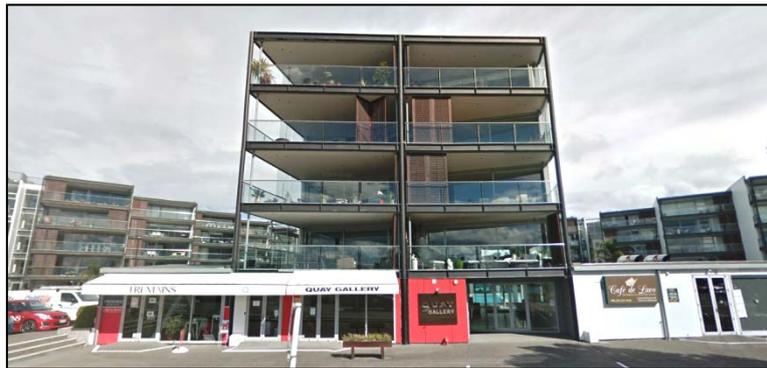




## Determination 2019/030

# Regarding the refusal to issue a building consent for invasive investigation of structural steel in an apartment complex at 14 West Quay, Ahuriri, Napier



### Summary

This determination considers the refusal to issue a building consent for investigation and subsequent reinstatement of concrete panels containing potentially corroded structural steel elements. The determination considers the authority's reasons for refusing to issue the building consent.

### 1. The matter to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> (“the Act”) made under due authorisation by me, Katie Gordon, Manager Determinations, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.

1.2 The parties to the determination are:

- Body Corporate BC 368533 as owner of the common areas and representing the owners of the 103 apartments in the complex (“the applicant”), acting through its legal advisor (“the applicant’s lawyer”)
- Napier City Council (“the authority”), carrying out its duties as a territorial authority or building consent authority, acting through its legal advisor (“the authority’s lawyer”).

1.3 I also consider that Engineering New Zealand (“ENZ”), formerly known as the Institute of Professional Engineers New Zealand (“IPENZ”) has an interest in this determination<sup>2</sup>.

1.4 The application for this determination arises from the following:

<sup>1</sup> The Building Act, Building Code, Acceptable Solutions, past determinations and guidance documents issued by the Ministry are all available at [www.building.govt.nz](http://www.building.govt.nz) or by contacting the Ministry on 0800 242 243.

<sup>2</sup> The professional body for engineers formerly known as IPENZ (Institution of Professional Engineers New Zealand) changed its name to ENZ (Engineering New Zealand) on 1 October 2017. In this determination I refer to the organisation by the name it bore at the relevant time.

- The five-storey apartment complex accommodating 103 units (“the complex”) was built in 2006/2007 and some five years later various legal claims arose regarding certain aspects of the construction.
- Investigations in 2014 recorded corrosion stains at deck/wall junctions which led to concerns about the corrosion coating of concealed structural steel elements. Invasive investigations were proposed to establish the condition of steel weld plates to six sample areas of three of the blocks in the complex (“Block A, Block B and Block D”).
- In February 2017, the applicant’s engineers submitted an application to the authority for a building consent to undertake invasive investigation and reinstatement work, subsequently responding to three requests for further information (“RFIs”).
- In April 2017, the authority refused to issue a building consent for the proposed work due to its concerns that the engineer’s producer statements did not include the structural durability of the proposed work.

1.4.1 This determination therefore arises from the decision by the authority to refuse to issue a building consent for the proposed investigation and reinstatement, because the authority is not satisfied that the work will comply with the Building Code<sup>3</sup> in regard to structural durability of sample areas when investigation and reinstatement work is completed.

1.5 The matter to be determined<sup>4</sup> is therefore the authority’s exercise of powers in refusing to issue a building consent for the proposed building work for the reasons provided to the applicant.

## 1.6 The evidence

1.6.1 In making my decision, I have considered the submissions from the parties, from IPENZ (now ENZ), from the consulting engineering firm for the project (“the design engineer”), and the other evidence in this matter.

1.6.2 Evidence considered in this determination includes producer statements and guidance provided by engineering companies and professional bodies. For clarity, this determination refers to these entities as shown in Table 1 (with abbreviations commonly used):

Engineering role	Title in this determination	Producer statement:	Title
Design and documentation of proposed investigations and reinstatement	“design engineer”	PS1 – Design	“PS1”
Review of engineering design	“peer review engineer”	PS2 – Design Review	“PS2”
Inspection of proposed investigations and reinstatement	“construction engineer”	PS4 – Construction Review	“PS4”
Institute of Professional Engineers New Zealand/ Engineering New Zealand	“IPENZ”/ “ENZ”	Guidelines on Producer Statements (jointly produced)	“IPENZ Guidelines”
Association for Consulting Engineers New Zealand	“ACENZ”		

**Table 1: The engineers and producer statements**

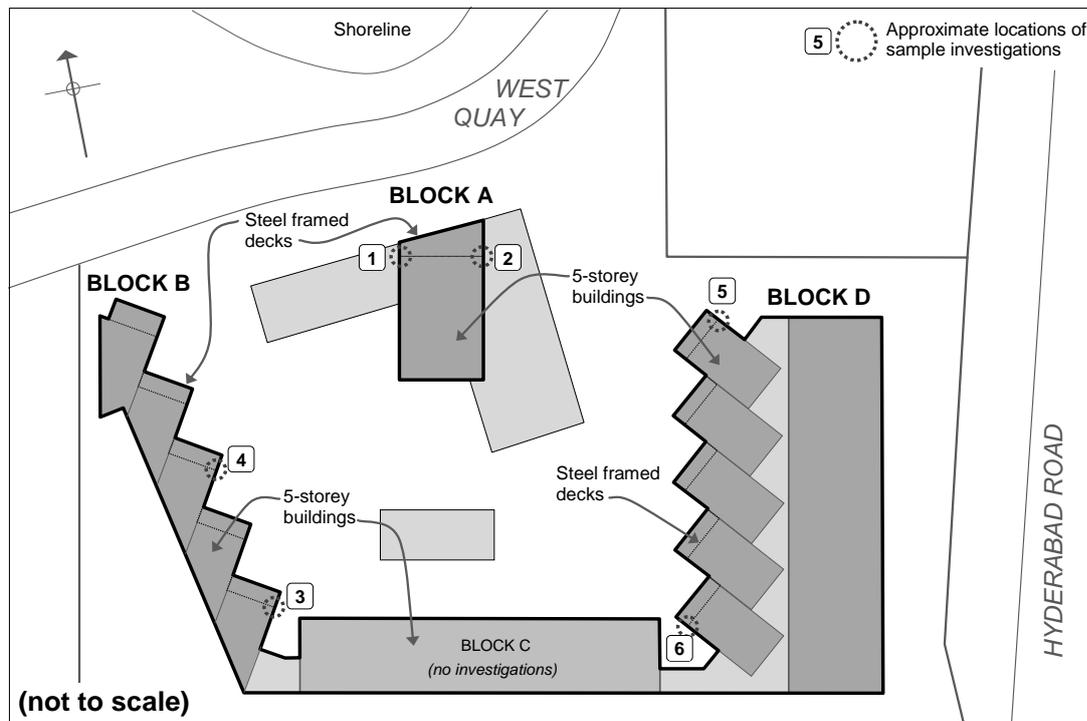
<sup>3</sup> Schedule 1, Building Regulations 1992

<sup>4</sup> Under sections 177(1)(b) and 177(2)(a) of the Act

1.6.3 Certain sections<sup>5</sup> of the Building Act and the Building Code are referred to within this determination. Relevant excerpts are provided in Appendix A.

## 2. The building work and background

2.1 The apartment complex was constructed in 2006/2007 on a former industrial site opposite the shoreline. The complex includes four five-storey-high blocks as indicated in Figure 1:



**Figure 1: Site plan sketch**

2.2 The blocks include steel-framed decks attached to reinforced concrete walls and floors. Various problems have arisen since completion of the complex, including concerns about signs of corrosion to some areas of structural steel. Photographs taken in August 2014 record corrosion staining at some deck/wall junctions to Blocks A, B and D.

