

# **DISCIPLINARY COMMITTEE DECISION REGARDING A COMPLAINT ABOUT JOO CHO**

## **Confidential to parties**

### **In accordance with:**

Engineering New Zealand Rules 2019

Engineering New Zealand Disciplinary Regulations 2017

Chartered Professional Engineers of New Zealand Act 2002

Chartered Professional Engineers of New Zealand Rules (No 2) 2002

### **Prepared by**

Jenny Culliford FEngNZ (Ret.)

### **Chair of the Disciplinary Committee**

Peter Boardman FEngNZ CPEng IntPE(NZ)

Rachel Wright CMEngNZ CPEng IntPE(NZ)

David Naulls, nominated by Consumer New Zealand

Anita Killeen, Barrister of the High Court of New Zealand

### **Members of the Disciplinary Committee**

21 December 2021



**engineering  
new zealand**  
te ao rangahau

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# EXECUTIVE SUMMARY

1. Joo Cho CMEngNZ CPEng IntPE(NZ), of Seismotech Consulting Limited, was engaged by the owner of 230 High Street to undertake the structural design for an eight-storey building in central Christchurch. During construction, an engineer observed from the street potential issues with the building. Further investigation by independent experts found the building did not comply with the Building Code. Construction was halted.

## DECISION

2. Having considered the matter following the hearing held on 27 September 2021, we have found the engineering services provided by Mr Cho were not in accordance with the expected standard of a Chartered Member of Engineering New Zealand and a Chartered Professional Engineer.
3. We have found that:
  - a. Mr Cho has performed engineering services in an incompetent manner by designing a building that does not comply with the Building Code;
  - b. Mr Cho breached his obligations in respect of the Code of Ethical Conduct applicable to Chartered Professional Engineers and members of Engineering New Zealand by failing to undertake his engineering activities in a careful and competent manner and failing to act with objectivity, by:
    - i. signing the PS1s for amended designs after he had been alerted to concerns about his design;
    - ii. not properly addressing and resolving the issues raised by peer reviewers;
    - iii. making significant design changes without peer review;
    - iv. dismissing the concerns raised by independent engineers without using these comments as an opportunity to reflect on his work; and
    - v. failing to accept that his design is non-compliant.
4. The complaint is upheld.
5. Mr Cho is removed from the register of Chartered Professional Engineers and not permitted to re-apply for registration for a period of two years. Mr Cho is to pay \$12,458.71 + GST towards the costs incurred by Engineering New Zealand and the Registration Authority in inquiring into his conduct (which is 60% of their total costs). Mr Cho is reprimanded in the strongest terms possible.
6. In addition, the Registration Authority will:
  - notify the Registrar of Licensed Building Practitioners appointed under the Building Act 2004 of the order and the reasons for it; and
  - publish and name Mr Cho in our final decision of this complaint on its website, in a public press release, and in any other communication it considers appropriate.

# BACKGROUND

## THE ENGINEER

7. Joo Cho CMEngNZ CPEng IntPE(NZ) is a Chartered Professional Engineer, Chartered Member of Engineering New Zealand, and director of Seismotech Consulting Limited.<sup>1</sup>
8. Mr Cho is, and was, a Chartered Professional Engineer<sup>2</sup> and a Member of Engineering New Zealand<sup>3</sup> at the time he performed the engineering services the subject of this complaint.

## THE BUILDING

9. An eight-storey steel framed building has been constructed at 230 High Street, Christchurch where it faces on to a busy shopping and pedestrian precinct. It was intended to house retail on the ground level, offices on the next five floors, and residential on the top two levels.
10. Mr Cho was engaged by the owner of the building, to complete stage two of the project.<sup>4</sup> The building's structure was designed by Mr Cho in 2015-16. A building consent for stage two, for the steel superstructure, was granted on 15 August 2016<sup>5</sup> and amended on 2 February 2017<sup>6</sup> and 8 March 2018.

## COMPLAINT

11. In November 2017, during construction of the building, an engineer from a separate consulting firm observed several issues with the building visible from the street. Those concerns were subsequently referred to the Christchurch City Council ("the Council").
12. On 7 May 2018, the building owner applied for a code compliance certificate for stage two, but the application was rejected by the Council. A review found the structure did not appear to conform with the Building Code in several areas. The Council applied for a determination by the Ministry of Business, Innovation and Employment ("MBIE") on 12 November 2018.
13. The MBIE Determination issued on 4 December 2019 found the design to be non-compliant.
14. On 28 May 2019, the complainant formally lodged a complaint with Engineering New Zealand about the structural design of 230 High Street as designed by Mr Cho. The complainant was of the view that Mr Cho's design raised "*serious concerns about his competency as a practicing [sic] consulting structural engineer*".

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<sup>1</sup> Seismotech Consulting Limited was incorporated on 17 June 2016. At the time of writing, the Registrar of Companies had initiated action to remove the company from the register as it was overdue in its obligation to file an annual return.

<sup>2</sup> Mr Cho was first registered as a Chartered Professional Engineer in July 2008.

<sup>3</sup> The conduct complained of took place between 2016 and 2019. During this period Mr Cho was a Member of the Institution of Professional Engineers New Zealand Incorporated ("IPENZ") and then a Chartered Member of Engineering New Zealand after IPENZ changed its trading name to Engineering New Zealand in October 2017.

<sup>4</sup> Stage one, designed by another party, included the building's foundations, concrete slab, and services under the slab. Building consent for stage one was granted on 19 November 2015 (BCN 2015/8299) and the consent was amended on 22 June 2016 and 26 March 2018. A code compliance certificate was issued for stage one on 12 April 2018. Stage one is not the subject of this complaint. As such, this decision does not discuss the adequacy or otherwise of the stage one design.

<sup>5</sup> Building consent BCN 2016/2849 was for the original superstructure designed by a different engineering firm and superseded by Mr Cho's design which was Amendment 1.

<sup>6</sup> Amendment 1 was Mr Cho's redesign of the superstructure.

15. On 24 August 2020, after considering the matter, Dr Wayne Stewart FEngNZ CPEng, chair of Investigating Committees, acting as adjudicator, decided to refer the complaint to an investigating committee.

## INVESTIGATING COMMITTEE

16. The members of the Investigating Committee were:

Dr Carron Blom FEngNZ (Chair)  
Stuart George CMEngNZ CPEng IntPE(NZ)  
Kevin Brown CMEngNZ CPEng IntPE(NZ)

17. The Investigating Committee found there to be six key issues arising from the complaint:

- Non-compliance with the Building Code;
- Declarations on PS1s;
- Relationship with peer reviewers;
- Changes to producer statements;
- Response to peer concerns; and
- Response to identified non-compliance with the Building Code.

18. The Investigating Committee considered these issues to be of a grave and serious nature.

19. After considering the matter, the Investigating Committee decided on 21 June 2021 there were no grounds to dismiss the complaint and concluded the complaint should be referred to a disciplinary committee on the basis that it raised concerns as to whether Mr Cho had met the standard expected of a reasonable Chartered Member of Engineering New Zealand and Chartered Professional Engineer.

## DISCIPLINARY COMMITTEE

20. On 6 July 2021, a disciplinary committee was appointed to hear the complaint.

21. The Disciplinary Committee convened online to hear the matter via videoconference on 27 September 2021.

22. The members of the Disciplinary Committee are:

Jenny Culliford FEngNZ (Ret.) (Chair)  
Peter Boardman FEngNZ CPEng IntPE(NZ)  
Rachel Wright CMEngNZ CPEng IntPE(NZ)  
David Naulls, nominated by Consumer New Zealand  
Anita Killeen, Barrister of the High Court of New Zealand

23. The following parties also attended the hearing via videoconference.

### **Complainant**

The complainant

The (then) graduate engineer who originally observed the building

### **Respondent**

Joo Cho CMEngNZ CPEng IntPE(NZ)

Director, Seismotech Consulting Limited

## Engineering New Zealand

Dr Carron Blom FEngNZ  
Stacey Campbell  
Tiffany Matsis

Investigating Committee Representative  
General Manager  
Senior Legal Advisor

24. The parties were invited to make submissions prior to the hearing. Neither party provided written submissions.
25. The complainant and Mr Cho made oral submissions at the hearing.
26. All relevant information gathered has been incorporated into our report below.

