BUILDING PERFORMANCE

Determination 2026/045

Refusal to grant a building consent for a staged building that included a proposed alternative solution for a fire prevention system

40 Te Puke Quarry Road, Te Puke

Summary

This determination considers the reasons for the refusal of a staged building consent by the authority that included a proposed oxygen reduction system as an alternative solution to comply with the fire safety provisions. The determination also discusses the staging of building consents and provides commentary for the parties in assessing the proposed system.

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, Andrew Eames, Principal Advisor Determinations, 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. Eastpack Ltd, as the owner of the property and applicant for this determination ("the owner"), who has been represented by their fire engineer ("the fire engineer") and structural engineer ("the structural engineer") during the consent process and in this determination.

1.2.2. Western Bay of Plenty District Council, carrying out its duties as a territorial authority or building consent authority ("the authority").

1.3. I have found it appropriate to include B Stratton as a person with an interest, as they were the engineer responsible for independently reviewing the proposed fire engineering design as an alternative solution and issuing a Producer Statement 2 ("PS2")[2] ("the review engineer").

1.4. In accordance with section 170(a), I have also consulted with Fire and Emergency New Zealand ("FENZ") in relation to this matter.

1.5. This determination arises from the authority's decision to refuse to grant a building consent for stage 2 of a project to construct a new cool store facility. The authority made the refusal because it had concerns about the compliance with the fire safety provisions in the Building Code, being clauses C1 – C6, and the completeness of the submitted plans and specifications in relation to the intended final use of the building.

1.6. The matter to be determined, under section 177(1)(b) and (2)(a), is the authority's decision to refuse to grant building consent BC99898 in relation to a proposed oxygen reduction system ("ORS"), as an alternative solution, for a new building.

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

[2] PS2 (Producer Statement – Design Review).

1.7. The determination will consider the authority's reasons for the refusal given in its letter dated 26 March 2026 and its emails dated 31 March and 8 April 2026.

1.8. On 12 June 2026, the Ministry held a technical meeting with the parties and/or their representatives, the review engineer and FENZ to discuss the scope of the matter to be determined ("the technical meeting"). The technical meeting also covered additional topics relevant to the events that led to the refusal decision such as the staging of building consents, the administration of the building consent application and compliance views of the proposed ORS that formed part of the building consent. The attendees' views on these matters, as far as they are relevant to the matter to be determined, have been incorporated into sections 3 and 4 of this determination.

1.9. This determination is limited to considering the authority's decision to refuse the consent, and the reasons given for that refusal. It includes commentary designed to assist the parties when considering the compliance of these types of fire safety systems in future, in relation to the compliance criteria raised by the authority in its refusal and the subsequent technical meeting.

1.10. The determination will not, however, consider the compliance of the proposed oxygen reduction system as an alternative solution with the relevant provisions of the Building Code. It does offer some commentary on issues raised in the technical meeting.

2. The building work and background

2.1. The proposed building work is part of a larger staged project to construct a new cool store facility for storing produce, primarily kiwifruit, on the southern side of the owner's property. The cool store building, once completed, is intended to incorporate full-height racking, an automatic storage and retrieval system ("ASRS"), and an ORS, supported by an aspirating smoke detection system.

2.1.1. Stage 1 of the project covered the construction of the cool store's foundations, drainage, switch room and plant room. The building consent for this stage has been granted and construction has occurred.

2.1.2. Stage 2 of the project, which is the subject of this determination, covers the construction of the cool store's superstructure, including the ORS, and an environmental load-out area.

2.1.3. Future stage 3 will provide for the installation of the racking and ASRS.

2.2. The completed cool store will be approximately 20m high, with a floor area of approximately 4300m^2, and will be a single fire cell. A smaller and lower environmental load-out area will be located off the cool store, as a separate fire cell, and will have a sprinkler system fitted. The two fire cells will be separated by a 60-minute fire wall.

2.3. The fire design for the building, including the ORS within the cool store, was prepared by the owner's fire engineer. The ORS is intended to reduce the likelihood of fire occurring and limit its growth. This differs from a sprinkler system, which suppresses a fire once it has developed sufficiently to activate the system.

