

Determination 2025/060

The compliance of two horizontal steel beams adjacent to internal stairs with Clause F4 Safety from falling

13 Tory Street, Te Aro, Wellington

Summary

The matter being determined relates to two new horizontal steel beams installed alongside existing internal staircases in a commercial/residential building. This determination considers the requirements of clause F4 and the likelihood of accidental fall in this case.

In this determination, unless otherwise stated, references to “sections” are to sections of the Building Act 2004 (“the Act”) and references to “clauses” are to clauses in Schedule 1 (“the Building Code”) of the Building Regulations 1992.

The Act and the Building Code are available at www.legislation.govt.nz. Information about the legislation, as well as past determinations, compliance documents (eg, Acceptable Solutions) and guidance issued by the Ministry, is available at www.building.govt.nz.

1. The matter to be determined

- 1.1. This is a determination made under due authorisation by me, Rebecca Mackie, for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment (“the Ministry”).¹
- 1.2. The parties to the determination are:
 - 1.2.1. BEM Holdings Limited, the owner of the property and the applicant for this determination (“the owner”)
 - 1.2.2. Wellington City Council, carrying out its duties as a territorial authority or building consent authority (“the authority”).
- 1.3. The determination arises from the authority’s failed building inspection for seismic strengthening work in an existing mixed-use building. The matter relates to two new steel beams installed adjacent to internal stairs, which the authority considers barriers are required by Clause F4 to restrict access to the beams as there is a potential fall of 1m or more.
- 1.4. The matter to be determined under section 177(1)(a) is whether two new as-built steel beams (ie two 250mm-wide parallel flange channels or ‘PFC’ beams) installed adjacent to existing internal staircases complies with Building Code Clause F4.

Issues outside this determination

- 1.5. The determination does not consider:
 - 1.5.1. The decision by the authority to grant the building consent² or its decision to refuse to issue the code compliance certificate.
 - 1.5.2. Any decision by the authority to issue a certificate for public use for the building.
 - 1.5.3. The Building Code compliance of any other building work.

¹ The Building Act 2004, section 185(1)(a) provides the Chief Executive of the Ministry with the power to make determinations.

² SR523252.

2. Background and the building work

- 2.1. The building is a four-storey structure constructed in 1904. The ground floor accommodates retail premises, the first floor is used as office space and the second floor is a residential apartment. There is also an internally accessed basement.
- 2.2. The building's first floor is accessed via a door opening directly onto a public footpath at ground level and existing stairs ("the lower stairs") rising along the northern perimeter wall. The second floor apartment is accessed via a lockable internal door at first floor level and existing stairs ("the upper stairs") which rise without a landing along the northern perimeter wall and make a ninety-degree turn at the top. There is no door between the top of the upper stairs and the apartment's living space.
- 2.3. On 7 July 2023, the authority granted building consent SR523252 for work including seismic strengthening, new ground floor bathrooms, new basement stairs and façade upgrades.
- 2.4. The relevant building work relates to the installation of two new 250mm-wide horizontal steel beams ("the new beams")³, installed below two existing horizontal angles, adjacent to two existing internal staircases.
- 2.5. The building consent plans do not include provision for any new barriers associated with installation of the new beams.
- 2.6. The **lower beam** is:
 - 2.6.1. adjacent to the lower stairs which have a handrail in front of the beam and are accessed via a door opening directly from the street
 - 2.6.2. different in colour from the lower stairs
 - 2.6.3. adjacent to stairs which are used to access offices on the first floor and the front door of the second floor apartment.
- 2.7. The **upper beam** is:
 - 2.7.1. adjacent to the upper stairs, and at one point, level with and directly adjacent to a stair tread ("the adjacent stair tread")
 - 2.7.2. identical in colour to the upper stairs
 - 2.7.3. partially located in front of a window
 - 2.7.4. adjacent to stairs that are private and internal to the apartment.

³ I have not been provided with any other dimensions regarding the two beams.

- 2.8. The authority carried out a “final” inspection on 3 December 2024. The inspection record was emailed to the owner’s Architect, and was recorded as a “fail”, with the authority noting the following concern:

Restriction of access required in stairwell to new wind beams between G – Level 1, and Level 1 and level 2.

- 2.9. The owner’s Architect disputed the authority’s decision in an email dated 4 December 2024, stating:

... the request to restrict access along a new structural wind beam is outside the scope of F4 safety from falling as per the following

...

Performance F4.3.1 shall not apply where such a barrier would be incompatible with the *intended use* of an area ...

- 2.10. The owner and authority continued to correspond but were unable to resolve the matter. The owner subsequently applied for a determination.

3. Submissions

The owner

- 3.1. The owner considers performance clause F4.3.1 does not apply as “a barrier would be incompatible with the intended use”⁴ of the stairwells. Their submission (in summary) is:

- 3.1.1. The two new beams have been installed below the existing structural angles (“the old beams”).
- 3.1.2. The old beams are “an existing structure for which there was no previous restriction”.
- 3.1.3. The new beams are “[not] the floor of a building, it is new seismic strengthening”.
- 3.1.4. No barriers are required for either of the new beams as the performance requirement of clause F4.3.1 does not apply because:
 - There is no “sudden change in level as [the new beams are] next to stairs, that from ground to level 1 has a balustrade in front of, that results in a gradual change in level”.
 - A “barrier would be incompatible with the intended use of the area”.