# INFORMATION GATHERED

## DOCUMENTS

27. We considered the bundle of documents provided by Engineering New Zealand including, but not limited to:
  - Council Building Consent files for stage 1 and stage 2;
  - Correspondence between Mr Cho and the complainant;
  - Letter from Holmes Consulting to the Council dated 12 August 2018 (“the Holmes review”);
  - Beca – 230 High Street - Structural Review, dated 12 April 2019 (“the Beca report”);
  - MBIE Determination 2019/060 Regarding compliance with Building Code Clause B1 Structure of a multi-storey steel framed building at 230 High St, Christchurch, dated 4 December 2019 (“the MBIE Determination”);
  - the Adjudicator’s decision;
  - Structural Analysis & Design Features Report, dated 18 June 2020 (“the 2020 Structural Report”); and
  - Review of Structural Assessment 230 High Street, Christchurch, dated 19 June 2020 (“the 2020 Review”);<sup>7</sup>
  - Responses by Mr Cho, the complainant, the Council, and the peer reviewer engineers to the Investigating Committee’s requests on 18 November 2020 for further information; and
  - the Investigating Committee’s decision.

## THE STRUCTURAL DESIGN

28. Located at 230 High Street, Christchurch, the subject building is eight storeys high with a slender rectangular footprint that occupies most of its narrow 232m<sup>2</sup> site (the MBIE Determination):

*The superstructure comprises steel framing for the support of gravity loads and to withstand lateral forces. There is a core comprising a lift shaft, single stairwell and services risers, which is located midway along the southern wall. The total floor area of the building is 1,540m<sup>2</sup>, with floor to floor heights of 4.5m at ground level and 3.3m on other levels.*

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<sup>7</sup> The 2020 Structural Report and the 2020 Review were provided to the Investigating Committee by the Council on the basis these would only be released to the parties if they confirmed the reports would be kept confidential and used only in relation to the complaints process. The complainant made this confirmation by email, was provided with the reports and gave feedback on them. Despite repeated invitations, Mr Cho did not respond to the request for confidentiality and has therefore not been provided with a copy of the reports.

Floors are concrete topping on a proprietary timber infilled flooring system, with 200mm deep ribs spanning between the external walls to the north and south. The roof is steel cladding with lightweight steel purlins connected to steel beams. Exterior walls are timber studs with insulated metal panels.

The lateral load capacity is provided principally by eccentrically braced frames (EBFs) along the northern and southern walls ... and adjacent to the service core ... Limited additional strength in the transverse direction is provided by two moment resisting frames...

... During construction, the bracing of the EBF at ground level ... next to the stairwell was modified to enable access to the stairwell ... This modification involved moving the upper section of the brace member further along the beam and adding a gusset section taken from a hot rolled section of steel...

29. Mr Cho submitted three PS1s (producer statements – design)<sup>8</sup> to the Council:

- Amendment 1 to the stage two consent dated 19 December 2016. This declared the design was in (the MBIE Determination):

*[C]ompliance with Clause B1 is in accordance with Verification Methods 11 B1/VM1 and B1/VM4; that the PS1 covers building work on drawings 100-S-000, 001 to 033; and that it is subject to site verification that “existing foundation and anchor bolts adequately constructed”*

- Amendment 2 to the stage two consent dated 23 February 2018. This declared that the design was in (ibid):

*[C]ompliance with Clauses B1 and B2 in accordance with NZS 1170, NZS 3101 and NZS 3404, and subject to site verification that “ground condition and steel base connections to be in accordance with Amendment 1 design”*

- A third PS1 dated 7 August 2018 to cover the brace modified during construction (“the modified brace”) as noted above. More detail regarding the modified brace is provided below.

## Secondary Designer

30. As part of the stage two design, Mr Cho instructed a secondary designer. The secondary designer was a director of another company.
31. Mr Cho told the Investigating Committee that the secondary designer had experience with structural design and construction monitoring for a large-scale project overseas. He said the secondary designer’s experience in New Zealand was working at the Council reviewing structural work (as a senior engineer in building control), while working at another company part time. He said 230 High Street had been primarily designed to the HERA<sup>9</sup> guideline as an “Accepted Solution” and the secondary designer was competent to design the structure in line with the procedure established in the Accepted Solution.
32. The Council told the Investigating Committee that the secondary designer was not involved with the approval of the building and the assessment for building consent was carried out by an external consultant.

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<sup>8</sup> A PS1 is a statement from the design engineer which states they believe on reasonable grounds their design complies with the Building Code. Their intent is to signal to a Building Consent Authority (“BCA”) that certain design work has been done (or overseen/supervised) by a practitioner who is competent to perform the defined work (most usually, a Chartered Professional Engineer). The PS1 has no legal status under the Building Act 2004 nor the Building Code but is part of the package of information a BCA will consider when deciding whether to issue a building consent.

<sup>9</sup> Heavy Engineering Research Association.

## Peer reviewers

33. Two engineers were commissioned by Mr Cho as the peer reviewers for the building design.
34. One of the peer reviewers signed an initial PS2 (producer statement – design review) on 19 January 2017 and a subsequent PS2 on 23 February 2018. The peer reviewers advised the Investigating Committee:

*It was our view that, at the time of providing the PS2, the building complied with the Code subject to the outstanding matters referred to in the PS2 certificate being incorporated ...*

*Our register of issues noted the remaining issues as being closed on the basis [Mr Cho] had confirmed they were resolved. The PS2 was issued subject to several amendments being incorporated into the design and was accepted by Christchurch City Council on that basis (to the intent that the PS1 was qualified to the extent of the amendments required).*

*We have subsequently identified that they were not closed out by [Mr Cho] and that [Mr Cho] made fundamental design changes during construction without our review.*

35. The peer reviewers contacted the Council on 25 June 2018 to advise that they had concerns their PS2 did not cover the building as constructed and that outstanding issues in their original PS2 had not been addressed by Mr Cho.

## Building consent

36. Building consent for stage two was granted by the Council on 15 August 2016, and was amended on 2 February 2017 and 8 March 2018.
37. The Council commissioned an external consultant to conduct engineering evaluations of the building consent application and engineering services technical review. The external consultant evaluated the original building consent application lodged as part of stage one and also reviewed Mr Cho's amended structural design which was stage two.
38. Based on the external consultant's assessment and the information provided by the building owner in support of the consent application, the Council considered it had reasonable grounds to be satisfied the design, if constructed in accordance with the plans and specifications, would comply with the Building Code.

## The modified brace

39. As stated above, during construction, the bracing of the EBF at ground level was modified to enable access to the stairwell.
40. Following an inspection of the modified brace by the Council on 12 April 2018 and an RFI<sup>10</sup> from the Council dated 10 May 2018 seeking assurance regarding its design, Mr Cho applied for a minor variation to the building consent on 25 July 2018.
41. On 7 August 2018, Mr Cho provided a supporting PS1 at the Council's request.
42. On 10 August 2018 the Council advised that, due to its complexity, the modified brace was to be processed as an amendment to the building consent and requested that Mr Cho submit an application for the amendment, including an updated PS2 from the peer reviewer.

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<sup>10</sup> Request for information



## THE COMPLAINANT'S CONCERNS

43. In November 2017, during construction of the building, an engineer from a separate consultancy firm observed several issues with the building, viewed from the street. The complainant obtained a copy of the archived consented drawings from the Council and completed a brief page-turn review. The complainant said the Council documents confirmed the serious nature of their observations.
44. The complainant subsequently conducted a high-level ETABS analysis.<sup>11</sup> They said this identified further potential design issues with the building's design. The complainant listed thirteen issues which they considered to be "design defects" including that the building was highly torsional, and the seismic coefficients used in the design appeared incorrect. The complainant considered the building's design underestimated seismic loads in the order of 25%.
45. The complainant met with Mr Cho in late November 2017 to discuss their concerns. The complainant recommended Mr Cho complete a detailed review of the design, supported by a peer review, to determine if the complainant's concerns were justified. The complainant advised Mr Cho that if their analysis of the design faults was correct, they considered they were ethically obliged to inform the Council of the potential design issues.
46. In his email response to the complainant (on 11 December 2017), Mr Cho said:
- "the design and construction practice of the ductile design is quite different from your experience in the brittle or nominally ductile structures. This demands the higher requirement for design, materials, e.g. seismic grade steels, and inspection schedule. So, I am not sure if you are competent to review this type of structure, in terms of the ethical standard limiting their competency. So, if you still have concerns and want more information on this issue, please provide follows:*
- [The complainant's] *sample project for the multi-storey structure with a full or limited ductility, NOT a nominal ductility*
  - *IPENZ competency of [the engineer] who raised concerns and reviewed the design done by CPEngs..."*
47. Mr Cho told Engineering New Zealand on 17 August 2019, after reviewing the complainant's preliminary calculations, he noted there was a significant difference in opinion on the design concept between the complainant and himself. He said:
- "Seismotech's design is based on the limited ductility of 3, while [the complainant] has reviewed with a ductility of 1.25."*
48. He also said:
- "Seismotech set up a design procedure based on the HERA guideline which is considered a verified method to avoid controversy. [The complainant] should have commented on the ductile system itself to ensure whether or not the plastic hinges are effectively developed under the code requirements, which is actually well presented in our calculations (EBF Calculations)."*
49. While Mr Cho has since stated the peer review was limited to the "early stages of the design not the final stage with packed documents", he nonetheless advised the complainant:
- "Four CPEng qualified engineers have been involved; 2 design engineers and 2 peer reviewers – no other engineer with limited experience has participated in this project. All of them are quite experienced in multi-storey buildings locally and internationally. Three of*

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<sup>11</sup> ETABS (Extended 3D Analysis of Building System) is an engineering software product for multi-storey building analysis and design.