2.4. It operates by continuously pumping nitrogen into the space, keeping the air in the store at a mix of 85% nitrogen, 14% oxygen and 1% argon. By comparison, ambient air contains approximately 21% oxygen. The respective levels of the gases are based on the type of building and the nature of the materials to be stored, specifically their combustibility. The ORS is to be installed as an alternative solution to demonstrate compliance with the relevant Building Code provisions, instead of a sprinkler system to comply with acceptable solution C/AS2.

2.5. On 28 July 2025, the authority and the owner's agents met to discuss the project and the staging of the consent. It was decided during this meeting that: "The stage two consent for the building, including fire design and fire access, will be submitted once the fire engineering is finalised and approved, with a peer review process to be undertaken…". In addition, an action point from the meeting recorded that: "A follow-up pre-application meeting will be scheduled ahead of the stage two submission to ensure all documentation and design considerations are aligned".[3]

2.6. The post-meeting comments added to the meeting record by the authority on 29 July 2025 stated:

> 1. Applicant to review and issue a frozen set of plans showing the final building design and layout for consent, including the [environmental loading area (ELA)], plant rooms, racking system etc…"
>
> 2. The fire design is critical to the overall building compliance. The building has a specific system for the Oxygen Reduction and, so the building should be designed in its final state, ie., with the ELA, plant rooms, automatic storage and retrieval system rooms and racking in their final positions included. Fire engineering report to capture the final building design…
>
> 4. A full fire report shall be provided by the applicant, as a single design, with no staged application for parts of the overall building, suitably peer reviewed and supported with a PS2…
>
> 7. A design that removes or stages the proposed building by removing the ELA, plant rooms etc is not acceptable. The design shall capture the final complete building.

2.7. On 8 August 2025, the owner provided responses to the items from the meeting, including:

[3] A further meeting was noted to be scheduled for 11 August 2025. However, I have received no further information about this meeting and whether it went ahead.

2.7.1. confirming that the stage 2 consent will include the cool store, environmental load out area, plant room and "expected racking layout"

2.7.2. stating that: "A separate consent for racking will be required once detailed design is complete – overall building design has allowed for racking loads, and the layout is not expected to change"

2.7.3. accepting the scope of the required fire design

2.7.4. confirming that the fire report would consider "the building as a single design with all items included" and was being peer reviewed, and that a PS2 would be submitted with the consent application

2.7.5. stating that the only item that the building consent would not include is the "detailed design of the racking system".

2.8. In September 2025, the owner lodged building consent application BC99898 for stage 2 of the construction project with the authority. The application was accompanied by a fire report for the proposed fire engineering design ("the fire report"), written by the owner's fire engineer. The report included the ORS and showed the indicative racking layout for the completed building. The authority referred the application to a third party for processing ("the third-party processor").

2.9. On 9 October 2025, the owner was asked to "supply a PS2 and associated documentation to demonstrate a full assessment of the fire engineering design, this will need to be inclusive of the ORS without [sic] any limitations".

2.10. On 14 October 2025, the third-party processor, on behalf of the authority, issued the first request for information ("RFI") regarding the consent application. The RFI covered numerous matters including seeking clarification for whether the racking shown on the plans was part of the consent. It also stated that as there was a clear future intent to install an ASRS in the cool store, the building had not been designed for its intended use. The RFI requested that the fire report should be revised to reflect this intended use and supporting documentation supplied.

2.11. The owner responded to the RFI, confirming that the racking would be included in a separate building consent application, and had been shown on the plans for information only.

2.12. The third-party processor issued a further RFI on 16 October 2025. The owner confirmed in its response that the review engineer would provide a PS2 for the fire safety design; and the owner's fire engineer would issue a Producer Statement 4 ("PS4")[4] for the ORS once its commissioning was complete.

2.13. On 17 October 2025, FENZ provided a building memorandum with advice for the authority on the building consent application and fire report. The memo included

[4] PS4 (Producer Statement – Construction Review).

advice on the fire separation between the cool store and environmental load out area, the performance of the ORS and the external fire threats to the cool store from adjacent buildings, among other matters.

2.14. On 16 February 2026, the review engineer issued a PS2 for the proposed fire design, as requested. The PS2 was a design review of the proposed fire design as an alternative solution. The PS2 did not refer to clause C4. Once alerted, the review engineer advised the omission was a typographical error and provided a revised PS2 that included compliance with clause C4 in late March 2026.