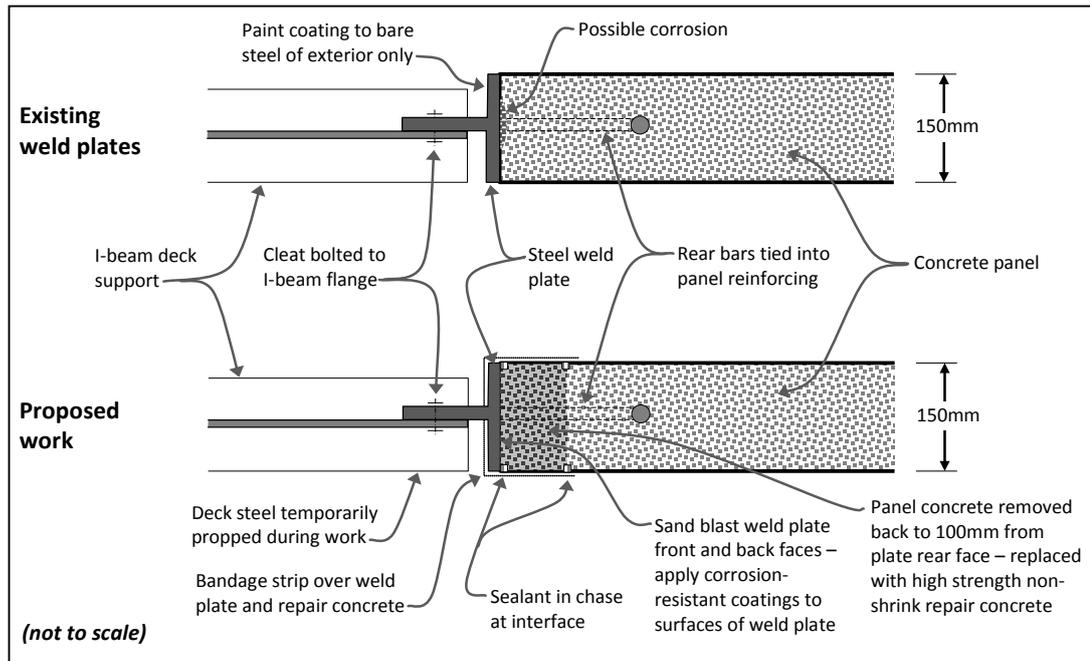
2.3 At existing deck/wall junctions, steel ‘weld plates’ include reinforcing bars that project from the rear and flat cleats from the front. Weld plates are cast into concrete wall panels, with cleats bolted to flanges of steel I-beam deck supports. Exposed plate faces are painted to match concrete walls.

### 2.4 The proposed building work

2.4.1 Photographs taken during visual inspections on 15 August 2014 identify the six sample locations (see Figure 1) proposed for invasive investigation.

2.4.2 The following sketch is based on the pictorial explanation of the proposed investigation work, as included in the design engineer’s technical specification:

<sup>5</sup> In this determination, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code



**Figure 2: Invasive investigation diagram**

2.4.3 As indicated in Figure 2, the proposed work generally includes:

- temporary propping to support deck steel beams during repair work
- removal of existing concrete around the weld plates and inspection of the steel/concrete interface behind the weld plate
- if instructed by the construction engineer, sand blasting of weld plates to remove any existing corrosion and application of a corrosion-resistant coating
- reinstatement of demolished concrete using non-shrink repair concrete grout, with sealant applied to rebate chases along the junction line
- 'bandage' strips glued to extend over weld plate, steel concrete interface and sealant-filled chase with existing/new concrete junction prior to repainting.

## 2.5 The consent application and documentation

2.5.1 The applicant applied for a building consent on 16 February 2017, with the application documentation by the design engineer including:

- consent drawings (architect's original drawings with engineering notes added)
- photographs dated 15 August 2014 of the six sample locations (see Figure 1)
- the technical specification for the proposed work
- producer statements (PS1 – Design) for Blocks A, B and D
- letter from the construction engineer, confirming engagement to inspect the work and to issue a PS4 – Construction Review for the work on completion.

2.5.2 A producer statement (PS1 – Design) in respect of 'invasive testing of panel end weld plates' was provided for each of the three blocks, with each statement referencing the applicable drawings. In other respects, the statements dated 14 February 2017 were identical and were limited to compliance with Clause B1

Structure of the Building Code. Each stated that the design engineer believed on reasonable grounds that the building work:

...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...

## **2.6 The authority's first request for further information "RFI no.1"**

2.6.1 Following receipt of the building consent application the authority requested further information. It asked for compliance with Clause B2 Durability (hereafter referred to as 'Clause B2') to be addressed in producer statements to be provided by the design engineer. In response, the design engineer provided three identical letters dated 20 February 2017; one for each block.

2.6.2 The letters informed the authority that the producer statements could not include Clause B2 because there 'is no effective verification method for Clause B2 contained within the Building Code.' However, the design engineer added the following information about compliance of the building work with Clause B2:

- (i) Concrete durability (including concrete grades, strengths, and cover to reinforcement) have [sic] been selected in accordance with NZS 3101:2006 Part 1<sup>6</sup> section 3.
- (ii) Structural steelwork protection (where this is required) to be upgraded from that existing has been specified in accordance with NZS 3404.1:2009<sup>7</sup> section 5 and AS/NZS 2312:2002<sup>8</sup>, this latter being formulated on a "time to first maintenance" basis.

## **2.7 The authority's second request for further information "RFI no.2"**

2.7.1 In a letter to the applicant dated 15 March 2017, the authority sought further information in relation to the building consent application. Comments included the following (in summary):

- additional information/clarification is required to demonstrate compliance with Clause B2
- the maximum \$200,000 liability stated in the producer statements is considered insufficient to cover the extent of proposed work
- the upgrading of corrosion coatings and concrete reinstatement should be included in the producer statements
- a producer statement PS2 – Design Review is required for the design.

2.7.2 The design engineer responded on 31 March 2017 attaching:

- a producer statement (PS1 – Design) dated 20 March 2017 amended to note that the statement was issued in respect of 'invasive testing of panel end weld plates plus associated reinstatement' and revision of the maximum liability from \$200,000 to \$500,000
- a new version dated 20 March 2017 of the supplementary letter previously provided with RFI no.1, updated to include calculations prepared by the design engineer relating to durability of concrete and structural steelwork protection

<sup>6</sup> New Zealand Standard NZS 3101:2006 Concrete Structures - Part 1: The Design of Concrete Structures

<sup>7</sup> New Zealand Standard NZS 3404.1:2009 Steel structures - Materials, fabrication, and construction

<sup>8</sup> Joint Australian/ New Zealand Standard AS/NZS 2312.1:2002 Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings

- consent documentation and structural calculations stamped as approved by the peer review engineer on 20 March 2017
- a producer statement (PS2 – Design Review) dated 17 March 2017 for the proposed building work.

## 2.8 The authority's third request for further information "RFI no.3"

2.8.1 In a letter to the applicant dated 3 April 2017, the authority continued to maintain that the producer statements were incomplete in relation to Clause B2. The authority also asked for the limitation of liability clause to be removed from the producer statement.

2.8.2 The design engineer met with the authority on 4 April 2017 and on 5 April emailed drafts for the authority's consideration prior to formalising the response to RFI no. 3. The engineer proposed (in summary):

- further expansion of the supplementary letter
- amending the section 6 form of the consent application to refer to the Clause B2 row in the table to the supplementary letter
- amending the producer statement (PS1) to refer to the supplementary letter and to revise the maximum liability from \$500,000 to \$1,000,000.