*them had post-graduate study in the Canterbury University with Master and PhD degrees in structural engineering, after practical experience overseas. So, it is confirmed that the design has been adequately conducted with sufficient peer review process, by the engineers strongly competent in this field.”*

50. On 11 December 2017, the complainant informed Mr Cho his response did not address their concerns, notably Mr Cho had not provided “*supporting evidence such as a technical design review or supporting calculations to demonstrate [the] concerns are unfounded*”. Consequently, the complainant referred their concerns to the Council.

## CHRISTCHURCH CITY COUNCIL

51. The Council engaged Holmes Consulting Ltd (“Holmes”) to carry out a high-level review of the potential design issues raised. On 12 August 2018, Holmes issued a report which concluded the structure did not appear to conform with the Building Code in several areas and recommended a thorough investigation.
52. The Council forwarded the thirteen areas of concern to Seismotech for comment. Mr Cho, on behalf of Seismotech questioned the validity of the Holmes report. He said the report’s findings were based on the “*high-level review*” made by the complainant. In response to Engineering New Zealand Mr Cho noted the complainant had not carried out a detailed review of the structure, nor had they claimed to :

*“Seismotech’s understanding is that this issue was initially raised by some engineers with limited experience on the ductile design and then agreed by other engineers who conducted a high-level review based on a routine design procedure for the elastic structure.”*

53. Mr Cho disagreed with Holmes’ findings and reaffirmed Seismotech’s position that the building was structurally adequate.
54. On 12 November 2018, the Council sought a determination from MBIE as to whether the works were compliant with the Building Code.

## MBIE DETERMINATION

55. MBIE released its determination about the building on 4 December 2019.<sup>12</sup> The determination considered whether the building as designed and constructed complied with Clause B1 of the Building Code with respect to the specific concerns raised by the complainant in their letter to the Council on 13 December 2017.
56. As part of the determination process, MBIE obtained expert advice from an independent engineering firm, Beca<sup>13</sup>. Beca’s first report was issued on 12 April 2019. This report concluded that of eleven issues raised by the complainant, seven did not comply with the Building Code. Additionally, Beca identified several other items it considered were potential issues requiring further investigation.
57. Following a meeting between the parties and responses from Mr Cho, a final report was issued on 8 August 2019. On 21 October 2019, Beca responded to further submissions that had been made by Mr Cho on 9 September 2019. Beca’s conclusions, Mr Cho’s responses, and Beca’s further comments are all summarised in appendices to the MBIE determination.

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<sup>12</sup> MBIE Determination 2019/060 “Regarding compliance with Building Code Clause B1 Structure of a multi-storey steel framed building at 230 High St, Christchurch”: Available at: <https://www.building.govt.nz/assets/Uploads/resolving-problems/determinations/2019/2019-060.pdf>

<sup>13</sup> Beca is referred to as “the expert” in MBIE’s determination.

58. The MBIE determination states:

*“The design engineer (9 September 2019) – disagreed with the draft’s conclusions based on the expert’s report; said the expert had ignored the design engineer’s original concept and calculations and had instead reviewed the building as a normally ductile structure; and considered that capacity design carried out.*

and, in response:

- *The expert continued to disagree with the design engineer’s assertion that a limited ductile design had been achieved. The expert considered there were “obvious areas” where the requirements from the relevant Standards and guidelines for detailing active links and capacity design of other elements had not been complied with.*
- *The expert also considered there were “significant departures” from the procedures in the HERA publication for design and detailing as a limited ductile structure .....*
- *The expert concluded that the building was not in accordance with B1/VM1 either as a limited ductile or nominally ductile design.”*

59. On 4 December 2019, Katie Gordon, MBIE Manager Determinations found the building at 230 High Street, Christchurch, as designed by Mr Cho, did not comply with Clause B1 of the Building Code. With respect to the thirteen concerns raised in the complainant’s letter to the Council on 13 December 2017, Ms Gordon found ten items were not compliant, two items were compliant, and she had insufficient information to establish compliance with respect to one item (see Table 1).

**Table 1: Summary of MBIE Determination**

Engineering concerns	Status	MBIE Determination (p16)
1. Column splice capacity	×	Not in accordance with B1/VM1.
2. Modified brace (ground level, Grid 6)	×	Not in accordance with B1/VM1.
3. Calculation of seismic loads, torsional stability	×	Not in accordance with B1/VM1.
4. EBF column hold down bolts	×	Not in accordance with B1/VM1.
5. Column on Grid 5-H	×	Not in accordance with B1/VM1.
6. Pile capacity	×	Not in accordance with B1/VM1.
7. Foundation uplift by overturning	?	The design engineer had not provided enough information to demonstrate that this was in accordance with B1/VM1.
8. Raft foundation (punching shear)	×	Not in accordance with B1/VM1.
9. Load path into EBFs on Grids 5 and 6	✓	In accordance with Verification Method B1/VM1 for Clause B1
10. Precast stairs at landing	×	Not in accordance with B1/VM1.
11. EBF active link connections to minor axis of column	×	Not in accordance with B1/VM1.
12. EBF links against the stairwell	×	Not in accordance with B1/VM1.

Engineering concerns	Status	MBIE Determination (p16)
13. Composite action with concrete flooring.	✓	In accordance with Verification Method B1/VM1 for Clause B1

### Owner's reports

60. Following the MBIE determination, the building owner commissioned a report from a structural engineer on the building's compliance with the Building Code and remedial options to achieve compliance. The Council provided the Investigating Committee with copy of the 2020 Structural Report,<sup>14</sup> along with the 2020 Review.<sup>15</sup>
61. The 2020 Structural Report assessed the Building Code compliance against the 'as-built' context rather than the consented design. The 2020 Structural Report found, and the 2020 Review concurred, that:
- the building does not comply with the Building Code in several areas; and
  - a retrofit is not feasible for the building to be safely used as intended, so the building must be demolished.
62. The 2020 Structural Report also raised two complicating factors:
- whether boundary separations and building drifts should have been covered by the original design and previous assessment reports; and
  - whether there are further issues regarding the adequacy of the stage one piled foundation (which were excluded from previous investigations), and whether Mr Cho should also have checked the foundations, even if designed by others, to confirm they were suitable to support the new design for stage two.
63. The Council has engaged an expert to review the owner's report and to provide the Council with advice. It has also issued a notice under s 133AH of the Building Act 2004 requiring the owner to provide a Detailed Seismic Assessment. At the time of the disciplinary hearing, the Council's expert report was not yet available.

## THE HEARING

### Oral submissions by the complainant

64. At the hearing, the complainant outlined the background to the complaint. They told the Disciplinary Committee about their concerns with the way Mr Cho responded to their raising of potential issues:

*"What was concerning for me at the time was that the issues were substantial and not easily resolved. ... when we received the information back from Mr Cho, it was pretty clear to us that firstly the answers that were provided to our questions weren't sufficient enough to demonstrate that the particular details of the building worked engineering-wise or were compliant in anyway. It was kind of more opinion-based responses than justification by analysis and calculation.*

*... This is not a situation that could be easily resolved and just based on the approach that I had back, it really raised my concerns about the competency of what we were seeing here.*

<sup>14</sup> Prepared by two engineers MEngNZ and CMEngNZ CPEng and reviewed by another engineer CMEngNZ CPEng.

