mr G, the CEO of Company F.”*

11. The outcome sought from the appeal comprises three elements:
 - (a) Reversal of the decision to dismiss the complaint *“so that the complaint can be properly investigated.”*
 - (b) *“..competent design engineers who are familiar with all the buckling provisions of NZS 3404 to be used as investigators”*
 - (c) *“... the Council to recommend that ENZ interview Mr G face to face.”*
12. The panel notes that the outcomes which it can determine under the appeal are as set down in 6 above.

The original complaint

13. In September 2018, Mr A filed a complaint with Engineering New Zealand about Mr B's work relating to a Factory Building and Workshop Building, owned by Company H Ltd and leased by Company F Ltd ("Company F"). [BOD 3-35]
14. The original design had been undertaken by Mr A when employed by Company I Consulting Engineers. [BOD 99-100]
15. The complaint cited Mr B as the Chartered Professional Engineer responsible for the structural reports and Mr A alleged that Company C's assessment of the parallel chord steel trusses was incompetent. [BOD 3]
16. Mr B further alleged that Mr B had failed *"to properly review the suitability of the structural model used or get a second opinion from another engineer."* [BOD 3]
17. The stated aim of the complaint was *"to have Mr B found incompetent, by the Registration Authority, of being able to adequately assess the flexural torsional buckling capacity of parallel chord steel trusses and to have the same registered as a specific exclusion on Mr B's practice field of competency.."* [BOD 4]
18. The complaint alleged a breach of rule 42E of the Rules (Act competently). [BOD 5]

Decision being appealed and evidence considered

19. The decision under appeal is the decision of a Chair of Investigating Committees acting as Adjudicator, to dismiss Mr A's complaint about Mr B, under s57(a) of the Rules and clause 8(a) of the Engineering New Zealand Disciplinary Regulations, on the grounds that there is no applicable ground of discipline. [BOD 206-212]
20. The Chartered Professional Engineers Council has no jurisdiction to consider the matter with respect to the Engineering New Zealand Disciplinary Regulations and the panel's focus is therefore on grounds under the Chartered Professional Engineers of New Zealand Rules.

21. Under s15 of the Regulations, the Council may receive any evidence that the RA would have been entitled to receive on the decision being appealed.
22. The evidence considered by the panel in arriving at this decision included:
 - i. The Bundle of Documents [BOD 1-212]
 - ii. Submission from Mr A received 21 May 2021.
 - iii. Submission from Mr B received 9 June 2021
 - iv. Submission from the RA received 9 June 2021
 - v. Submission in response from Mr A received 15 June 2021

Hearing

23. The parties agreed that the appeal would be heard “on the papers”.
24. The panel met by “Zoom” on 7, 9 and 16 July 2021 to consider the evidence and formulate this decision.

Discussion and Findings

25. Mr A is a former director of Company J Limited and in 1999, as a senior employee of Company I Consulting Engineers, Dunedin, had designed the first stage of the Company F factory. [BOD 100]
26. Mr B was engaged by Company F to complete a structural design for new additional crane rails / support structures in the Company F buildings.
27. The engagement referred to in 26 above involved a review of plans and completion of a preliminary structural assessment of the existing structure to verify its capacity / adequacy for the certification of specific gantry cranes.

28. Mr B had expressed written concerns regarding the Company F building's structural design.
29. The concerns referred to in 28 above were brought to Mr A's attention when Mr G, the CEO of Company F, wrote to Mr A advising him to notify his professional indemnity insurers of the concerns raised about Mr A.
30. While reference has been made in documentation relating to the appeal, to Mr G of Company F, the panel is not aware of any complaint made by Mr G, against Mr B.
31. The stated grounds of appeal, in Mr A's notice of appeal, have been used as the framework against which to assess if the evidence presented is sufficient to satisfy the panel that it should overturn the Adjudicator's decision and uphold his appeal.
32. The panel has addressed the grounds of appeal as follows:

Ground of appeal A: *"Mr D has a background in local government and public health engineering (water supply and wastewater management). He has not been a structural design engineer with a working knowledge of the buckling provisions of the Steel Structures Standard, NZS 3404. In particular, he does not have the knowledge or experience to carry out a steel design using clause 5.6.4 "design by buckling analysis" Mr D is therefore ill-qualified to assess Mr B's competency regarding the same"*
33. The issue here is not the credentials of the decision maker, but whether he made the correct decision.
34. Irrespective of the point made in 33, the panel considers that the RA has correctly addressed the matters of appointment of an adjudicator and an adjudicator's qualifications in paragraphs 9.3 to 9.5 of their submission.
35. An important factor is that the appeal is heard by way of a rehearing (s37(2) of the Act refers (see 6 above).