2.8.3 I have seen no response from the authority to the above draft proposals but in a letter to the authority dated 12 April 2017, the design engineer formally responded to RFI no.3 attaching:

- supplementary letter dated 11 April 2017, with item (c) expanded to note that the attached calculations (which had previously been submitted in response to RFI no.2):
  - ...demonstrate that the structural elements affected by the invasive testing and associated reinstatement will, in terms of its design, satisfy the 50-year durability requirement [my emphasis] as per the aforementioned standards.
- producer statement (PS1) dated 11 April 2017 amended to:
  - include as condition (iii) that the statement is subject to:
    - associated durability (B2) requirements being demonstrated in terms of the attached letter dated 11/4/17 [the supplementary letter]
  - revise the design engineer's professional indemnity insurance from \$500,000 to \$1,000,000, with the footnote including:
    - ...Liability under this statement accrues to the design firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence) is limited to the sum of \$1,000,000.
- an amended version of the table in part 6 of the consent application, indicating that standards NZS 3101, NZS 3404 and 'Other'<sup>9</sup> were identified as the means of compliance with Clause B2.

<sup>9</sup> Joint Australian/ New Zealand Standard AS/NZS 2312.1:2014 Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings

## **2.9 The refusal to issue a building consent**

2.9.1 An undated document headed “Refusal of application for building consent” records the authority’s decision to refuse to issue a building consent for the application because it:

...is not satisfied on reasonable grounds that clause B2 would be met if the building work were properly completed in accordance with the plans and specifications that accompany the application.

2.9.2 There were two reasons provided for refusal; ‘Reason 1 – B2 Durability’ and ‘Reason 2 – Limitation of liability’.

2.9.3 Regarding the first reason, the authority noted the following (in summary):

- because it ‘does not have the internal engineering expertise’, the authority is reliant on the advice and expertise of the design engineer
- the producer statement (PS1) certifies Clause B1 only, with Clause B2 limited to a reference to a supplementary letter
- if the design engineer is unable to certify Clause B2 compliance, without any caveats, the authority cannot be satisfied in accordance with section 49(1).

2.9.4 Regarding the second reason for refusal, the authority noted the following (in summary):

- the limitation of liability clause in the PS1 states that ‘liability under this statement accrues to the design firm only’ with the maximum amount of damages payable being limited to the sum of \$1,000,000
- with its lack of internal expertise and reliance on the producer statement, the authority considered that if the design engineer is insistent on limiting its liability as set out in the PS1 then the authority cannot be satisfied on reasonable grounds that the provisions of the Building Code would be met if the building work were properly completed in accordance with the plans and specifications that accompany the application.

## **2.10 The application for determination and further information**

2.10.1 The Ministry received an application for a determination on 18 May 2017 which was accepted on 22 May 2017.

2.10.2 In an email to the parties dated 21 June 2017, the Ministry notified the parties that IPENZ would be added as a person with an interest in this determination. Subsequent responses confirmed that the parties had no issues with IPENZ proposing to make a submission by 21 July 2017.

2.10.3 Correspondence ensued between the Ministry and the parties with a view to clarifying issues raised by the refusal and subsequent submissions. The content of that correspondence is summarised in Appendix B.

## **3. Submissions and responses by applicant and authority**

### **3.1 The applicant’s initial submission**

3.1.1 The applicant’s lawyer set out the background to the dispute and outlined the building work proposed, and then addressed the reasons provided by the authority for its refusal to issue a building consent. The applicant considered the authority had not

provided valid grounds in support of its decision to refuse to issue a building consent. The applicant's lawyer submitted (in summary):

- in regard to the omission of Clause B2 from the design engineer's PS1:
  - producer statements have no status under the Act
  - the design engineer explained the rationale and provided supplementary letters to confirm compliance with Clause B2
- in regard to the liability level noted in the design engineer's PS1:
  - a limit of liability does not determine the code compliance of the work
  - any limit must also be considered in the context of the proposed work
- the authority sought and obtained a peer review of the proposal, with no further comment by the authority on the peer review.

3.1.2 The applicant provided copies of the following (in summary):

- the consent application documentation
- the authority's requests for further information (RFI no.1, RFI no.2, RFI no.3)
- associated Producer Statements – PS1 – Design, with supplementary letters
- the documentation signed as reviewed by the peer review engineer
- Producer Statement – PS2 – Design Review dated 17 March 2017
- various other calculations and correspondence.

### **3.2 The authority's initial submission**

3.2.1 In a letter dated 19 June 2017, the authority's lawyer outlined the background to the consent application and its refusal, including the following comments (in summary):

- the authority does not have 'in-house engineering expertise', so is reliant on the design engineer's confirmation of code compliance
- given the design engineer is not prepared to confirm compliance with Clause B2 and limits any potential liability, the authority cannot be satisfied under section 49(1) of the Act on the code compliance of the proposal
- if the authority is instructed by a determination to issue a building consent, it would have no liability from the decision to issue the consent if the building work fails in the future
- if there is no effective verification method for Clause B2, that is a gap in the Building Code, for which reform and guidance is needed.

3.2.2 The authority's submission also responded in part to the Ministry's queries (referred to above at paragraph 2.10.3 and summarised in Appendix B). The authority's lawyer noted:

- in regard to the basis for declining to accept the PS1:
  - the PS1 for Clause B1 has not been 'declined'
  - the authority 'is not concerned' with the level of insurance cover
  - the only concern is with being satisfied on code compliance
- in regard to whether the PS1 would be accepted if not for the insurance level:

- if the design engineer was certain of compliance, there would be no need to limit its future liability, so the PS1 cannot be relied on
- if the limitation was removed, the authority could be satisfied that the proposal would comply
- regarding the design engineer’s supplementary letters and attachments:
  - the supplementary letters do not set out how B2 compliance is achieved
  - the design engineer does not state that the work will comply and this suggests uncertainty.

### **3.3 Further submissions and responses**

3.3.1 The applicant responded to the authority’s submission, and the authority responded in turn, with submissions continuing to focus on:

- the validity (or otherwise) of the authority’s reasons for refusal
- the authority’s role and responsibilities as a building consent authority
- how a building consent authority is able to have reasonable grounds to be satisfied as to compliance with the Building Code
- the role of an engineer in this process, and the information an engineer provides to assist a building consent authority to reach a decision in terms of section 49 of the Act.

3.3.2 I also received submissions from IPENZ on these issues. Submissions from the parties and from IPENZ are summarised in Appendix C.

## **4. The first draft determination and responses**

4.1 The first draft determination was issued to the parties and to IPENZ for comment on 15 September 2017.

### **4.2 The applicant’s response**

4.2.1 The applicant responded to the first draft determination on 17 October 2017. The applicant did not provide any submissions in response to the draft but, noting the authority had asked the Ministry to address a number of questions in a further draft determination, indicated it wished to comment on any such draft.

### **4.3 The authority’s response**

4.3.1 The authority responded to the first draft determination on 17 October 2017. It did not accept the draft and asked the Ministry to address in a further draft the following questions about how compliance with Clause B2 could be established:

- Is there an effective verification method for Clause B2 contained within the New Zealand Building Code? If so, please explain what it is.
- Are the IPENZ-directed “supplementary letters” sufficient to satisfy [authorities] of compliance with Clause B2 of the New Zealand Building Code? If so, please explain why.

4.3.2 The authority also asked that a further draft determination clarify whether the authority was being directed, by determination, to grant the building consent sought by the applicant.

4.4 IPENZ did not respond to the first draft determination.

## 5. The second draft determination and responses

5.1 The second draft determination was issued to the parties and to IPENZ for comment on 19 February 2018. In that draft I addressed the authority's requests for clarification following the first draft, but reached the same decision which was (in summary) that the authority:

- had not properly assessed code compliance of the proposed building work
- had reached its decision to refuse the building consent based on irrelevant considerations
- should make a new decision based on relevant considerations, using the discussion in the determination as a guide to establishing relevant matters it should have considered.

### 5.2 The applicant's response

5.2.1 The applicant responded to the second draft determination on 5 March 2018, accepting the draft 'in principle in so far as it determined that the Napier City Council was wrong to refuse to issue the building consent'. However, the applicant also indicated that the design engineer wished to make comment on the substance of the determination.

5.2.2 Noting that the design engineer is not a party to this determination, I have treated submissions from the design engineer as being made on behalf of the applicant.