<sup>15</sup> Authored by an engineer CMEng NZ CPEng

*And it should have been better, we should have got answers better than what we did. Or we should have got an acknowledgement that there was a problem. But we haven't got that acknowledgement and I might add, we still haven't got that acknowledgment. So that's what prompted me to basically sort of draw a line under it and say ... "enough's enough", we need to expose this to the Council and get them to address the problem further."*

65. The complainant added:

*"... Mr Cho was very firm in his view on the design of the building and he believed that the design of the building was correct. ... after that time there have been three engineering reports tabled which suggests there's significant flaws in the building that need correcting. And from my perspective, Mr Cho hasn't recognised any of those and even with today's hearing, ... it shows that Mr Cho is still firm in his views on the way he's designed the building."*

### **Oral Submissions of Mr Cho**

66. Mr Cho told us that when the concerns were raised with him by the complainant, he thought it was a "simple and clear misunderstanding between two engineers". He said he and the complainant used different methodologies, based on different ductilities, which is why they got different results. He believed that expert reviews of the building were more familiar with the complainant's methodology and had focussed on assessing who was right, rather than whether the building complied with the Building Code. He maintained that his design was compliant with the Building Code.
67. Stage one of the building, the foundations<sup>16</sup>, had been designed before Mr Cho was engaged by the building owner for the stage two design. We asked Mr Cho if he had reviewed stage one before undertaking his stage two design. He said he had. The foundations had been designed for a different superstructure so he reviewed them to ensure they would be acceptable for his new stage two superstructure design.
68. The Disciplinary Committee asked Mr Cho about the involvement of the peer reviewers in his design process. He said Seismotech is a small firm with a lack of resources which is why he tried to get peer reviewers involved in the initial stages. He was unable to provide us with any evidence that there was any quality assurance undertaken, such as checking of the final design.
69. Mr Cho told us that there were no significant changes from the consented design made to the structure during construction. He did not consider the modified brace to be a significant change, saying it was just detailing.
70. When asked by the Disciplinary Committee if he had discussed the complainant's concerns with his client and undertaken a review, Mr Cho said he had raised the issues, but the client was not willing to pay for a review.
71. We asked Mr Cho if he had reflected on his design as a result of the expert reports commissioned for the MBIE determination. Mr Cho said the experts had used the complainant's methodology of ductility 1.25, with which he totally disagreed. He said MBIE asked the reviewer to re-review based on his methodology, but the experts came to the same conclusion and supported their first review. He said he tried to respond to that second report, but his client didn't want to continue Seismotech's

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<sup>16</sup> The building's foundations are comprised of a 1.1m deep concrete raft slab on a 2m deep base of compacted gravel used to fill in a previous basement construction. Twenty-eight screw piles were installed to a depth of 26.5 – 28.5m below ground level. The shafts of the piles were filled with 30MPa strength concrete.

engagement and did not want to pay for his review. When asked if he had considered responding anyway, he replied that he was quite sure his building was “okay” and the design was acceptable.

72. Mr Cho maintained that his building design was acceptable. He told us that he stands by his original design but if he were to design the same building now he would do it differently resulting in a building that was overdesigned and more expensive.
73. Mr Cho told us that he has left engineering and is now retired.

## DISCUSSION

### THE DISCIPLINARY COMMITTEE’S ROLE

74. Professional disciplinary processes primarily exist to protect the public, uphold professional standards, and maintain public confidence in the profession and its regulation. They do this by ensuring members of the profession adhere to certain universal (or accepted) professional standards.<sup>17</sup>
75. Our role is to consider the information before us relative to the Chartered Professional Engineers of New Zealand Act 2002 (“the Act”) and the Chartered Professional Engineers of New Zealand Rules (No 2) 2002, and the Engineering New Zealand Rules 2019, Engineering New Zealand Disciplinary Regulations 2017 (“the Regulations”), and Engineering New Zealand Code of Ethical Conduct 2016. We must consider whether Mr Cho has acted in accordance with accepted professional standards and, if not, whether there are grounds for disciplining him in accordance with the Act and the Regulations.

### RELEVANT STANDARDS

76. The applicable Chartered Professional Engineer Code of Ethical Conduct is contained in the Chartered Professional Engineers of New Zealand Rules (No 2) 2002, rules 42A – 42I.
77. The relevant Engineering New Zealand Disciplinary Regulations are those that came into force on 1 October 2017.

### THE LEGAL TEST

78. The legal test to assess whether Mr Cho acted in accordance with acceptable professional standards is whether he acted in accordance with what a reasonable body of his peers would have done in the same situation.
79. The assessment of whether an engineer has acted in accordance with accepted standards may be informed by whether reasonable members of the public would “consider such an act or omission, if acceptable to the profession, were to lower the standard of that profession in the eyes of the public”.<sup>18</sup>
80. If the evidence is Mr Cho acted in accordance with accepted standards, then we will dismiss the complaint. If the evidence is Mr Cho did not act in accordance with accepted standards, then we will uphold the complaint. Where the behaviour meets this criterion, we must consider whether the conduct “falls seriously short of accepted conduct” before imposing a disciplinary sanction.<sup>19</sup>

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<sup>17</sup> *Dentice v Valuers Registration Board* [1992] 1 NZLR 720 (HC).

<sup>18</sup> *Robinson v RA* (10 July 2015, *Appeal Ruling #29*) Chartered Professional Engineers Council. Available at: <https://www.cpec.org.nz/40-appeal-ruling-29-10-july-2015/file>

<sup>19</sup> *Ibid.*

81. This means the matter for the Disciplinary Committee to decide in this case is whether the engineering services provided by Mr Cho, as identified in the complaint, met the standard to be reasonably expected of a Chartered Professional Engineer and Member of Engineering New Zealand.
82. Our approach to this question has been to consider the standards that applied at the time, the work undertaken by Mr Cho, and whether his performance met those standards.
83. The Disciplinary Committee is required to apply the civil standard of proof, that is, the balance of probabilities, when making a finding of fact. In other words, we must be satisfied that the material facts are “more likely than not” to be true, based on the evidence before us.

## ANALYSIS

84. The Investigating Committee found there to be six key issues arising from this complaint. We will discuss each in turn.
  - Non-compliance with the Building Code;
  - Declarations on PS1s;
  - Relationship with peer reviewers;
  - Changes to producer statements;
  - Response to peer concerns; and
  - Response to identified non-compliance with the Code.

### Non-compliance with the Building Code

85. We are not required to perform a detailed analysis of Mr Cho’s design to assess whether or not it complies with the Building Code. An in-depth review has already been undertaken by MBIE in its determination and there have been other reviews by a number of independent engineers. Although the reviews did not all come to exactly the same findings, every one of those reviews did find significant areas of non-compliance with the Building Code.
86. Mr Cho has said that the issue is a difference in methodology between that which he has used and that used by everyone else. It is significant that MBIE’s determination states that Mr Cho’s design does not meet the requirement of the Building Code as a limited ductile or as a nominally ductile design.
87. Despite the considerable body of evidence to the contrary, Mr Cho has maintained throughout that his design is acceptable and compliant. His response to the reviews and findings has been that he has significant experience in designing high rise buildings and post-graduate qualifications in this field. We do not find this evidence compelling enough to counter the findings of MBIE and the various structural engineering experts.
88. The 2020 Structural Report and the 2020 Review both concluded that the building as built is beyond rehabilitation. This is extremely concerning.
89. We are satisfied that Mr Cho’s design does not comply with the Building Code. We do not accept that this is a situation where there is a simple difference of methodology: this building is clearly non-compliant. We reject Mr Cho’s stance that the several experienced structural engineers who reviewed the building design are incorrect in their assessment that the building is non-compliant.

### Declarations on PS1s

90. Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute

of Architects, Engineering New Zealand, and the Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand.

91. Although producer statements have no particular status under the Building Act 2004, the producer statement system is widely used to provide building consent authorities with reasonable grounds for the issuing of a Building Consent or a Code Compliance Certificate, without having to duplicate design or construction checking undertaken by others. Producer statements give confidence to building consent authorities that building work will be or has been constructed to meet the Building Code and approved consent requirements.
92. In signing a PS1, Mr Cho was giving his professional opinion regarding the building design, specifically: *“I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competence to do so.”*
93. The complainant raised their concerns with Mr Cho in November 2017. When Mr Cho signed the PS1 on 23 February 2018, for the second amendment to the building consent<sup>20</sup> and when he signed the PS1 for the proposed modification on 7 August 2018<sup>21</sup>, he had had several meetings and discussions with the complainant about possible problems with his design. He either was, or should have been, aware of the need to re-evaluate his design. A reasonable engineer would have been on notice that there were concerns about his design and should have paused to address these. Mr Cho appears to us to have been so convinced his design was correct that he did not give due consideration to the issues being raised by a fellow professional.
94. It is clear to us that Mr Cho believed his building design complied with the Building Code. He remains adamant about that. However, it is less clear what those reasonable grounds were for his belief.
95. We do not believe a reasonable engineer in the same circumstances would have signed a PS1 attesting to believing on reasonable grounds that their design was compliant with the Building Code once they had been alerted to concerns raised by other engineers unless a review had been undertaken and the concerns satisfactorily resolved.

### **Relationship with peer reviewers**

96. A peer review is a professional opinion based on sound engineering analysis and assumptions, good practice, appropriate regulations and unbiased judgement. It is an independent assessment of engineering work, where the peer reviewer needs to have a level of engineering expertise at least equivalent to the engineer responsible for the work being reviewed. Peer reviews may range from a review of completed or partially completed engineering work to establish whether specific objectives have been met, to a series of reviews at pre-determined stages in large, complex projects.
97. As noted in Engineering New Zealand’s 2018 practice note on peer reviews<sup>22</sup>:

*Peer review is a powerful tool in maintaining and enhancing the quality of engineering work. It’s an important check in a self-regulating profession like engineering. Peer review checks whether originating engineers used suitable processes and assumptions and made appropriate decisions. This helps strengthen the quality of work engineers do. It also gives*

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<sup>20</sup> Amendment 2 to building consent BCN 2016/2849 involved amended structural details.