2.15. The third-party processor issued a further RFI on 18 February 2026, asking (among other things) for "a single revised PS2 covering the entire design as an alternative solution"; and for the racking to either be incorporated in the PS2 or removed from the plans.

2.16. The owner responded by seeking clarification from the authority of which parts of the fire safety design it considered had been excluded from the PS2; and they removed the racking from the plans.

2.17. On 26 March 2026, the authority refused to grant building consent BC99898. The reasons for refusal given in the authority's letter were that:

> The [Authority] is not satisfied, on reasonable grounds, that the proposed BC99898 complies with the relevant Building Code Clause C provisions. The amended and re-submitted Fire Report (V2.4) indicates a clear intention to install an ASRS racking system; therefore, it is considered that the building is not being designed for its intended use.

2.18. Correspondence then passed between the parties about the refusal. In an email dated 31 March 2026, the authority expanded on its reasons for refusing the consent, stating: "The intention to install [the ASRS racking system] raises concerns about whether the building is designed for its intended use." The authority gave further details as follows.

2.18.1. In terms of Building Code compliance, the reason for refusal is based on clause C4.3: "Reliance on the Acceptable Solution is using a risk-based approach in a specific design which is not appropriate. As [sic] statement like "the ORS space is specifically designed to prevent fire occurring." is not a reason to accept the design, so C4.3 is not met."

2.18.2. The "design" does not achieve the minimum level of compliance required by the Building Code, based on the information provided. The ORS is not a proven system and as it is being fitted into a new building, full compliance is required. The changes made to the fire report during processing to remove the ASRS and retrieval system, but with the stated intention of installing it later, does not design the building for its intended use.

2.18.3. The PS2 does not take into account the final design of the building. The PS2 is for "low level storage" when it is clear the intent is to have an ASRS.

2.18.4. The ORS is not proven as a replacement for a sprinkler system (as opposed to a supplementary system). "A sprinkler system could do the job … There are too many uncertainties around the ORS, failure modes, operational functionality, and life safety (for example the effect of low O2 availability...".

2.18.5. "The risk is high with this system should failure occur", so the authority is unable to be satisfied with compliance on reasonable grounds as required by the Act.

2.19. The authority suggested the owner apply for a determination or provide "more detailed documentation or expert opinions."

2.20. On 2 April 2026, the owners provided a detailed response to the authority's refusal.

2.21. On 8 April 2026, the authority sent the owner a further email on its reasons for refusal, including the following new points.

2.21.1. Although the ORS may have been used overseas, the authority requires "clear and unequivocal demonstration" of its compliance with the New Zealand building code. The evidence provided does not establish compliance with clause C4.3.

2.21.2. The challenges associated with conventional sprinkler systems (given by the owner as the reason for installing the ORS as the primary fire prevention system) do not resolve the issue of establishing the ORS's compliance with the Building Code.

2.21.3. The scope of the PS2 in relation to the ASRS design means that full compliance of the proposed building is not proved.

2.21.4. The authority's "considerations around oxygen concentration and life safety remain unresolved".

2.21.5. The precedents provided of where ORS systems have been accepted by other building consent authorities "do not diminish [the authority's] obligation to insist upon strict compliance" with the Building Code.

3. Submissions

The owner

3.1. The fire engineer and structural engineer acting on behalf of the owner submitted the owner was not aware of specific concerns the authority or the third-party processor had with compliance with performance criteria C4.3 or life safety until 31

March 2026 and 8 April 2026, respectively, as they were not put to the owner in an RFI and that the building consent should not have been refused.

3.2. In responding directly to the authority's reasons for the refusal, as given in its correspondence of 31 March and 8 April 2026:

3.2.1. The fire safety report is for a new building, and the owner has never suggested that sections 112 or 115 might apply.[5]

3.2.2. The building consent reflected the "final design" of the building and it is not for the authority "to presuppose what the [owner] may choose to do within the building or to use the building for in the future".

3.2.3. During the determination process, including the technical meeting, the authority has raised items of concern that have either been dealt with by the owner through the RFIs, or that the authority had not raised prior to or at the point that it refused the building consent application.

3.2.4. The owner considers that all of the authority's points from its reasons for refusal letter and associated emails in relation to the compliance of the ORS and the changes to the plans have been addressed.