### 5.3 The design engineer's comments

5.3.1 The design engineer responded to the second draft determination on 9 March 2018, agreeing with the decision in the draft but noting the following (in summary):

- it did not agree that the building consent application should be treated by the authority (in making a new decision) as a proposal relying on an alternative solution in respect of Clause B2
- it reiterated its view that compliance of the structural steel and corrosion coatings with Clause B2 could be established by Verification Methods.

### 5.4 The authority's response

5.4.1 The authority responded on 5 March 2018. It did not accept the second draft determination and stated its primary concern as being whether 'supplementary letters' are sufficient 'to satisfy Building Consent Authorities of compliance with [Clause B2]'

5.4.2 Referring to passages from the second draft determination the authority also made the following submissions (in summary):

- there is a 'gap' in the Building Code because compliance with Clause B2 cannot always be established by Verification Method
- if the design engineer was prepared to commit in writing (whether by producer statement, letter or even email) that the works will comply with Clause B2 of the Building Code as long as they are constructed in accordance with the specified plans then it is likely the authority would grant the building consent

- the design engineer is not certain that the building work will comply with B1, otherwise it would have no need to limit its liability in the PS1
- the determination ‘should direct the council to issue the building consent if it is satisfied that the building work will comply with the building code’.

## **5.5 ENZ’s response**

5.5.1 ENZ provided a submission dated 21 March 2018. It agreed with most aspects of the second draft determination but was concerned by wider implications of the observation in the draft determination that the building consent application should be treated as an alternative solution.

## **6. The third draft determination and responses**

6.1 The third draft determination was issued to the parties and to ENZ for comment on 27 April 2018. In that draft further addressed the authority’s requests for clarification following the second draft, but reached the same decision described in paragraph 5.1.

### **6.2 The applicant’s response**

6.2.1 In an email dated 23 May 2018, the applicant made no further comments on the third draft and requested that the determination be finalised and issued.

### **6.3 ENZ’s response**

6.3.1 ENZ’s response on 15 May 2018 generally supported the draft determination, but expressed concerns that comments in paragraphs 8.9 and 8.10 of the third draft could lead to a more broad implication that the decision means that indirect citing of standards is generally permissible, rather than specific to particular cases (see Paragraph C8 in Appendix C).

### **6.4 The authority’s response**

6.4.1 The authority’s lawyer responded to the third draft on 28 May 2018 and included the following comments (in summary):

- The response to the first draft determination set out questions that should be addressed (see paragraph 4.3). These questions were further elaborated in the response to the second draft (see paragraph 5.4). Despite three draft determinations these ‘key issues’ have not been addressed.
- The third draft appears to ‘foreshadow the unfortunate situation’ the authority will face in having no clear answers by adopting ‘a narrow interpretation’ of limiting the determination’s conclusions to the exercise of powers.<sup>10</sup>
- Although the third draft ‘attempted to remedy this conundrum to some extent’ in paragraph 8 of the draft, this only touched on but did not specifically address the issues – leaving the authority ‘even less certain about the compliance pathway.’

6.4.2 Following the above response, the Ministry sought direction from the applicant in regard to resolving the determination, as described below in paragraph 6.5.

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<sup>10</sup> Under Section 177(1)(b) of the Act

## **6.5 The Ministry's request for direction to progress the determination**

- 6.5.1 Following the authority's response to the third draft determination, the Ministry wrote to the parties on 30 May 2018 to seek direction on a way forward for the determination.
- 6.5.2 The Ministry noted that it had 'not been asked to determine, in terms of s177(1)(a), whether the proposed building work will comply with the Building Code'. However the authority's initial response to the third draft determination had foreshadowed its position 'if the determination is finalised without answering those questions'.
- 6.5.3 The Ministry therefore asked the applicant to consider and confirm which of two options it would like to progress with: either to finalise the determination or to amend the application to include a decision on compliance under section 177(1)(a).

## **6.6 Finalisation of the determination**

- 6.6.1 Receiving no response to the above, the Ministry informed the parties on 12 November 2018 that 'unless we receive advice to the contrary, it is intended to close the file for this application on or shortly after 12 December 2018'.
- 6.6.2 At the applicant's request, the application was kept 'on hold' until 1 March 2019, and in an email to the Ministry dated 26 February 2019, the applicant's lawyer confirmed that the applicant had chosen Option 1 from the Ministry's correspondence: finalisation of the determination.
- 6.6.3 In a letter to the Ministry dated 18 March 2019, the authority's lawyer acknowledged the applicant's choice but added that proposed changes to the Verification Method and Acceptable Solution for Clause B2 will fill 'the gap' in the compliance pathway identified by the authority. I have addressed these recent changes in paragraph 8.11.

## **7. Discussion**

### **7.1 The authority's refusal to issue the building consent**

- 7.1.1 The authority considered that the information supplied in support of the application for a building consent (including information provided in response to RFIs) was not sufficient to allow it to be satisfied, on reasonable grounds, that the work when properly completed would comply with the Building Code if built in accordance with the plans and specifications submitted.
- 7.1.2 Section 50 of the Act requires that if an authority refuses to grant an application for a building consent it must provide the applicant with reasons for the refusal. That notification should be sufficiently clear so that the applicant can submit specific information on specific matters of doubt to allow the consent to be issued.
- 7.1.3 This determination was sought under section 177(1)(b) of the Act and therefore turns on the authority correctly exercised its powers when it refused to issue a building consent for the reasons provided. The applicant did not seek a decision in terms of section 177(1)(a) as to whether particular matters comply with the Building Code.
- 7.1.4 Submissions from the parties, as well as from the design engineer and IPENZ (and later from ENZ) in response to the application and to draft determinations issued have all addressed to some degree the validity (or lack thereof) of the authority's reasons for refusal, and whether the decision to refuse the consent was correct.

7.1.5 While it is not necessary for me to address other matters, in this determination I have also commented in paragraph 8 on parties' submissions in the context of the practice of engineers providing their professional opinion on compliance with Clause B2 via 'supplementary letters'.

7.1.6 I turn first to the grounds for refusal of a building consent.

## 7.2 Grounds for refusal of building consent

7.2.1 In the case of the proposed building work, the authority's undated refusal provided reasons under two headings: 'Durability' and 'Limitation of liability'.

7.2.2 The authority's rationale for these reasons for refusal was expressed as follows (in summary):

- the producer statement (PS1) certifies Clause B1 only, with Clause B2 limited to a reference to a supplementary letter
- if the design engineer is unable to certify Clause B2 compliance, without any caveats, the authority cannot be satisfied in accordance with section 49(1)
- the 'limitation of liability' clause in the design engineer's PS1 demonstrated to the authority that the design engineer does not have confidence in its design:
 

'[...]If [the design engineer] is insistent on limiting its liability as set out in the PS1 (presumably because of the risk of future claims relating to the PS1 being wrongly issued) then the [authority] cannot be satisfied on reasonable grounds that the provisions of the Building Code would be met if the building work were properly completed in accordance with the plans and specifications which accompany the application. [...]
- because it 'does not have the internal engineering expertise', the authority is reliant on the advice and expertise of the design engineer.

7.2.3 I consider these reasons for refusal under the headings which follow.

## 7.3 Providing professional opinion on compliance with Clause B2

7.3.1 It is well established in previous determinations<sup>11</sup> that a building consent authority cannot insist on the production of a producer statement. It follows from that statement that the format in which information about compliance with Clause B2 was provided here is not important.

7.3.2 In its refusal to issue a building consent the authority originally asserted that because the design engineer's statements about compliance with Clause B2 were not provided in a producer statement, it was possible to infer that the design engineer has doubts about compliance with Clause B2. In its submissions the authority expanded on this point, asserting that the design engineer's statements in the supplementary letters 'fall well short' of confirming that the works will comply with Clause B2.

7.3.3 Despite the stated position given in its reasons for refusal, the authority appeared later to accept that information about compliance does not need to be provided in a producer statement. On 19 June 2017 the authority's lawyer stated:

it matters not whether [the design engineer] makes the statement [about compliance with Clause B2] in a producer statement or in some other format.