<sup>21</sup> A variation for a modification to bracing to enable access to the stairwell.

<sup>22</sup> Engineering New Zealand, Practice Note 2: Peer Review (version 2 – April 2018) Available at: [www.engineeringnz.org/resources/practice-notes-and-guidelines/](http://www.engineeringnz.org/resources/practice-notes-and-guidelines/)



*New Zealanders confidence in the work of engineers. A peer review means engineering work is scrutinised by other engineers. When originating engineers willingly and actively participate, it helps keep the profession's overall output at a high standard.*

98. At the time the peer reviewers carried out their reviews and signed PS2s<sup>23</sup>, the applicable version of the IPENZ Practice Note relating to Peer Review was the version dated June 2003.<sup>24</sup>
99. There are several types of peer review, as detailed in the 2003 Practice Note:
- **Peer Review:** The Peer Review is potentially the most complex kind of review both technically and ethically. The purpose of Peer Review can include comment on some or all of the following: whether the completed work has met the objectives set out for it, other options that could have been included in the preliminary design, whether the evaluation of options is rigorous and fair, the validity of the assumptions, the validity of the conclusions, the process towards completion of the work, the validity of the recommendations, the objectives set out for the work, adherence to relevant regulations and codes of practice, and the fitness for purpose of the work. Peer Review may also be part of the design function, to consider elements of the design process, such as resources, the value engineering process, concept design, risk reviews and design methodology.
  - **Design Review/Technical Review:** The purpose of a Design Review is to check assumptions, design method, arithmetical accuracy and the conclusions drawn by the designer. The review will include compliance with regulations, laws, design codes and internal design methods. A Design Review is sometimes required to utilise a different design approach from that of the designer so as to test the acceptability of the design.
  - **Regulatory Review:** The purpose of a Regulatory Review is to assess whether the design complies with pertinent regulations, consent requirements and laws. The review does not assess the design objectives, process, options, assumptions or method, but only the submitted design, testing the outcome against regulatory parameters.
  - **The expert witness:** In the capacity of an expert witness, a peer reviewer is asked by legal counsel or the commissioner of an inquiry to advise the court on specified aspects of a work undertaken by another designer.
100. In relation to regulatory reviews, the 2003 Practice Note says:

*“There is no direct relationship between the peer reviewer and the designer, although the designer may be asked questions about inconsistencies in the work [...]*

*The peer reviewer’s role is to identify areas of the design that need to be addressed and to invite the designer to resolve them to the peer reviewer’s satisfaction. The peer reviewer does not become involved in resolving the issues.”*

101. A peer reviewer who carries out a review as part of the building consent process needs to complete a PS2. This is submitted to the Building Consent Authority with the design review report, which should include a log of communication between the peer reviewer and the originating engineer. The PS2 is a statement of opinion, based on stated reasonable grounds, that the aspects of the proposed building work covered in the scope of engagement will comply with the Building Code.

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<sup>23</sup> PS2s signed and dated 14 December 2016, 19 January 2017, and 23 February 2018.

<sup>24</sup> Version 2 of the Practice Note was issued in April 2018.

102. Mr Cho told us at the hearing that he involved peer reviewers in his design process because Seismotech was a new and small firm with a lack of resources. We agree this is a sensible and appropriate approach. However, we do not consider this is a replacement for a proper independent regulatory peer review, which is what was required. In this case, the peer reviewers were essentially acting as design reviewers, albeit in a limited capacity.
103. We are concerned that Mr Cho appears to have over-stated the involvement of the peer reviewers in the development of the design. He has said that peer review was limited to the early stages of design, yet he told the complainant that *“the design has been adequately conducted with sufficient peer review process, by the engineers strongly competent in this field”*.
104. It is also of concern that there is no evidence that Seismotech had any quality assurance procedures in place that would ensure proper review and checking through all phases of the design.
105. Regardless of how Mr Cho viewed the role of the peer reviewers, it is clear he did not take their advice on board. Several of the issues raised by the peer reviewers remained unresolved. The peer reviewers contacted the Council in June 2018 as they were concerned their PS2 did not cover the building as constructed and that outstanding issues in their original PS2 had not been addressed by Mr Cho.
106. We would expect a reasonable Chartered Professional Engineer and Chartered Member of Engineering New Zealand to resolve all issues raised by peer reviewers to their satisfaction and to undertake appropriate design review at all stages including for significant changes made during construction.

### **Changes to producer statements**

107. The peer reviewers told the Investigating Committee that Mr Cho made *“fundamental design changes during construction”* without their review.
108. It is a matter for concern if design changes were made by Mr Cho after PS2s had been signed and submitted to the Council. Building Consent Authorities are entitled to rely on producer statements and to expect that changes will be notified to them with documents revised as appropriate. A design change without documentation and associated peer review, in effect, is a change to the producer statement as signed by the peer reviewers. Building Consent Authorities should be able to rely on the integrity of the peer review process.
109. One of the changes made by Mr Cho was the modified brace which was found by the MBIE determination to be not in accordance with the Building Code.
110. Mr Cho did not provide any evidence at the hearing to alleviate these concerns. He told us he did not consider the modified brace to be a significant change to the main structure referring to it as a detail. We do not agree. Detailing is not a secondary component. It is a very important aspect of a higher ductility structure in that it affects how energy is dissipated.
111. We do not believe that a Chartered Professional Engineer and a Chartered Member of Engineering New Zealand would make significant changes to their consented design during construction without applying for a variation or amendment to the building consent with associated peer review and revised PS2(s). However, although we do not agree with him, we note that Mr Cho was firm in his view that the modified brace was not a significant design change.

## Response to peer concerns

112. As we have briefly discussed above, we were concerned by the way in which Mr Cho responded to issues being raised by fellow professionals – whether those were peer reviewers or third parties such as the complainant.
113. When the complainant raised their concerns with Mr Cho in late 2017, there was a series of emails and a meeting to try and resolve their differences. However, instead of engaging in the process, Mr Cho appears to have relied on his perceived seniority, dismissing the concerns as having been raised by engineers with limited experience of ductile design (in his opinion).
114. At the hearing, Mr Cho maintained his position that his design was compliant with the Building Code and other engineers did not understand his methodology.
115. Mr Cho does not appear willing to accept, or give consideration to, feedback from reviews carried out by other professional engineers, even when the same points are raised by more than one independent reviewer. Engineers need to be receptive to criticism and willing to adjust their practice in response to changes in industry standards.<sup>25</sup>
116. It is of concern that Mr Cho was unable to address the issues raised by the complainant and other reviewers objectively at the time. He potentially missed the opportunity to rectify the technical concerns before construction was completed. Consequently, the issues remain unresolved.
117. The entire system of checks and balances that is part of professional engineering is reliant upon engineers being willing to accept and address critiques of their designs.
118. We do not believe Mr Cho acted as a reasonable Chartered Professional Engineer and Chartered Member of Engineering New Zealand in the same circumstances would have done when he dismissed concerns raised by the peer reviewers and other engineers without taking the time to reflect upon his work.

## Response to identified non-compliance with the Building Code.

119. In its decision, the Investigating Committee said:

*“Despite the significance of MBIE’s findings, Mr Cho has not acknowledged the shortfall of his design, the potential consequences to others, nor advised us of the steps he has taken to enable his client and Council to rectify the issues.”*

120. Unfortunately, this has not altered. When we asked Mr Cho at the hearing whether he had reflected further on his design after reading what the engineers engaged by MBIE had to say, he remained adamant that his design was acceptable.
121. Mr Cho did engage initially with the MBIE process, making submissions and attending the meeting set up by MBIE with the parties. He told us that after the first expert review, he responded by saying he disagreed totally because their methodology was different from his. However, when MBIE’s experts carried out a further review taking his methodology into consideration and confirmed their opinion that the design did not comply with the Building Code, Mr Cho did not respond further although he was given an opportunity to do so.
122. One of the factors influencing Mr Cho’s decision not to make a further response to MBIE was the client’s decision to end Seismotech’s engagement. With his conviction that the design is acceptable, Mr Cho was not prepared to respond to MBIE without payment from the client.

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<sup>25</sup> refer Engineering New Zealand Practice Note on Peer Reviews (April 2018).

123. We are deeply concerned that Mr Cho still has not accepted that his design is non-compliant and does not accept the MBIE determination.