3.3. The decision to stage the construction project and associated building consents was made "in consultation with [the authority]" and was "for logistical reasons". It was discussed with the authority that the only item not covered by the consent would be the detailed design of the racking for the ASRS. Changes to the fire report were made on this basis. The racking was to be shown for information only in the stage 2 building consent and until the racking is complete, the owner plans to "only block stack kiwi fruit trays on the floor of the cool store to a maximum height of ~ 4.8m".

3.4. The authority processed the stage 2 consent and in the RFI of 18 February 2026, it gave the owner the option of either incorporating the racking in this stage building consent application or removing it from the consent plans. The owner chose to remove the racking and submits that "no indication ... was given that choosing to remove the indicative racking would result in refusal of the consent".

3.5. The owner opted to use an ORS for fire protection in the cool store, rather than sprinklers, due to the quantity of produce intended to be stored in the building. Sprinkler systems are designed to protect a building, not the stored product, and require a fire to occur before they are activated. Any incidence of fire in the cool store makes loss of the stored produce through smoke contamination "inevitable". An ORS would "virtually eliminate" this possibility of smoke contamination. "An ORS installation is designed as a fire prevention system, not a fire suppression system, and is designed to allow continuously monitored fire prevention to be available" making it "substantially better than a sprinkler system".

[5] Section 112 *Alterations to existing buildings* and section 115 *Code compliance requirements: change of use*.

3.6. In addition, the height of the cool store means that "roof level only" sprinklers cannot be used: a fire "the size of a fully engulfed house fire" would be required before the sprinklers were activated. There are several functionality issues with cold storage sprinkler systems, including inadvertent activation. The owners consider "in rack sprinklers … unacceptable".

3.7. In considering clause C4.3, the owner notes that this clause "considers what occurs in the event of a fire" and that an "aspirating smoke detection system" forms part of the ORS installation. The owner states: "The escape route travel distances within the cool store comply with C/AS2, a smoke detection system will be installed within the cool store, and C4.3 is constrained to only consider fire events – not reduced oxygen atmospheres." As the alternative design for the ORS does not impact upon the means of escape, no fire modelling is required.

3.8. The fire engineer stated that the system has been used extensively overseas in various contexts and is "ideally suited to cool and cold storage facilities, due to the construction methodologies". There are "international standards for ORS installations, which ensure [their] functionality and reliability".[6]

3.9. The equivalency of the ORS to a sprinkler system is covered in the fire report, with the calculations confirmed by an independent risk management consultant. This independent risk analysis confirmed "that an ORS installation is at least as functional and reliable as a single supply sprinkler system".

3.10. In response to the authority considering the "risk is high" should the ORS fail, the fire engineer stated: "Unlike a sprinkler installation, the functionality of an ORS installation is continuously monitored". In addition, the function of the building as warehousing "is considered to be a low life safety risk".

The authority

3.11. The authority considers that the documentation supplied with the application for the stage 2 consent and following requests for further information "did not support the design." The building consent was processed on behalf of the authority by a third-party processing company who was instructed "…to rely on the production of a suitable PS2 for the design".

3.12. There are several concerns with the building fire design including the ORS for which the PS2 was issued that relate to the overall refusal of the consent, including:

3.12.1. whether the cool store inhibits the external escape route: "how the failure of the fire safety system may affect the evacuating occupants past the new Coolstore [sic]"

[6] The fire engineer referred specifically to *ISO 20338:2019 Oxygen reduction systems for fire prevention: Design, installation, planning and maintenance*, Annex A1, and its associated guidelines, and noted that they are a representative on the committee responsible for developing the standard and guidelines.

3.12.2. the fire report limiting the storage to 3m when the building is intended for higher storage heights: what was intended by this and what were the ramifications in terms of compliance with the acceptable solution and section 115

3.12.3. the lack of calculations provided to demonstrate how compliance with clause C4.3 will be met, whether compliance with clause C4.3 can be achieved without the ORS, and whether egress from the cool store can be demonstrated to comply by some other means, such as using C/VM2.

3.12.4. the availability of parts and expertise in NZ should failure occur, and who will carry out the post-consent inspection, maintenance and reporting regime for the ORS.

3.12.5. how the failure mode assessment has been conducted as it is not supported by calculations or numerical validation.