7.3.4 The issue for the authority then became the perceived lack of a written statement from the design engineer that the building work would comply with Clause B2:

<sup>11</sup> See for example Determination 2017/083 on an authority's refusal to issue a code compliance certificate and whether a producer statement is required (at paragraph 4.1).

If [the design engineer] was prepared to commit in writing (whether it be a producer statement, a letter or even an email) that “the works will comply with clause B2 of the Building Code as long as they are constructed in accordance with the specified plans” then it is likely the [authority] would grant the building consent.

(submission dated 5 March 2018 from authority’s lawyer)

7.3.5 On this point I make the following observations:

- IPENZ (and now ENZ) guidelines<sup>12</sup> advise engineers not to complete PS1s for Clause B2 that show ‘blanket compliance’ for a range of materials in a design, with engineers directed to attach supplementary letters to summarise how the various materials comply with Clause B2.
- As noted in paragraph 2.8.3 the design engineer followed IPENZ guidance and provided supplementary letters with detailed calculations to demonstrate its professional opinion that the building work would comply with Clause B2, and how it would do so.

7.3.6 The question is whether the authority properly considered that information when reaching its decision. I return to this point in paragraph 7.6.

## 7.4 Limitation of liability

7.4.1 The authority has stated that the ‘limitation of liability’ clause in the design engineer’s PS1 demonstrates to the authority that the design engineer does not have confidence in its design. The authority has also conceded that if the design engineer did not seek to limit its liability, the authority would be satisfied the proposal would comply. This concession suggests the authority has confused compliance issues with commercial considerations around limitation of liability and insurance.

7.4.2 Through the development of industry practice over time, PS1 producer statements such as those here include a statement that limits the designer’s liability to a building consent authority to a specified sum. The IPENZ guidelines note that the extent of the limitation on the designer’s liability (as well as the existence of professional indemnity insurance, although that is not at issue here) may assist a building consent authority when deciding the extent to which it will rely on a producer statement.

7.4.3 In legal terms, this is the weight the building consent authority may give to the producer statement. The weight to be given to a producer statement should be considered in the context of what is known about the author of the producer statement (discussed in paragraph 8.5), and is distinct from the facts that are established by that producer statement.

7.4.4 Therefore, while the information about liability is provided for the building consent authority’s information, the extent to which the designer seeks to limit their liability is not a matter the authority is able to take into account when making a statutory decision as to compliance in terms of section 49 of the Act. Decisions by a building consent authority whether to grant a building consent under section 49 concern compliance with the Building Code and can only take into account those parts of a producer statement that also concern compliance with the Building Code. A commercial decision on the part of the design engineer to limit their liability cannot be a determining factor in whether the work covered in a particular producer statement will meet the performance requirements of the Building Code.

<sup>12</sup> IPENZ Practice note 1 – ‘Guidelines on Producer Statements’, Version 3 January 2014

## **7.5 Reliance on design engineer because of absence of internal engineering expertise**

- 7.5.1 It is not in doubt that a building consent authority is entitled to rely in the first instance on information provided by an applicant for a building consent. However, it then has an obligation to properly assess the adequacy of all information submitted for a consent application; to check that the application complies with the Building Code (section 14F), and to make a decision on whether it has reasonable grounds to consider the relevant provisions of the Building Code would be met if the building work were properly completed (section 49).
- 7.5.2 Once the authority is satisfied that the practitioner providing an opinion on compliance has the requisite skills, qualifications, experience, knowledge and expertise in the particular field, it should proceed to carry out the usual checks on the compliance of the proposed building work. This will include checking information provided to support the application of Standards, Acceptable Solutions, Verification Methods, or other design documents used.
- 7.5.3 However, if the building consent authority has doubts about proposed building work, or about an opinion provided, or the ability of its own officers to properly assess it, its role requires it to take further steps to properly assess the adequacy of information submitted. This may include:
- seeking more information from the building consent applicant, including requesting a peer review of technical information
  - engaging technical expertise itself to assist with assessing the application<sup>13</sup>.
- 7.5.4 However in the present case there is no evidence that the authority has considered the substance of the proposed building work or the weight it should give to the design engineer's opinion. Instead it went as far as identifying what it perceived as 'caveats' to the proposal, and stopped at that point.

## **7.6 Conclusion on reasons for refusal**

- 7.6.1 Accordingly I find the decision to refuse to issue the building consent to be incorrect because the authority did not consider relevant matters or take the relevant steps to assess the consent application, and instead made a decision based on irrelevant considerations:
- inferences it drew from the format in which information on code compliance was provided
  - inferences it drew from statements about limitation of liability in documentation provided
  - its perceived reliance on the design engineer and lack of adequate internal engineering expertise.
- 7.6.2 I turn now to the principles relevant to the assessment of building consent applications, the information provided with the building consent application (and subsequently in response to RFIs) in this case, and the relevant matters the authority should have considered when reaching a decision.

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<sup>13</sup> Regulation 8 of the Building (Accreditation of Building Consent Authorities) Regulations 2006 requires building consent authorities to have a system to ensure it has enough employees and contractors to perform its building control functions.

## 8. Relevant considerations for assessing consent application

- 8.1 Section 49 provides for an authority to grant a building consent if it is “satisfied on reasonable grounds” that the provisions of the Building Code would be met if the building work were properly completed in accordance with the plans and specifications that accompanied the application. The Building Act provides a number of tools to assist designers and building consent authorities with this task.
- 8.2 The task of a building consent authority under section 14F(a)(i) is to properly assess the adequacy of all information submitted for a consent application, regardless of the format of that information.
- 8.3 If a building consent authority does not have staff with the competencies required to properly assess an application, then (as noted above at paragraph 7.5.3) it can engage a practitioner with appropriate technical expertise as necessary.
- 8.4 After considering all of the relevant evidence that is available, it may seek more information if required, consider any inconsistent evidence or evidence to the contrary, and weigh up the evidence of the claimed performance of the proposal before reaching a decision on whether it has reasonable grounds to be satisfied that if the building work is completed in accordance with the proposal it will comply with the requirements of the Building Code.
- 8.5 An authority may require more information if it is not satisfied the design will meet the requirements of the Building Code. For example, when considering a practitioner’s judgements or opinions an authority will need to consider whether:
- the design is applied correctly and the proposal is appropriate in the circumstances
  - the judgements are made by people with appropriate skills, experience, qualifications and professional registrations
  - the views expressed apply directly to the building work in question.

### ***Skills, qualifications, experience of design engineer***

- 8.6 In my view considerable information was known or available to the authority about the design engineer’s credentials:
- the design engineering company is a recognised multi-disciplinary consultancy that has operated for over 45 years and provides local and international services that include civil, geotechnical and structural engineering
  - the design engineer is a structural engineer with over 40 years’ experience in structural design, building regulation, and forensic engineering.

### ***Evidence of compliance in this case***

- 8.7 In regard to the documentation submitted for this consent application, I note that:
- the design engineer submitted drawings, photographs and specifications for the proposed investigation work, supported by producer statements with attached supplementary letters and calculations, including durability calculations, for each block (noting that some of the information was provided in response to an RFI rather than with the consent application)
  - in preparation of the consent application and response to RFIs the design engineer referenced the relevant industry Standards for concrete structures and for steel structures and calculated how the building elements will meet

durability requirements given the particular environmental conditions of the site

- the design engineer followed IPENZ instructions for producer statements and provided supplementary letters with calculations attached to demonstrate how compliance with Clause B2 was achieved, with documentation peer reviewed
- inspections and construction review are to be carried out by the construction engineer, with a producer statement for construction review (PS4) issued on satisfactory completion of the reinstatement work.

***Compliance pathway at the time of the consent application***

8.8 As noted in paragraphs 5.3 and C6.2 in Appendix C, the design engineer submitted that compliance of the proposed building work with Clause B2 had been established via Acceptable Solutions and Verification Methods<sup>14</sup>, and was therefore deemed to comply with the Building Code:

- The Standard relied on to establish compliance for the concrete (NZS 3101) was cited in the B2/AS1.
- The Standard relied upon to establish compliance for the structural steel (NZS 3404) was cited in B1/VM1, and NZS 3404 in turn referred to the Standard for protection of steel (AS/NZS 2312) as a means of complying with Clause B2.