## DECISION

### DISCUSSION

124. We may make an order for discipline against Mr Cho as a Chartered Professional Engineer if we are satisfied he has performed engineering services in a negligent or incompetent manner or he has breached his obligations in the Code of Ethical Conduct.<sup>26</sup>
125. We may also make an order for discipline against Mr Cho as a Chartered Member of Engineering New Zealand if we are satisfied he has breached his obligation to comply with the relevant Code of Ethical Conduct, act competently, and act as a fit and proper person.<sup>27</sup>

### Competence

126. To determine whether Mr Cho acted competently, we refer to the decision of *Robinson v RA* which states:<sup>28</sup>

*“Whether engineering services have been performed in an incompetent manner is a question of whether there has been a serious lack of competence (or deficit in the required skills) judged by the areas of competence which in this case are encapsulated by Rule 6 [of the Chartered Professional Engineers Rules (No 2) 2002].”*

127. We consider the Chartered Professional Engineers Council’s comments in respect of the Registration Authority and its role as regulator of Chartered Professional Engineers are equally applicable to engineers who have membership with Engineering New Zealand.
128. Chartered Professional Engineers are assessed against the twelve elements set out Rule 6 of the Rules to establish their competence, they are:

*“(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*

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<sup>26</sup> Chartered Professional Engineers of New Zealand Act 2002, s 21.

<sup>27</sup> Engineering New Zealand Rules 2017, r 10.5.

<sup>28</sup> *Robinson v RA* (10 July 2015, Appeal Ruling #29) Chartered Professional Engineers Council. Available at: <https://www.cpec.org.nz/40-appeal-ruling-29-10-july-2015/file>

*(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.”*

129. For the reasons set out above, we find that Mr Cho failed to provide engineering services at a competent and accepted standard reasonably to be expected of a Chartered Professional Engineer and Chartered Member of Engineering New Zealand. In particular, Mr Cho failed to design a building that complied with the Building Code.
130. Additionally, Mr Cho, in rejecting the MBIE determination and analyses by several experienced structural engineers identifying numerous areas of non-compliance with the Building Code, failed to demonstrate an adequate level of competence.
131. In our view, Mr Cho’s actions were not consistent with the elements of competence required of a Chartered Professional Engineer found in Rules 6(a) – (d), (f) – (h) and (j).
132. As detailed in our analysis above, we find that Mr Cho did not undertake the engineering services he provided in a careful and competent manner. His design did not meet the standard that would reasonably be expected of a professional structural engineer in the same circumstances. We consider that a reasonable body of Mr Cho’s peers would not accept his engineering services to be at a standard expected or acceptable to the profession. We also consider that the public should reasonably be able to expect better from a Chartered Professional Engineer and Chartered Member of Engineering New Zealand.
133. We find Mr Cho performed engineering services in an incompetent manner and his engineering activities fell below the accepted standard of a Chartered Professional Engineer and a reasonable Member of Engineering New Zealand.

### **Code of Ethical Conduct**

134. The Codes of Ethical Conduct which apply to members of Engineering New Zealand and Chartered Professional Engineers both require that engineers must only undertake engineering activities within their competence and in a careful and competent manner.
135. Mr Cho as a Chartered Professional Engineer and as a Chartered Member of Engineering New Zealand had a general duty to act competently and with care in any engineering work he undertook.
136. As stated above, we consider that Mr Cho undertook engineering activities in an incompetent manner. We are of the opinion that he also failed in his duty of care. Mr Cho’s failure to address and resolve adequately the design issues raised by the peer reviewers show a lack of care as does his failure to advise Council of changes occurring during construction. The modified brace is a clear example where both care and competence were lacking.
137. One of the key tenets of the Code of Ethical Conduct is the requirement to act competently. An engineer is obliged to keep their engineering knowledge and skills up to date.

138. One of the ways professionals develop competence is by having design work peer reviewed and giving due consideration to the peer reviewer's comments<sup>29</sup>.
139. Another requirement of the Code of Ethical Conduct is the obligation to behave appropriately, by being honest and objective, and acting with integrity.
140. We consider that Mr Cho failed to act objectively in dismissing without due consideration the concerns expressed by the complainant, peer reviewers, and independent experts. The complaint against Mr Cho is of a grave and serious nature, that could have remained unidentified but for the initial diligence of the complainant with potentially significant consequences. Mr Cho has not acknowledged or understood these issues which, in the context of the Christchurch earthquakes, is very concerning.

## DECISION

141. Having considered all the evidence, including the oral evidence provided at the hearing on 27 September 2021, we have decided to uphold the complaint about Mr Cho. His engineering services have been below the standard reasonably expected of a Chartered Professional Engineer and Chartered Member of Engineering New Zealand. We find that Mr Cho has performed engineering services in an incompetent manner and has breached the Code of Ethical Conduct, specifically by failing to act in a careful and competent manner and with objectivity. Accordingly, we find there are grounds for disciplining Mr Cho under section 21 of the Act and clause 17 of the Regulations.

## PENALTY

142. Having found Mr Cho in breach of his obligations as a Chartered Professional Engineer and as a Chartered Member of Engineering New Zealand, we need to determine what orders, if any, should be made against him.
143. There is a range of disciplinary actions available to a disciplinary committee as set out in section 22(1) of the Act. There is also a range of sanctions in respect of Mr Cho's membership with Engineering New Zealand under clause 17(3) of the Regulations.
144. On 16 November 2021, our substantive decision was sent to the parties and they were invited to make submissions on penalties. We asked the complainant and Mr Cho to provide any submissions on penalties by 29 November and 6 December 2021 respectively.

## THE COMPLAINANT'S SUBMISSIONS

145. The complainant made submissions on 17 November 2021.
146. In relation to Mr Cho's membership of Engineering New Zealand, the complainant submitted *"Mr Cho should be removed from membership, this is on the basis that Mr Cho has not acknowledged fault or error in his design, he has demonstrated he does not fully understand basic design principals which is concerning for any future work he may be involved in. The scale of the error and continued lack of acknowledgement of that error leads me to believe that Mr Cho is not competent to practice as a consulting engineer again."*
147. The complainant supported the imposition of a fine but made no specific suggestions as to quantum.

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<sup>29</sup> Engineering New Zealand, Practice Note 8: Being Ethical (version 3 – August 2019) Available at: [www.engineeringnz.org/resources/practice-notes-and-guidelines/](http://www.engineeringnz.org/resources/practice-notes-and-guidelines/)

148. The complainant submitted that Mr Cho should be named publicly and the decision “*published on the website on the basis that this is a very good example of learning from mistakes and an excellent study case of ethics and competency for structural engineers generally*”.

## MR CHO’S SUBMISSIONS

149. Mr Cho did not make any submissions regarding penalties, nor did he respond to the complainant’s submissions.

150. He did however make some comments about penalty at the hearing. He asked that we consider making any fine as low as possible because he is not working at the moment and is retired.

151. We have taken those comments into consideration as being in the nature of a submission.

## RELEVANT LAW

152. In *Roberts v A Professional Conduct Committee of the Nursing Council of New Zealand*<sup>30</sup> the High Court outlined a number of principles to be applied by the Health Practitioners Disciplinary Tribunal in determining the appropriate penalty to impose in disciplinary proceedings. The High Court determined that a disciplinary penalty must:

- protect the public (including through deterrence of other practitioners from engaging in similar conduct);
- set and maintain professional standards;
- where appropriate, rehabilitate the practitioner back to the profession;
- be comparable with penalties imposed on practitioners in similar circumstances;
- reflect the seriousness of the practitioner’s conduct, in light of the range of penalties available;
- be the least restrictive penalty that can reasonably be imposed in the circumstances; and
- be fair, reasonable, and proportionate in the circumstances.

153. The High Court also stated that while penalty may have the effect of punishing a practitioner, punishment is not a necessary focus for the Tribunal in determining penalty.

154. The principles in *Roberts* are broadly applicable to our power to make disciplinary orders under section 22 of the Act and under the Regulations. They are the principles we rely on when considering the appropriate penalty orders in this case.

155. The principles have general application to professional disciplinary proceedings in the light of the Supreme Court’s decision in *Z v Dental Complaints Assessment Committee*.<sup>31</sup> In *Z*, the Supreme Court makes general statements about the purposes of professional disciplinary proceedings, noting such proceedings are designed to:

*Ascertain whether a practitioner has met appropriate standards of conduct in the occupation concerned and what may be required to ensure that, in the public interest, such standards are met in the future. The protection of the public is the central focus.*

156. This is consistent with *Roberts*, as *Roberts* lists public protection and the maintenance of professional standards as the foremost considerations relevant to penalty.

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<sup>30</sup> [2012] NZHC 3354.

<sup>31</sup> [2008] NZSC 55.