3.13. The authority provided the notes from the pre-application meeting where agreement was made as to the content of the stage 2 consent (see paragraphs 2.1 to 2.7), and a link to the advice on its website regarding staged consents but this did not describe its administration of staged consents and it did not make any additional submissions or comments on this topic. The authority also did not comment on the change in the agreed staging of the owner's building consent application, made at the request of its third-party processor that in part led to the authority's refusal.

The review engineer

3.14. The review engineer submitted (in summary):

3.15. The design of the ASRS and racking was not available for review as they did not form part of the building consent and hence were not covered by the issued PS2. The review engineer considers that the ASRS and racking being installed in the future stage does not "prevent or invalidate assessment of the current consent scope".

3.16. After reviewing the fire report, the information about the ORS, and the associated documentation and correspondence, the review engineer remained of the "opinion that the design complies with clauses C1–C6, F6, and F8 of the… Building Code" and that the authority's "concerns do not justify refusal of the building consent on fire engineering grounds".

3.17. The ORS is a fire prevention system rather than an active fire protection system and is an alternative solution: "… the ORS continuously keeps oxygen below the concentration needed for ignition and sustained combustion, rather than requiring

a detection system to activate before discharging a suppressing agent. In that sense, ORS prevents fire rather than reacting to it to control or suppress fire after ignition and fire growth. Prevention is an enhancement over active fire suppression and fire protection systems."

3.18. Compliance with clause C4.3 is not a reason for refusal: "The ORS removes oxygen, one of the essential elements of fire, so ignition and sustained flaming combustion cannot occur in the protected space … This directly addresses the clause C4.3 outcomes for tenability, including smoke exposure and visibility."

3.19. The absence of sprinklers does not of itself establish non-compliance with clause C4.3, stating "C4.3 does not require sprinklers specifically. It allows other fire protection systems where they can show equal or better performance, reliability, and effectiveness, whilst also managing any secondary risks from operation, maintenance, or use."

3.20. Sprinklers do not prevent fires and do not necessarily fully suppress a fire event. Rather they contain the fire until emergency personnel can complete the suppression.

3.21. Other systems exist that do not include sprinklers or water for fire suppression, such as gaseous fire suppression systems in computer server rooms that operate similarly to the ORS in this case. ORS are also widely used across Australia: "the [owner's] facility is an extension of that established practice, and not untested technology."

3.22. The fire design has used international ORS standards and guidance, which will "provide a clear engineering framework for reliable ignition prevention." The fire engineering analysis used for the report uses "deterministic and probabilistic methods consistent with recognised fire engineering practice", which are appropriate and align with current New Zealand practice.

3.23. "[The] PS2 relies on that analysis, and [the review engineer has] cross-checked the calculations." The "missing reference" in the first PS2 was "inadvertent" and promptly corrected once the review engineer became aware of it. The omission "did not alter the basis of my peer review or the conclusions reached."

3.24. The review engineer acknowledges the authority's concerns about life safety in low oxygen environments but considers this an operational matter best managed through WorkSafe requirements and the environment "does not, by itself, show non-compliance with clause C4.3."

4. FENZ Consultation

4.1. I consulted with FENZ under section 170(a) in relation to this matter. FENZ provided its views in a letter dated 22 May 2026, and based on discussion at the technical meeting, considers that each building consent stage should demonstrate

compliance in its own right. I have summarised its views in the following paragraphs.

4.2. FENZ considers that the authority's "…concern over life safety has not been clearly articulated – [a FENZ] review has identified multiple possible interpretations of [the authority's] position."

4.3. Given the building is intended to be occupied following the completion of the stage 2 building work, the authority's "…question of how the building demonstrates compliance at the completion of stage 2 is valid. While we understand the eventual intent, the building at the completion of Stage 2 represents a very different risk to the final construction. While the fuel load is expected to be lower due to the stated reduced storage heights [prior to the ASRS and racking being consented and constructed], there will be more people using the building for loading and unloading operations."

4.4. The staged construction will result in "materially different risk conditions" at the end of stage 2 compared to when the building is complete. "Clear articulation of the assumptions, controls and system availability applicable to each stage is important to understanding the fire and operational risk profile at those points in time."

4.5. It is unclear when the aspirating smoke detection will be installed and whether this is part of the ORS, as an additional system contributing to warning of fire.