36. Further to 35 above, in hearing the evidence that was available to the Adjudicator the panel can make its own determination of the merits of the matter being appealed, meaning that the Adjudicator's credentials have no bearing on the decision.
37. In paragraphs 5.2, 5.3 and 5.4 of their submission the RA has outlined the purpose of disciplinary proceedings and has asserted that *"..the Adjudicator's decision to dismiss the complaint was a legitimate exercise of the discretion open to it..."*. The panel agrees with the RA on that point, irrespective of the outcome.
38. The stated ground does not provide a basis to overturn the Adjudicator's decision.

Ground of appeal B:

"Mr E, an experienced structural design engineer, has given ENZ an expert assessment in the matter regarding the Company F workshop building. The adjudicator ought not to have ignored Mr E's assessment. Mr E's expert assessment ought to have been given due weight."

39. In September 2019 Mr E was engaged by Engineering New Zealand, to undertake a high-level review and give his *"opinion about concerns raised by Mr G about engineer Mr A."* [BOD 98-100]
40. The panel notes that the engagement of Mr E by Engineering New Zealand was in connection with a complaint by Mr G about Mr A, not the complaint about Mr B, which is the focus of this appeal, although this does not prevent the panel from considering Mr G's findings.
41. Mr G retired as a director of Company K Ltd, a firm of consulting structural and civil engineers and has a background in structural design. [BOD 98]
42. In his decision [BOD 207] the Adjudicator has acknowledged having reviewed the expert assessment by Mr E, amongst other documents.

43. There is no evidence that the Adjudicator has either ignored, or not given due weight to Mr E's assessment and this specific ground is therefore considered to have no merit.
44. Notwithstanding the statements in 40, 42 and 43 above in the context of this particular ground, the panel has taken the findings of Mr E's expert assessment into account in addressing Grounds C and D below.

Ground of appeal C:

"The Adjudicator has misrepresented the complaint. The essence of the complaint regards Mr B's competency regarding all the buckling provisions of NZS 3404, the Steel Structures Standard. [The snow load used by Mr B for his assessment is correct and not in dispute. Snow loading is not the substance of the complaint]."

45. With reference to 35 above, any alleged misrepresentation on the part of the Adjudicator is not relevant as the appeal is conducted as a rehearing, meaning that in considering the evidence that was available to the Adjudicator, the panel is able to make its own determination of the merits of the matter being appealed.
46. The panel concludes that the buckling provisions of NZS 3404 are the central issue in the matter being appealed and consider snow loadings to be a peripheral issue.
47. In his expert assessment Mr E noted [BOD 100] - *"Mr A is correct that there is an alternative design method available in the steel code. Viz Section 5.6.4 Design by Buckling Analysis which references Appendix H as a means of compliance. The steel code (NZS 3403) has several sections where a simplified design methodology is available to the engineer. These significantly reduce the computational time but the trade-off is they give conservative results which in some cases can be quite conservative."*
48. Further, Mr E observed *"I have not been able to independently verify Mr A's calculations due the complexity involved and which requires access to a suitable 3-D analysis programme. However I note he has used a suitable one (Sap 2000) and I consider his methodology sound."*

49. The panel is satisfied, from the evidence available, that on the central matter of buckling stability of the trusses, Mr A's methodology, involving the applications of the provisions of Appendix H of NZS 3404 (Elastic Resistance to Lateral Buckling) is sound.
50. The panel also notes that the provisions of Appendix H of NZS 3404 are discretionary and not mandatory as is evident in clause H1.2 which states "*... When it is desirable to avoid undue conservatism, then 5.6.4 may be used which requires the use of the results of an elastic flexural-torsional buckling analysis...*".
51. The finding at 49 in respect of Mr A's approach being sound, does not automatically mean that Mr B's approach is incorrect.
52. The panel agrees with the observation of Mr E [BOD 100] that "*..if Company C had used the alternative method available the buildings' ratings would have been considerably higher. It is possible that the current ratings of both buildings are less than 100% due to the increase in code snow loadings in 2010 well after when they were designed and consented.*"
53. The panel also notes Mr E's observation [BOD 100 clause 8] – "*I concur with Mr A that if as the Company C report alleges the building's rating is <10% it could most likely have failed under gravity loads alone and so this rating is most likely dubious.*"
54. The panel would have expected that in arriving at a very low assessed building rating, Mr B might have reconsidered his assumptions, utilised an alternative methodology to verify his findings, or attempted to reconcile differences with the original designer, before issuing his report to the building owner or lessee, but evidence suggests that he did not.
55. The technical approach used by Mr B appears fundamentally sound, and consistent with established practice, but in this instance has produced a very conservative result, which should have triggered some further thought by Mr B.