157. The Supreme Court in *Z v Dental Complaints Assessment Committee*<sup>32</sup> also states that while professional disciplinary proceedings are not intended to punish practitioners, they may have a punitive effect in practice. This is also consistent with the principles set out in *Roberts*, in that the penalty must be the least restrictive penalty and that punishment is not a necessary focus of a disciplinary penalty.
158. The reasoning underlying *Roberts*' focus on practitioner rehabilitation is less relevant to penalties under the Act in light of the fact that the removal or suspension of a Chartered Professional Engineer's registration does not prevent the individual practising as an engineer but does prevent use of the Chartered Professional Engineer title.
159. It is appropriate that disciplinary penalties mark the profession's condemnation of the relevant conduct, noting that to do otherwise would not be consistent with the purpose of the Act to establish the title of Chartered Professional Engineer as a mark of quality.<sup>33</sup>

## DISCUSSION

160. The public places significant trust in engineers to self-regulate. As a professional, an engineer must take responsibility for being competent and acting ethically. The actions of an individual engineer also play an important role in the way in which the profession is viewed by the public.
161. We found Mr Cho departed from what could be expected of a reasonable engineer. That is, he has breached his obligation to undertake engineering activities in a careful and competent manner. We have also found he has practiced engineering in an incompetent manner.
162. In our view, Mr Cho's actions, if condoned, would undermine the public's trust in the engineering profession and reduce the public confidence in the Chartered Professional Engineer title and membership with Engineering New Zealand. If his actions had been left unchecked, the safety of the public could have been at risk.
163. Mr Cho's actions showed a lack of the competencies and skills required of a Chartered Professional Engineer, and a lack of care and an inability to engage in any discussion of whether his design was flawed. His departure from expected standards is at the higher end of the scale, and our orders need to reflect our view of the breach.

### Membership of Engineering New Zealand

164. In respect of orders relating to membership with Engineering New Zealand, we may order an Engineering New Zealand member be:<sup>34</sup>
  - expelled from membership;
  - suspended from membership for any period;
  - suspended from membership until such time as the member has fulfilled requirements for professional development as have been specified by the Committee; or
  - suspended from membership for a period of time if by a prescribed date, the member fails to fulfil requirements for professional development as has been specified by the Committee.

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<sup>32</sup> *Ibid.*

<sup>33</sup> Chartered Professional Engineers of New Zealand Act 2002, s 3.

<sup>34</sup> IPENZ Disciplinary Regulations, reg 17(3)(a) – (d).



165. In the decision of *Attorney-General v Institution of Professional Engineers New Zealand Incorporated and Reay*<sup>35</sup> the High Court set out the standard the public expects when an engineer is a member of Engineering New Zealand:

*[M]embership of a professional body, such as the Institution, can confer a status that signals trustworthiness to the public. This status reflects the value that society places upon the training and skill acquired by members and upon the Institution's ability to maintain the standards of its members through ongoing education, training and disciplinary processes.*

166. The Court also went on to set out the public expectation of Engineering New Zealand's role in maintaining the standard of the profession:<sup>36</sup>

*There is, however, a counterbalance to the public trust that is reposed in members of professional bodies such as the Institution. That counterbalance is the public expectation that the Institution will tightly regulate admission into its ranks and ensure members maintain high professional standards. The public expects that if a person is to be afforded the status of membership of the Institution, then those individuals will maintain professional standards and that those standards will be enforced by the Institution through, if necessary, disciplinary proceedings. If a professional body, such as the Institution, wishes to maintain that public trust, and the value associated with membership status, then it must act in accordance with this expectation.*

167. Mr Cho was a Chartered Member of Engineering New Zealand until his membership lapsed in August 2021 due to non-payment of his membership subscription. As he is no longer a member, we do not need to consider whether or not to remove him from membership.

168. We hope that if Mr Cho does re-apply for membership, he will avail himself of the many educational services and continuing professional development opportunities then available to him to improve his practice.

## Registration

169. In respect of orders relating to registration as a Chartered Professional Engineer, we may order:<sup>37</sup>

- an engineer's registration be removed, and they may not apply for re-registration before the expiry of a specified period;
- an engineer's registration be suspended for a period of no more than 12 months or until they meet specified conditions relating to the registration; or
- the engineer be censured.

170. In *A v Professional Conduct Committee*<sup>38</sup> the High Court said, in relation to a decision to cancel or suspend a professional's registration, that four points could be expressly and a fifth implicitly derived from the authorities:

*First, the primary purpose of cancelling or suspending registration is to protect the public, but that 'inevitably imports some punitive element'. Secondly, to cancel is more punitive than to suspend and the choice between the two turns on what is proportionate. Thirdly, to suspend implies the conclusion that cancellation would have been disproportionate. Fourthly, suspension is most apt where there is 'some condition affecting the practitioner's*

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<sup>35</sup> [2018] NZHC 3211 at [52] and [55].

<sup>36</sup> *Ibid* at [56].

<sup>37</sup> Chartered Professional Engineers of New Zealand Act 2002, s 22.

<sup>38</sup> *A v Professional Conduct Committee* [2008] NZHC 1387 at [81].

*fitness to practise which may or may not be amendable to cure'. Fifthly, and perhaps only implicitly, suspension ought not to be imposed simply to punish.*

171. We consider the Judge's comments in *Reay* are equally applicable to the Registration Authority and its role in regulating Chartered Professional Engineers.
172. We have found that Mr Cho has departed from what could be expected of a reasonable engineer, and this departure is serious. Mr Cho performed engineering services in an incompetent manner and breached his professional obligation to act competently, and behave appropriately. In our view, his actions, if condoned, would undermine the public's trust in the engineering profession and reduce public confidence in the Chartered Professional Engineer title. As previously notes, if his actions had gone unchecked, the safety of the public could have been at risk.
173. We do not consider only suspension and/or a fine to be reasonable and proportionate in this case. Given the seriousness of Mr Cho's misconduct and his continued inability to accept any criticism of his work, we consider that removal from the register is warranted.
174. We considered whether suspension with conditions requiring professional development and a period of supervision to the satisfaction of Engineering New Zealand would be an appropriate sanction and provide an opportunity for rehabilitation. However, we are of the view that this would be inadequate from the perspective of safety and protection of the public. We are mindful of Mr Cho's response to the technical advice of experience structural engineers and do not have confidence that he would respond positively to the opportunities this approach would give him. We have concerns that Mr Cho has not learned from this experience. He continues to maintain that his design is compliant with the Building Code. This is deeply concerning.
175. In this case, greater weight must be given to the public interest, public protection and the need to maintain public confidence in the profession, than to the consequences of the imposition of the penalty on Mr Cho.
176. We noted the recent decision of a disciplinary committee in the matter of a *Complaint by Tauranga City Council about Bruce Cameron*<sup>39</sup>. In that matter, the Committee ordered that the engineer be removed from the register and not be allowed to apply for re-registration for two years. That engineer had exhibited a concerning pattern of poor and unacceptable practice over a long period of time. The Committee was concerned at the scale of Mr Cameron's misconduct, but also with his apparent lack of insight into his actions and his unwillingness to change throughout the process.
177. Although Mr Cho has not exhibited a repeated and ongoing pattern of poor practice, as in *Cameron*, we are similarly concerned with Mr Cho's apparent unwillingness to alter his behaviour. We believe that his competence and commitment to professional ethics needs to be thoroughly assessed by a competency assessment board if he wishes to re-apply for registration as a CPEng.
178. We have therefore decided that Mr Cho's registration be removed and that he may not re-apply for registration for a period of two years. We consider this is a proportional response to the severity of Mr Cho's breach and his lack of acknowledgment of any wrongdoing.

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<sup>39</sup> 25 June 2019, available online:

[https://d2rjvl4n5h2b61.cloudfront.net/media/documents/002\\_TCC\\_v\\_Cameron\\_DC\\_decision\\_for\\_publication\\_-\\_anonymised\\_eSpL7Jr.pdf](https://d2rjvl4n5h2b61.cloudfront.net/media/documents/002_TCC_v_Cameron_DC_decision_for_publication_-_anonymised_eSpL7Jr.pdf)

## Fine

179. The Act and the Regulations state we may order that an engineer pay a fine up to a maximum of \$5,000. However, the Act does not allow us to impose a fine in addition to removing an engineer's CPEng registration. Accordingly, we are unable to impose a fine on Mr Cho.

## Costs

180. We may order an engineer pay costs and expenses of, and incidental to, the inquiry by Engineering New Zealand and the Registration Authority.<sup>40</sup> We note the ordering of payment of costs is not in the nature of a penalty.