⁴ As it relates to the ‘limits of application’ to clause F4.3.1.

- 3.1.5. The new beams are “not a sudden change in level in the path of travel or level of the building” and therefore “no additional restriction of access is required to be installed” to the new beams.
- 3.1.6. Any restriction or barrier to the new beams “is going to impact the character of the existing stairs in the heritage building”.

The authority

- 3.2. The authority considers the requirements of clauses F4.3.1 and F4.3.4(g) are not being met due to the location of the new beams. Their submission (in summary) is:
 - 3.2.1. The new beams are adjacent to stairs and there is unrestricted access to them.
 - 3.2.2. The requested barriers would not be incompatible with the intended use of the area “as the stairs provide access to the apartment on the top level of the building” and “[a]s the building has housing it is likely children under the age of 6 would frequent⁵ the area”.
 - 3.2.3. A barrier is required to restrict access to the new beams “due to the potential fall of 1 metre or more and to guard a change of level and reduce the likelihood of accidental fall”.
 - 3.2.4. The lower beam “can be freely accessed” as it is located alongside stairs accessible directly from the street.
 - 3.2.5. The upper beam “can be freely accessed” as it is alongside “stairs leading to the apartment, which is a continuation of the access route”.

4. Discussion

- 4.1. This determination is concerned with the compliance of the two new beams with Building Code Clause F4 *Safety from falling*, specifically performance criteria clause F4.3.1. The parties dispute what is required; accordingly, I must consider what is required by clause F4 in this case.

The legislation

- 4.2. One of the purposes⁶ of the Act is to ensure people who use buildings can do so safely.

⁵ Refer to Determination 2001/009 *Diagonal wire balustrade to a common stair in a multi-unit dwelling* (28 August 2001). I continue to hold that view in this case, and consequently I consider the lower stairs are not likely to be frequented by children because they would not be in that area unaccompanied.

⁶ Section 3(a)(i).

- 4.3. Sections 16, to 19 of the Act set out the framework for building work complying with the Building Code to the extent required by the Act. The Building Code prescribes the functional requirements for buildings and the mandatory performance criteria with which building work must comply.
- 4.4. Previous Determination 2012/061⁷ considered the purpose and relationship between the functional requirements and the performance criteria of the Building Code. The performance criteria, functional requirements and the objectives of the Code and the principals and purposes of the Act are all linked and must be interpreted and applied consistently with each other. The functional requirements do not impose additional obligations, as the performance criteria are the mandatory requirements⁸, rather the functional requirements guide the interpretation (or nature and scope) of the performance criteria, in line with the Code's objectives and the Act's purposes.
- 4.5. The objective of clause F4.1 is to "safeguard people from injury caused by falling". The functional requirement of clause F4.2, in achieving this objective, is that buildings must be constructed to "reduce the likelihood of accidental fall". This does not require people to be absolutely protected from falling, only that the risk or likelihood of accidental fall must be reduced, as no person can ever be completely protected from falling⁹.
- 4.6. Performance criteria clause F4.3.1 requires:
- Where people could fall 1 metre or more from an opening in the external envelope or floor of a building, or from a sudden change of level within or associated with a building, a barrier shall be provided.
- 4.7. F4 is specifically concerned with protecting people from injury caused by falling and reducing the likelihood of accidental fall. The 1 metre fall height stated in clause F4.3.1 recognises that a person falling from a height greater than 1 metre will result in injury.
- 4.8. Previous Determination 2018/002¹⁰ took the approach that in considering the requirements of clause F4.3.1 one must first consider the functional requirement, that is, the likelihood of people accidentally falling. As above, the functional requirements guide the interpretation of the performance criteria, I consider it appropriate to take the same approach in Determination 2018/002 here.

⁷ Determination 2012/061 *Regarding the compliance of door handles installed in school classrooms at Wairoa College, Lucknow Road, Wairoa* (24 September 2012) at [7.1].

⁸ Section 16.

⁹ See Determination 2010/085 *Safety from falling from an infinity edge swimming pool at 4 Brookfield Street, St Heliers, Auckland* (15 September 2010), at [5.2].

¹⁰ Determination 2018/002 *Regarding the decision to issue a notice to fix for a retaining wall at 1/126 Island Bay Road, Beach Haven, Auckland* (13 February 2018)

- 4.9. The ‘likelihood of accidental fall’ relates to the chance of falling. ‘Likelihood’ is not defined in the Building Act or the Building Code, however the word ‘likely’ has been considered in the Courts, and it was held that:

“Likely” does not mean probable, as that puts the test too high. On the other hand, a mere possibility is not enough. What is required is “a reasonable consequence or [something which] could well happen.”¹¹

“Likely” means that there is a reasonable probability, or that having regard to the circumstances of the case it could well happen.¹²

- 4.10. For an accidental fall to occur, there must be a chance of accidentally falling, or accidentally falling must be likely. That is, a fall must be ‘a reasonable probability’ or falling ‘could well happen’. Where accidental falling is likely, F4.3.1 requires a barrier to protect people from injury from falling 1 metre or more.
- 4.11. Previous determinations¹³ have also considered “the likelihood of an accidental fall in terms of whether the area above ... [a building element¹⁴] is accessible. Where an area is inaccessible, a barrier is not required because there is no likelihood of an accidental fall”. I consider the presence of people is required for there to be a likelihood or reasonable probability of accidental fall.
- 4.12. What falls for consideration in respect of clauses F4.2 and F4.3.1 is the likelihood, that is, whether there is a reasonable probability of accidental fall, having regard to the circumstances of the case, that accidental falling could well happen.