56. The panel does not believe that the approach taken by Mr B is a demonstration of incompetence and has seen no evidence that his approach is not compliant with the code. However, it does indicate a situation where his findings could have resulted in a more costly outcome for the building owner or lessee than necessary, if building strengthening work were implemented to accommodate the findings of the conservative analysis, without verifying an appropriate or optimum level of response.
57. Further to 55 above, the panel's view is that if Mr B had reconsidered his assumptions, utilised an alternative methodology to verify his findings, and/or attempted to reconcile his technical conclusions with the original designer, before issuing his report to the building owner or lessee, the complaint which is the subject of this appeal may not have been laid.
58. The panel has seen no evidence that major strengthening was undertaken based on the outcome of Mr B's analysis.
59. The panel finds that Mr B's analytical approach, while conservative, was not unsafe and that while there is no evidence of incompetence, Mr B could have done more to ensure an outcome focussed on potentially better value for his client.
60. There is no evidence under this ground as a basis to overturn the Adjudicator's decision.

Ground of Appeal D:

"There is a sevenfold (700%) difference between Mr B's assessment and my own, which the Adjudicator describes as a "difference of engineering opinion". The Adjudicator fails to appreciate the unnecessary stress & anguish that Mr B's advice has had on Mr E, the CEO of Company F."

61. As Mr E is not a party to the complaint about Mr B, and had not made a submission about Mr B, the panel has addressed only the matter of differences between the assessments of Mr A and Mr B.

62. The panel agrees that Mr B's analysis was significantly more conservative than Mr A's but has seen no evidence that his analysis was unsafe.
63. As also observed in 59 above, while there is no evidence of incompetence, Mr B could have done more to ensure an outcome focussed on potentially better value for his client.
64. The nature of the truss, in particular the bottom chord element, is such that the more conventional approach used by Mr B has arrived at a significantly more conservative result than the alternative approach used legitimately by Mr A.
65. The marked difference between the two analyses highlights a situation commonly encountered in engineering, where two approaches can yield quite different results without any presumption of one being correct and the other being incorrect.
66. In his decision [BOD 211] the Adjudicator made reference to Mr B's communication, noting in effect that an approach could have been followed, which would have allowed his findings to be explained and discussed and which could have provided a basis for resolution of the issues without causing alarm. The panel agrees with these observations.
67. The panel has seen no evidence under this ground which would support the Adjudicator's decision being overturned.

Outcome of Appeal

68. The panel members have reviewed all four grounds of appeal.
69. While Mr B could have done more by refining his approach after his analysis indicated a low building rating, the panel considers that no ground has been established for referral of the matter to an Investigating Committee.

70. The panel's decision is to uphold the adjudicator's decision and dismiss the appeal under rule 57(a) of the Chartered Professional Engineers Rules (No 2) 2002, that no applicable ground of discipline under s21(1)(a) to (d) of the Act has been proven.
71. In accordance with s35 of the Act either party may appeal this decision to the District Court within 28 days.

Costs

72. The panel rules that any costs incurred by the parties in relation to this appeal shall lie where they fall.

Dated 19 July 2021

Signed by the Appeal Panel

A handwritten signature in blue ink, appearing to read "Chris Harrison", with a long horizontal flourish extending to the right.

Chris J Harrison (Principal)

A handwritten signature in blue ink, appearing to read "Sah Sale", written in a cursive style.A handwritten signature in blue ink, appearing to read "Al. Wriwood", written in a cursive style.

Schedule 1

Key correspondence, submissions and communications in this Appeal

Paginated bundle of documents provided by the RA on 30 March 2021 via OneDrive link, containing:

- (a) The complaint [3-35] including:
 - i. Letter raising concerns about Mr B and the Company F Building (1 September 2018) [3-21]
 - ii. Concerns form [22-26]
 - iii. Summary of complaint [27-35]
- (b) Complainant's supporting documents [36-148]
 - i. Relating to concerns about the Company F building
 - Company C commentary letter - Building A Factory [36-44]
 - Company C commentary letter Building B Workshop [45-53]
 - Example buckling analysis [54-97]
 - Expert assessment by E [98-100]
 - ii. Relating to second set of concerns about the Company M Buildings
 - Email from Mr L attaching Company Cs' structural assessment of Company M Building [101-143]
 - Company J structural review - existing steel portal planner shed for Company M corp [144-148]
- (c) Response [149-160]
 - i. Email informing Mr B of concerns [149-152]
 - ii. Response from Mr B [153-157]

- iii. Additional response from Mr B [158-160]
- (d) Early resolution attempt [161-203]
 - i. Emails between complainant and respondent
- (e) Letters to the parties dated 15 March 2021 [204-205]
- (f) Adjudicator's decision dated 11 March 2021 [206-212]

Other Documents

- (a) Notice of Appeal dated 29 March 2021
- (b) Email from CPEC chair to parties confirming receipt of Notice of Appeal (29 March 2021)
- (c) Email from CPEC chair to parties confirming appeal panel (16 April 2021)
- (d) Letter from Panel Principal to parties (10 May 2021) re panel, process, submissions schedule and communications
- (e) Submission from Mr A (21 May 2021)
- (f) Submission from the RA (9 June 2021)
- (g) Submission from Mr B (9 June 2021)
- (h) Submission in response from Mr A (15 June 2021)