8.9 The means by which compliance is established is a matter for the authority to consider when making a new decision, as is the decision on whether the proposal complies with the Building Code. In the third draft determination, I made the following observations about the compliance pathway that applied at that time:

- section 22(2) of the Act provides that compliance with an Acceptable Solution or Verification Method is treated as compliance ‘with the provisions of the building code to which that acceptable solution or verification method relates’
- an Acceptable Solution or Verification Method can relate to more than one clause of the Building Code. Examples of this can be seen in documents such as the Acceptable Solution for Simple Houses SH/AS1, or G12/AS2 which provides the means by which the installation of solar water heaters will meet the Building Code requirements of Clauses B1, B2, E2, and H1 in addition to G12 (I note here that para 1.02 of Acceptable Solution G12/AS2 provides that to comply with that Acceptable Solution solar water heaters must also comply with G12/AS1)
- paragraph 1.1.1 of B2/AS1 provides that building elements complying with a publication referenced in the Acceptable Solutions and Verification Methods, satisfy Clause B2 requirements when the conditions of use stated in the publication and Acceptable Solutions and Verification Methods are followed
- in the case of this consent application, B1/VM1 cited NZS 3404: Part 1 as a method of compliance, and paragraph 3.4.6 of NZS 3404 states ‘Protection against corrosion shall be to Appendix C. These provisions provided a means of compliance with the performance requirements of the New Zealand Building

<sup>14</sup> References to Acceptable Solutions and Verification Methods are in some cases shortened to the commonly used abbreviated titles for those documents in this section (for example B2/AS1, or B1/VM1). These documents are searchable by reference to those abbreviated titles and, as noted above at footnote 1, are available at [www.building.govt.nz](http://www.building.govt.nz) or by contacting the Ministry on 0800 242 243.

Code Clause B2: Durability.’ Appendix C cited AS/NZS 2312 for the compliance of certain steelwork

- therefore, the compliance pathway for the compliance of the steelwork with the durability requirements in Clause B2 was through B1/VM1 (by way of the citation in B1/VM1 of NZS 3404, which stated that the requirements of AS/NZS 2312 will satisfy the requirements of Clause B2)
- applying B1/VM1, the applicable version of a secondary reference document (such as AS/NZS 2312) is the version in effect at the date the Verification Method was published
- the version of AS/NZS 2312 in effect at the date B1/VM1 was published was the 2002 amendment
- the proposal for building work in this case was prepared using the current version of AS/NZS 2312: 2014.

8.10 The above compliance pathway was relevant when the third draft determination was issued on 27 April 2018. Although that pathway has been superseded as described below, the above paragraph provides the context for the authority’s response to the third draft (see paragraph 6.4) and also for the Ministry’s subsequent request for direction from the applicant to progress the determination (see paragraph 6.5).

### 8.11 The 2018 amendment to B2/AS1

8.11.1 On 11 September 2018, while the Ministry was awaiting the applicant’s response, Standards New Zealand announced that NZS 3404.1:2009 had been withdrawn because it had been superseded by other more recent standards and SNZ TS 3404:2018<sup>15</sup>. NZS 3404.1:1997 Steel structures standard remained current.

8.11.2 The foreword to SNZ TS 3404 included the following (in summary):

- the steel structures standard NZS 3404 Parts 1 and 2 is currently referenced in B1/VM1 for the compliance of the steelwork with Clause B2
- most of the material from NZS 3404.1:2009 is now included in AS/NZS 5131:2016<sup>16</sup>, with the major exception of corrosion protection
- the stand-alone technical specification updates the information of NZS 3404.1:2009 Section 5 and:
  - provides an advanced framework for specifying durability requirements for steel structures and components to allow durability requirements to be met without over or under-specification of coating systems
  - is prepared for use by designers and specifiers (amongst others) and covers corrosion protection of structural steelwork
  - is written to satisfy the requirements of (amongst others) Clause B2 as well as to remain compatible with NZS 3404 Parts 1 and 2:1997
  - supersedes NZS 3404.1:2009 Section 5 on corrosion protection and should be referred to instead of clause 3.4.6 in NZS 3404.1:1997

8.11.3 The Acceptable Solution for Clause B2 was then amended on 30 November 2018 to cite SNZ TS 3404 as an acceptable solution for ‘meeting the durability requirements of steel’ (see paragraph A2.1). Prior to that amendment B2/AS1 was silent on steel,

<sup>15</sup> Standards New Zealand Technical Specification: Durability requirements for steel structures and components: published 22 February 2018

<sup>16</sup> Joint Australian/ New Zealand Standard AS/NZS 5131:2016: Structural steelwork - Fabrication and erection

meaning that compliance was established via B1/VM1 based on the circuitous path described in paragraph 8.9.

## **9. The decision**

- 9.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the authority incorrectly exercised its powers of decision in refusing to grant a building consent on the grounds provided to the applicant; accordingly I reverse the authority's decision.
- 9.2 The authority should now make a new decision on whether to grant the building consent taking into account the matters identified in this determination as relevant to the decision and excluding those matters that this determination has identified as irrelevant.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 28 June 2019.

Katie Gordon  
**Manager Determinations**

## Appendix A: The legislation

### A1 Relevant provisions of the Building Act 2004

A1.1 The relevant sections of the Act discussed in this determination include:

#### **14F Responsibilities of building consent authority**

A building consent authority is responsible for—

- (a) checking, in accordance with the requirements of this Act for each type of building consent, to ensure that—
  - (i) an application for a building consent complies with the building code...

#### **19 How compliance with building code is established**

- (1) A building consent authority must accept any or all of the following as establishing compliance with the building code:
  - (b) compliance with an acceptable solution:
    - (ba) compliance with a verification method:
  - (c) a determination to that effect made by the chief executive...

#### **22 Acceptable solution or verification method for use in establishing compliance with building code**

- (1) The chief executive may, by notice in the Gazette, issue an acceptable solution or a verification method for use in establishing compliance with the building code.
- (2) A person who complies with an acceptable solution or a verification method must, for the purposes of this Act, be treated as having complied with the provisions of the building code to which that acceptable solution or verification method relates.

#### **45 How to apply for building consent**

- (1) An application for a building consent must—
  - (a) be in the prescribed form; and
  - (b) be accompanied by plans and specifications...
  - (c) contain or be accompanied by any other information that the building consent authority reasonably requires

#### **48 Processing application for building consent**

- (2) A building consent authority may... .. require further reasonable information in respect of the application...

#### **49 Grant of building consent**

- (1) A building consent authority must grant a building consent if it is satisfied on reasonable grounds that the provisions of the building code would be met if the building work were properly completed in accordance with the plans and specifications that accompanied the application.

#### **50 Refusal of application for building consent**

If a building consent authority refuses to grant an application for a building consent, the building consent authority must give the applicant written notice of—

- (a) the refusal; and
- (b) the reasons for the refusal

**188 Determination by chief executive**

- (1) A determination by the chief executive must—
- (a) confirm, reverse, or modify the decision or exercise of a power to which it relates; or
  - (b) determine the matter to which it relates.

**392 Building consent authority not liable**

- (1) No civil proceedings may be brought against a building consent authority for anything done or omitted to be done in good faith in reliance on any of the following documents:
- (a) an acceptable solution or a verification method:
  - (b) a determination made by the chief executive...

**A2 Relevant provisions of the Building Code**

A2.1 The relevant clauses of the Building Code and compliance documents discussed in this determination are:

**Clause B2—Durability****Objective**

**B2.1** The objective of this provision is to ensure that a building will throughout its life continue to satisfy the other objectives of this code.

**Functional requirement**

**B2.2** Building materials, components and construction methods shall be sufficiently durable to ensure that the building, without reconstruction or major renovation, satisfies the other functional requirements of this code throughout the life of the building.