The likelihood of accidental fall from the two beams

- 4.13. In deciding whether the new beams in this case satisfy functional requirement F4.2 and performance criteria clause F4.3.1, it is necessary to consider whether the new beams as-built gives rise to a likelihood (or reasonable probability) of an accidental fall of one metre or more. Where a likelihood does not exist, barriers are not required. Conversely, where there is a reasonable probability that accidental falling could reasonably occur, barriers are required to satisfy the clauses F4.2 and F4.3.1.

The lower beam

- 4.14. The lower beam is installed adjacent to the lower stairs, with a handrail running along the stairs in front of the beam. These stairs provide general access to the upper floors (ie the offices on level 1 and the apartment on level 2).

¹¹ Auckland City Council v Weldon Properties Limited 8/8/96, Judge Boshier, DC Auckland NP2627/95, upheld on appeal in Weldon Properties Limited v Auckland City Council 21/8/97, Salmon J, HC Auckland HC26/97

¹² Rotorua DC v Rua Developments Limited 17/12/99, Judge McGuire, DC Rotorua NP1327/97

¹³ See Determination 2017/077 *Regarding whether retaining walls at 25B Stonebridge Heights, Fielding required a barrier to comply with Clause F4* (2 November 2017) at [4.1.7].

¹⁴ In that case retaining walls.

- 4.15. It is clear the beam does not form part of the stairs. I consider the beam cannot be mistaken for a step or stair tread because of the features of the stairs and the handrail is in the way, acting as an obstruction. It is unlikely people would access the lower beam unintentionally or would inadvertently walk on the lower beam because the handrail separates the stairs from the beam.
- 4.16. I acknowledge someone *could* access the beam (as access is not absolutely restricted); however, this will require an intentional and deliberate action¹⁵ to navigate past the handrail for someone to find themselves on the beam in which they could accidentally fall from. This is beyond what is envisioned by ‘likely’ or ‘likelihood’ and not the requirement set out in functional requirement F4.2 and clause F4.3.1; a ‘mere possibility is not enough’. In my view, it is not likely or not a reasonable probability that someone using the stairs will inadvertently find themselves on the beam in which they will accidentally fall from.
- 4.17. Consequently, I consider the lower beam as built, with the handrail in place, meets the functional requirement of F4.2 (and clause F4.3.1 as it relates to the functional requirement), as accidental fall from the beam is unlikely. In which case a barrier is not required along the lower beam to comply with clause F4.

The upper beam

- 4.18. The circumstances of the upper beam differ from the lower beam in several important respects.
- 4.19. The upper beam is located *within* a residential apartment¹⁶, while installed adjacent to the upper stairs, the beam is identical in colour to the carpet on the stairs, is at the same level as one stair treads where the stairs turn at ninety degrees, and is situated in front of a window. There is no handrail or some other feature acting as an obstruction in this case.
- 4.20. I consider there is a reasonable probability the upper beam will be mistaken for part of a step tread by apartment occupants or visitors (including children) given the beam proximity in colour, location and level to the adjacent stairs. It is likely or a reasonable probability a person will unintentionally or inadvertently mistake the beam for a step and be present on the beam, in which case, I consider it is likely or a reasonable probability a person accidentally falling from the as built upper beam.
- 4.21. Consequently, I consider the upper beam does not meet the functional requirement of F4.2 and clause F4.3.1 as it relates to the functional requirement, as accidental fall from the beam is likely or a reasonable probability, and there is no barrier in place to safeguard people from injury caused by falling.

¹⁵ See Determination 2018/002 *Regarding the decision to issue a notice to fix for a retaining wall at 1/126 Island Bay Road, Beach Haven, Auckland* (13 February 2018) at [6.4.8].

¹⁶ That is a household unit.

4.22. I leave this matter with the parties to consider what is to be done in relation to features to safeguard people from injury caused by falling or reducing the likelihood of accidental fall.

5. Decision

5.1. In accordance with section 188 of the Building Act 2004, I determine:

- the lower beam adjacent to the lower stairs with the handrail complies with clause F4.3.1 as it relates to the functional requirement F4.2, as accidental fall from the beam is unlikely; and
- the upper beam adjacent to the upper stairs does not comply with clause F4.3.1 as it relates to the functional requirement F4.2, as it is likely someone could accidentally fall from the beam, and there is no barrier in place.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 5 December 2025.

Rebecca Mackie

Principal Advisor Determinations