181. When ordering costs, it is generally accepted the normal approach is to start with a 50% contribution.<sup>41</sup> That, however, is a starting point and other factors may be considered to reduce or mitigate that portion. Those factors include any co-operation from or attendance at the hearing by the engineer, and consistency with the level of costs in previous decisions. The balance of costs after the orders must be met by the profession itself.<sup>42</sup>

182. In respect of the medical profession, the Court in *Vatsyayann v PCC* said:<sup>43</sup>

*[P]rofessional groups should not be expected to bear all the costs of a disciplinary regime and that members of the profession who appeared on disciplinary charges should make a proper contribution towards the costs of the inquiry and a hearing; that costs are not punitive; that the practitioner's means, if known, are to be considered; that a practitioner has a right to defend [themselves] and should not be deterred by the risk of a costs order; and that in a general way 50% of reasonable costs is a guide to an appropriate costs order subject to a discretion to adjust upwards or downwards.*

183. Further, in *O'Connor v Preliminary Proceedings Committee* the High Court stated:<sup>44</sup>

*It is a notorious fact that prosecutions in the hands of professional bodies, usually pursuant to statutory powers, are very costly and time consuming to those bodies and such knowledge is widespread within the professions so controlled. So as to alleviate the burden of the costs on the professional members as a whole the legislature had empowered the different bodies to impose orders for costs. They are nearly always substantial when the charges brought are successful and misconduct admitted, or found.*

184. Neither party has made submissions on costs.

185. In the recent decision of a disciplinary committee in the matter of *a Complaint about Richard Joyce*<sup>45</sup>, the Committee criticised the engineer's lack of engagement in Engineering New Zealand's process and his lack of insight in not acknowledging his failures. The Committee made an order that the engineer pay 60% of the costs incurred in investigating and hearing the complaint.

186. We have considered Mr Cho's comment at the hearing that he is retired and no longer working. We have not been provided with any information to give us insight into what Mr Cho's current financial position might be nor the extent to which he has the ability to pay a portion of costs incurred by Engineering New Zealand.

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<sup>40</sup> Chartered Professional Engineers of New Zealand Act 2002, s 22(4) and IPENZ Disciplinary Regulations, reg 17(3)(g) respectively.

<sup>41</sup> Including *Cooray v Preliminary Proceedings Committee HC Wellington AP 23/94*, 14 September 1995 per Doogue J.

<sup>42</sup> *PCC v Van Der Meer* 1019/Nur18/422P.

<sup>43</sup> [2012] NZHC 1138 at [34].

<sup>44</sup> *O'Connor v Preliminary Proceedings Committee HC Wellington AP 280/89*, 23 August 1990 at [13] per Jeffries J.

<sup>45</sup> 10 December 2019, available online at:

[https://d2rjvl4n5h2b61.cloudfront.net/media/documents/Disciplinary\\_Committee\\_decision\\_NZTA\\_v\\_Joyce.pdf](https://d2rjvl4n5h2b61.cloudfront.net/media/documents/Disciplinary_Committee_decision_NZTA_v_Joyce.pdf)

187. We similarly consider Mr Cho’s lack of engagement with Engineering New Zealand throughout this process is an aggravating factor justifying an uplift from the starting point of 50% of costs. After Mr Cho failed to respond to repeated efforts to contact him about the disciplinary action, Engineering New Zealand was forced to apply to the District Court to seek a summons compelling his attendance at the hearing, pursuant to section 28 of the Act. This incurred additional time and costs, including court filing fees and process service fees.
188. Taking all factors into account, we have decided that Mr Cho pay 60% of the costs incurred by Engineering New Zealand in investigating and hearing this matter.

## Naming

189. In addition to notifying any orders made against an engineer on the register of Chartered Professional Engineers, the Registration Authority must notify the Registrar of Licensed Building Practitioners appointed under the Building Act 2004 of the order and the reasons for it and may publicly notify the order in any other way that it thinks fit.<sup>46</sup>
190. In respect of membership with Engineering New Zealand, we may order the member be named, the order against the member be stated and the nature of the breach described in the official journal of the Institution of Professional Engineers New Zealand or publicised in any other manner as may be prescribed by the Committee.<sup>47</sup>
191. The Act does not prescribe factors we should consider when deciding whether to name an engineer. While we are mindful of the specific legislative test of “desirability” set out in the Health Practitioners Competence Assurance Act 2003, we are guided by the public interest factors considered by the medical profession when deciding whether to name a practitioner.<sup>48</sup> These include openness and transparency in disciplinary proceedings; accountability of the disciplinary process; public interest in knowing the identity of the practitioner; the importance of freedom of speech; unfairly impugning other practitioners; and that where an adverse disciplinary finding has been made, it is necessary for more weighty private interest factors (matters that may affect a family and their wellbeing, and rehabilitation of the practitioner) to be advanced to overcome the public interest factors for publication.<sup>49</sup>
192. Naming is the starting point and will only be inappropriate in a limited number of circumstances where the engineer’s privacy outweighs the public interest. In *Y v Attorney-General*<sup>50</sup> the Court of Appeal explored the principles that should guide the suppression of the names of parties, witnesses, or particulars in the civil context. The starting point is the principle of open justice.<sup>51</sup>
193. The question is then, do the circumstances justify an exception to the principle of open justice. In a professional disciplinary context, a practitioner is “*likely to find it difficult to advance anything that displaces the presumption in favour of disclosure*”<sup>52</sup>. This is because the practitioner’s existing and

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<sup>46</sup> Chartered Professional Engineers of New Zealand Act 2002, s 22(5).

<sup>47</sup> Clause 17(3)(h) of the Regulations

<sup>48</sup> The presumption in s 95(2) of the Health Practitioners Competence Assurance Act 2003 is that a hearing shall be in public, but the Tribunal has discretion to grant name suppression. The test is whether it is “desirable” to prohibit publication of the name or any particulars of the affairs of the person in question and the Tribunal must consider both the interests of any person and the public interest.

<sup>49</sup> *Professional Conduct Committee of the Pharmacy Council of New Zealand v El-Fadil Kardaman* 100/Phar18/424P at [113] – [114].

<sup>50</sup> [2016] NZCA 474.

<sup>51</sup> *Ibid* at [25].

<sup>52</sup> *Ibid* at [32].

prospective clients have an interest in knowing details of the conduct, as this allows them to make an informed decision about the practitioner's services.<sup>53</sup>

194. Consistent with these precedents, the starting point is naming of engineers subject to a disciplinary order is the normal expectation. This is because public protection is at the heart of disciplinary processes, and naming supports openness, transparency, and accountability.
195. The complainant and Mr Cho did not specifically address the subject of naming in their submissions.
196. We note Mr Cho and his firm have been publicly named in the media several times in relation to the building and his firm was named in the MBIE determination.
197. We consider this matter is not comparable to that of *An Engineer CPEng CMEngNZ*<sup>54</sup> when it comes to naming, in which the engineer's name was permanently suppressed because that Disciplinary Committee had evidence before it that the publication of the name would cause extreme hardship. That engineer had not been previously named in the media.
198. We consider there are no factors for suppression which displace the high threshold, nor justify departing from the fundamental principle towards naming.
199. We consider there is a strong public interest in support of naming. Specifically, for the fundamental principles: openness and transparency of the disciplinary proceedings, right of the public to know the failings in the circumstances of this matter, and accountability of the disciplinary process.
200. We are of the view it is important we keep the public informed and updated regarding the matter because Mr Cho's involvement with the building at 230 High Street is widely known in the public and the profession.
201. We consider this decision will provide valuable learning for the profession, which restates the expected standard of engineers in their practice of signing and issuing producer statements. Engineers must be open and objective when presented with design review issues and take care in their resolution of these.

## Comment

202. In closing, we wish to acknowledge the assistance of the complainant and his firm in this matter. Considerable time and effort has been spent by these engineers in acting on their concerns about the building at 230 High Street.
203. If an engineer has reasonable grounds to believe that an engineering matter has, or could have, adverse consequences, the Code of Ethical Conduct requires them to bring the matter to the notice of the relevant regulatory body. The Code also requires engineers to take reasonable steps to safeguard the health and safety of people. We thank the complainant for their commitment to ethical practice.

## SUMMARY OF ORDERS

204. In exercising our delegated powers, we order that:
  - Mr Cho is removed from the register of Chartered Professional Engineers and not permitted to re-apply for registration for a period of two years;

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<sup>53</sup> Ibid.

<sup>54</sup> 8 December 2020, available online at

[https://d2rjvl4n5h2b61.cloudfront.net/media/documents/Disciplinary\\_Committee\\_decision\\_March\\_2021.pdf](https://d2rjvl4n5h2b61.cloudfront.net/media/documents/Disciplinary_Committee_decision_March_2021.pdf)

- Mr Cho is to pay \$12,458.71 + GST towards the costs incurred by Engineering New Zealand and the Registration Authority in inquiring into his conduct (which is 60% of their total costs); and
- Mr Cho is reprimanded in the strongest terms possible.

205. In addition, the Registration Authority will:

- notify the Registrar of Licensed Building Practitioners appointed under the Building Act 2004 of the order and the reasons for it; and
- publish and name Mr Cho in our final decision of this complaint on its website, in a public press release, and in any other communication it considers appropriate.



**Jenny Culliford**  
Disciplinary Committee Chair