**Performance**

**B2.3.1** Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:

- (a) the life of the building, being not less than 50 years, if:
  - (i) those building elements (including floors, walls, and fixings) provide structural stability to the building, or
  - (ii) those building elements are difficult to access or replace, or
  - (iii) failure of those building elements to comply with the building code would go undetected during both normal use and maintenance of the building

**B2.3.2** Individual building elements which are components of a building system and are difficult to access or replace must either:

- (a) all have the same durability, or...

**Acceptable Solution B2/AS1****3.6 Steel**

**3.6.1 SNZ TS 3404:** SNZ TS 3404 is an Acceptable Solution for meeting the durability requirements of steel building elements within its scope.

## **Appendix B: Summary of correspondence between the Ministry and parties to determination**

### **B1 Request on 24 May 2017**

(For brevity the design engineer's producer statement is referred to as the "PS1")

B1.1 The Ministry sought clarification from the authority about:

- the basis under section 49(1) for declining to accept the PS1
- the relevance of the level of professional negligence insurance to the validity of the PS1 as a means of establishing compliance
- whether the PS1 would be accepted if not for the level of insurance cover
- why the authority did not accept the design engineer's supplementary letters with attachments advising how Clause B2 will be satisfied.

### **B2 Request on 21 June 2017**

B2.1 The Ministry also sought clarification from the applicant on reasoning behind the design engineer's explanations in the supplementary letter noting that Clause B2 was not included in the PS1 'because there is no effective verification method for B2 contained within the Building Code' (see paragraph 2.6.2) taking into account:

- a PS1 form indicates compliance can be achieved with either Acceptable Solutions, Verification Methods or as an alternative solution
- the supplementary letters refer to three Standards, one of which is cited in B2/AS1<sup>17</sup>
- why these three standards cannot be relied on to establish compliance for the purposes of the PS1 (with the proposed corrosion control presented as an alternative solution).

B2.2 The design engineer responded to the above on 21 July 2017 and these comments are included as part of the design engineer's submissions (see paragraph C5).

### **B3 Request on 19 July 2017**

B3.1 In an email to the parties dated 19 July 2017, the Ministry included questions for the applicant and for the authority. For the applicant, reference was made to the above request and the Ministry questioned whether a further statement of opinion from the peer review engineer as to Clause B2 compliance had been contemplated. The design engineer addressed this as outlined in paragraph C6.3.

B3.2 The Ministry also noted the authority's submission maintained that the design engineer was not prepared to confirm the proposed work would comply with Clause B2, which appeared difficult to reconcile with the content of the supplementary letter (see paragraph 2.8.3). The authority was asked whether a peer review on Clause B2 would influence its decision.

B3.3 The authority was also asked to clarify why the design engineer's statements on compliance with B2 were not accepted, given that (in summary):

- section 49 provides the only matters that an authority can consider

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<sup>17</sup> Acceptable Solution for clause B2 Durability

- liability that may arise in the future is not relevant to a refusal under section 49
- the level of professional indemnity is also not relevant to a refusal under section 49
- providing required information is supplied, an authority is required to assess its adequacy regardless of the format of that information.

(The authority's lawyer responded to the above on 25 July 2017 and these comments are included as part of its submissions).

#### **B4 Request on 1 August 2017**

B4.1 The Ministry noted that although the applicant's submissions had set out 'pathways' by which compliance of the proposed work with Clause B2 was considered to have been met, the authority remained unsatisfied as to the adequacy of some elements.

B4.2 Comments were therefore sought from the authority on the following (in summary):

- The subject work is narrow in scope and the authority is asked to confirm what specific building element(s) it considers to be outside of the design engineer's statements regarding compliance with Clause B2.
- IPENZ advice to members is that compliance with Clause B2 needs to be shown on a material-by-material basis and the Code of Ethical Conduct requires members to act within their competence.

(The authority's lawyer responded to the above on 8 August 2017 and those comments are included as part of its submissions.)

## Appendix C: Further submissions and responses to submissions

### C1 Response to the authority's submission

C1.1 On 21 July 2017 the applicant's lawyer responded to the authority's submission and included the following comments (in summary):

- regarding the lack of in-house engineering expertise:
  - accreditation requires the authority to ensure sufficient expertise to perform its building control functions
  - the authority has chosen to transfer all risk and responsibility elsewhere, rather than to engage contractors to fill gaps in expertise
  - the authority must actively consider the application and cannot indiscriminately rely on the design engineer for compliance
- regarding the limitation of liability in the PS1:
  - the issue is whether submitted information provides reasonable grounds for the authority to be satisfied as to expected code compliance
  - given evidence provided by the design engineer, the authority cannot claim that it has insufficient grounds to be satisfied on code compliance
  - the suggestion appears to be that if designers limit their liability then the authority is able to refuse building consent
  - an objective judgement must be made according to the available evidence and all of the circumstances surrounding the situation
  - such a judgement cannot be founded on transference of potential risk.

C1.2 The applicant's lawyer concluded (in items 39 and 40) that:

The decision in this case by [the authority] to refuse to issue the building consent was not based on a proper application of section 49 of the Building Act 2004 and an appropriate exercise of [the authority's] statutory responsibilities. It is evident that [the authority] is seeking to take a passive role in performing its building control functions and seek to transfer risk entirely to [the design engineer].

Such a position is contrary to the legitimate expectation created by the regulatory framework that [the authority] will actively exercise a degree of oversight of building procedures in New Zealand.

### C2 Response to the applicant's response

C2.1 In a letter to the Ministry dated 25 July 2017, the authority's lawyer addressed the applicant's response to the authority's submission, noting that the submission 'essentially distils down to two points'. The lawyer included the following comments (in summary):

- regarding the lack of in-house engineering expertise:
  - it is unrealistic to expect expertise in specialist disciplines and producer statements are typically used as evidence of compliance
  - the engagement of an engineering contractor would not change the result because IPENZ considers that engineers should not include clause B2 in a PS1
  - the Act requires consent applications to be supported by adequate documentation and further information can be required by the authority

- the onus is on a consent applicant to satisfy as to compliance and not up to the authority to engage a contractor to bridge the gap between the design engineer's certification and the authority's requirements.
- regarding the sufficiency of evidence provided:
  - the design engineer and IPENZ maintain that compliance with Clause B2 cannot be certified because there is no effective verification method
  - if expert engineers cannot certify compliance, does that not indicate that they are not 'sure that the building work will comply with clause B2?'
  - failing the design engineer changing position, the authority will accept a determination on the matter, but seeks clarification as to liability.

### **C3 The authority's clarifications**

- C3.1 In a letter to the Ministry dated 25 July 2017, the authority's lawyer also responded to the Ministry's 19 July 2017 request (see paragraph B3). The responses generally repeated opinions expressed in earlier submissions and clarifications.
- C3.2 In a letter to the Ministry dated 8 August 2017, the authority's lawyer responded to the Ministry's 1 August 2017 comments (see paragraph B4) and also generally repeated opinions expressed in earlier submissions and clarifications.

## **Other submissions**

### **C4 Submission from IPENZ**

- C4.1 The submission dated 21 July 2017 attached a copy of IPENZ 'Guidelines on Producer Statements'<sup>18</sup> as a reflection of current good practice. IPENZ outlined its understanding of the dispute, noting that matters raised in the application 'have significant implications for the practice of structural engineers' and that the purpose of its submission was to provide:

...relevant background to the broader issues raised by this application and to set out IPENZ's position on the role of structural engineers in issuing documentation in relation to clause B2 of the Building Code.

- C4.2 In regard to the role of producer statements, comments included (in summary):
- Producer statements signal the involvement of a competent practitioner and can assist authorities to establish compliance, but they have no statutory status.
  - Although an authority can decide on the level of its reliance, a producer statement should not be the only means of establishing compliance as the authority remains responsible for a decision based on reasonable grounds.
  - An authority cannot refuse to issue a building consent 'simply because it cannot be provided with a producer statement' and in such a case must assess compliance in another way.
  - Producer statements are expressions of professional opinion and:
    - were not devised as a means of transferring risk and liability from the authority to an engineer
    - are not product warranties or guarantees of compliance.

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<sup>18</sup> Version 3, January 2014, produced with the Association for Consulting Engineers New Zealand (ACENZ)

C4.3 In regard to professional liability, comments included (in summary):

- The level of an engineer’s insurance should have no direct relevance in assessing code compliance.
- Limits on liability are not appropriate measures of the confidence to be placed in the work and cannot be a determining factor on whether proposed work will meet the performance requirements of the Building Code.

C4.4 In regard to producer statements and Clause B2, comments included (in summary):

- The code requires materials, components and construction methods to meet minimum durability periods and Clause B2 applies to all materials within a building, although an engineer influences only a small number of elements.
- Ministry guidance includes a limited list of generic materials with associated standards, which meet durability requirements, but for other materials in-service history or laboratory testing is required to establish Clause B2 compliance.
- Since July 2015, IPENZ has made it clear that engineers should not complete PS1s for Clause B2 to show “blanket” compliance when a range of materials have been specified in a design because:
  - durability compliance has to be shown on a material by material basis
  - a limited list of generic materials have been verified as B2 compliant
  - the Clause B2 Verification Method (B2/VM1) requires proof of performance from specialist testing laboratories, but no proof is available for many materials
  - there are no standards or guidance for any relevant materials available to use for alternative solutions, so an engineer must rely on an acceptable solution and/or proprietary information.
- Outside the list of acceptable solutions, it is ‘unreasonable and unacceptable to expect a design engineer to sign a producer statement’ as to whether specified materials meet B2, or ‘to carry any liability in that regard’.
- A requirement that engineers make such an assertion ‘would conflict with their obligation under the Code of Ethical Conduct to act within their competence.’

C4.5 In regard to supplementary letters, comments included (in summary):

- Engineers have been directed to provide a supplementary letter with the PS1 to ‘summarise those materials specified in the design that they can show compliance with clause B2 for’.
- This is believed to be the best interim solution as it allows the engineer to avoid certifying compliance for materials they are not competent to assess; and such letters are widely accepted by authorities.
- If engineers are expected to verify durability compliance, ‘this will have a significant impact on the sector and, in our view, will be unworkable given the current constraints of clause B2.’

## **C5 The design engineer's response to the authority's submission**

C5.1 On 21 July 2017, the design engineer responded to the authority's initial submission (see paragraph 3.2). In regard to the consent documentation, comments included (in summary):

- In order to act as a 'Building Consent Authority', the authority is required to hold the necessary expertise to review the information provided in the consent application, with additional expertise procured if necessary.
- Calculations submitted on Clause B2 performance were prepared in accordance with the relevant provisions of compliance documents cited under section 22(1) and these provide the form of evidence required by the authority.
- The authority's lawyer effectively says that calculations in accordance with relevant compliance documents can never satisfy the 'reasonable grounds' test.
- While one material (concrete) is fully covered in B2/AS1, another (steel) is not. The highly corrosive marine environment also adds complexity for corrosion protection of the steel/concrete interface behind the weld plates.
- The chosen approach was to set out relevant issues within supplementary letters, which follow the IPENZ recommended approach, and attaching the calculations to demonstrate compliance of the concrete and steel elements.
- What the authority does not take into account is that all the applicant is seeking to do is 'to excavate behind a small number of existing galvanised weld plates to confirm (or otherwise) the sufficiency' of the existing coatings.
- Where found inadequate for its remaining life, the follow-on reinstatement works will include enhancements of the original corrosion coating to achieve its remaining life.

C5.2 In regard to limitation of liability, comments included (in summary):

- The limitation of liability follows recognised practice within the engineering profession and the PS1 uses IPENZ standard wording that states the engineer holds a specified level of professional indemnity cover.
- It would be unrealistic and misleading to suggest that an engineer held unlimited levels of professional indemnity cover when clearly it does not.
- The assertion that the limit of indemnity suggests that the engineer doubts the reliability of the statement 'goes to the very heart of our professional integrity', as there is 'absolutely no linkage' between these issues.
- Although not relevant to the evaluation of code compliance, the insurance level was set at a reasonable pre-estimate of the likely cost of reinstatement, should there be a structural failure arising from the building work.

## **C6 The design engineer's responses to requests for clarification**

C6.1 The Ministry's 21 June 2017 email requested clarification of reasoning behind the supplementary letters, which state: 'Structural steelwork protection (where this is required) to be upgraded from that existing has been specified in accordance with NZS 3404 and AS/NZS 2312' and add that 'the attached calculations demonstrate that the proposed work will comply via these Standards'.

- C6.2 In his letter dated 24 July 2017, the design engineer's comments additional to those outlined in Paragraph C5.1 included (in summary):
- The Act provides for code compliance to be met via appropriate Acceptable Solutions, Verification Methods or alternative solutions. An authority cannot demand a higher level of verification.
  - If a proposal does not satisfy an Acceptable Solution or Verification Method it must be assessed as an alternative solution – which does not of itself create any 'gap' in the compliance framework as alleged by the authority.
  - Calculations attached to the supplementary letters demonstrate compliance of the concrete and the steel corrosion coatings.
  - The calculations for steel corrosion protection rely on NZS 3404, which is not referenced in B2/AS1 but is referenced in B1/VM1. NZS 3404 in turn references AS/NZS 2312 and states compliance with AS/NZS 2312 will comply with Clause B2 of the Building Code.
  - The calculations establish compliance with NZS 3404, which provides compliance with Clause B2. It is therefore 'quite wrong' for the authority to refuse to accept calculations prepared in accordance with B1/VM1.

C6.3 The Ministry's email of 19 July 2017 questioned whether a further statement of opinion from the peer review engineer as to Clause B2 compliance had been contemplated. The design engineer noted that (in summary):

- this would have been offered had it been requested, but the authority's refusal of 13 April 2017 'effectively cut off any opportunity' to make such a proposal
- notwithstanding that, any opinion offered by the peer review engineer 'would have been issued with the same general PS form and with the same 'limited liability' condition' as the previous PS2 – Design Review of 17 March 2017.

## **C7 The design engineer's response to ENZ's submission of 17 April 2018**

C7.1 The design engineer responded to ENZ's submission of 17 April 2018 on the second draft determination, noting that (in summary):

- ENZ 'is seeking a high level solution to the reality' that B2/AS1 does not currently cover common durability issues such as corrosion coatings for structural steelwork.'
- ENZ is conceding to the Ministry's view in the second draft that the consent application should be treated by the authority (in making a new decision) as an B2 alternative solution proposal 'solely to advance their main argument' that the Ministry needs to revise the current B2/AS1 citation.
- If the Ministry's view expressed in the second draft becomes the norm 'it would be unwise' for structural engineers to 'provide peer review opinions on B2 compliance for structural steelwork' based on NZS3404:1997.

## **C8 ENZ's request for clarification on indirect citing of standards**

C8.1 Whilst generally supporting the third draft determination, on 15 May 2018, ENZ added that further guidance would be appreciated in regard to compliance pathways described in paragraphs 8.9 and 8.10 of the third draft, noting (in summary):

- Earlier submissions on the first two drafts were based on the common understanding that relevant standards must be directly cited to be regarded as acceptable pathways of compliance. There is no such direct citing in Clause B2 for structural steel durability.
- The third draft adopts a different view by taking an indirect citing pathway ‘through the citation in B1/VM1 of NZS 3404, which states that the requirements of AS/NZS 2312 will satisfy the requirements of Clause B2’.
- Although the above citing appears to work when steelwork is exposed and able to be inspected and repaired/recoated, that does not apply to enclosed steelwork because AS/NZS 2312 does not provide for coatings lasting 50 years. However, the decision could imply that citing indirect pathways is generally permissible.

C8.2 ENZ concluded:

We support the decision in general but we would like clarification on whether the decision on compliance pathway is specific to the facts of this case (i.e. the steelwork being exposed), or whether the decision is confirming [a Ministry] policy in support of indirect citing pathways more broadly. If it is the latter, we submit that an advisory or education process is required as a matter of priority to confirm this view, and the reasons for it, to ensure a common understanding across the sector.