4.6. Although ORS technology is relatively new to the building industry, "the use of lowered oxygen concentration to inhibit fire risk" has been used for many years in "the chemical industry", and its "fundamental process and its benefits are well established". It considers "The underlying technology [of the ORS] does have a sound basis". FENZ stated that:

4.7. The ORS is demonstrated to have a "high mechanical reliability" in similar projects.

4.8. Concerns highlighted in the earlier FENZ memorandum to the authority of 17 October 2025 are still present regarding the integrity of the perimeter building envelope to enable it to maintain a low oxygen internal environment in the building, and the potential exposure of the building to external fire sources.

4.9. To ensure the "stored commodities" in the building remain within the ORS's capacity, FENZ recommended "both the oxygen set point and the operating temperature be recorded and monitored to confirm the system is still satisfying the design intent and achieving compliance".

4.10. The fire engineer's comments around the difficulty of providing sprinklers in a cool store environment do not demonstrate compliance of the ORS.

4.11. The proposed fire design "is based on reducing the likelihood of a fire incident occurring", which is different to the traditional approach of fire suppression. Such a preventative design could "readily demonstrate compliance" with the functional

requirements of the C clauses in the Building Code. Compliance may be more challenging to demonstrate with respect to the performance requirements, which tend to be written "using deterministic language".

4.12. In relation to the future stage 3 installation of the racking and ASRS, FENZ considered that this would generally increase the risk to its personnel responding to a fire. However, in this case, "the use of the lowered oxygen atmosphere to reduce the likelihood of a fire incident occurring is seen as a positive step to mitigate this hazard".

5. Discussion

5.1. The matter for determination is the authority's decision to refuse to grant building consent BC99898 for the second stage of building work in the construction of a new cool store facility. The authority refused the consent for reasons that included concerns about the final use of the building given the staged nature of the project and the proposed ORS, which was put forward in the application as an alternative solution for compliance with the C clauses of the Building Code.

Legislation

5.2. Section 17 states that all building work must comply with the Building Code to the extent required by the Act.

5.3. The proposed building work covered by building consent application BC99898, and the overall construction of the cool store facility is new building work. As such, they must comply fully with the relevant Building Code clauses.

5.4. Section 45 sets out how to apply for a building consent, including the plans and specifications to be included with the application.

5.5. Section 49 applies when an authority is deciding whether to grant a building consent, with section 49(1) specifying that:

> 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.

5.6. Section 50 applies where an authority decides to refuse to grant a building consent. It states:

> 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—
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> (a) the refusal; and

(b) the reasons for the refusal.

Staged consents

5.7. I turn first to the staging of the building consents. In its reasons for refusal, submissions and comments at the technical meeting, the authority raised concerns about the effect of staging the building work on the compliance of the completed building. In particular, the authority was concerned that, because the plans and specifications for the stage 2 application did not include the ASRS and racking, the building was "not being designed for its intended use" and compliance could not be demonstrated.

5.8. Staged consents are provided for in the Act in section 44(2):

> **44 When to apply for building consent**
>
> (1) An owner intending to carry out building work must, before the building work begins, apply for a building consent to a building consent authority that is authorised, within the scope of its accreditation, to grant a building consent for the proposed building work.
>
> (2) An owner may make a series of applications for building consents for stages of the proposed building work.

5.9. This is the only place in the Act where staged building work is discussed in relation to building consents or code compliance certificates. The Ministry has not provided any guidance under section 175 as to how staged building consents and building work should be processed and handled.

5.10. Accordingly, authorities have developed their own processes for managing staged consents and these can vary across the country.

5.11. Because there are no separate provisions for staged building consents in the Act, the general sections pertaining to granting consents and issuing code compliance certificates still apply to these consents.

5.12. With respect to consents, section 49 provides that an authority must grant a consent where it is satisfied on reasonable grounds that the building work, if constructed in accordance with the plans and specifications, will comply with the Building Code. Applied to staged building consents, this means that each stage of the building work must comply with the Building Code in its own right.

5.13. With respect to code compliance certificates, section 94 provides that an authority must issue a code compliance certificate if it is satisfied, on reasonable grounds, that the building work complies with the building consent. Applied to staged building work and consents, this means that each stage of the building work must comply with its issued consent and therefore in turn will also comply with the Building Code. Interim code compliance certificates were a feature of the former

Building Act,[7] but have not been allowed for in the current Act. This means that each stage of a staged project may receive its own code compliance certificate for the work covered by the building consent.

5.14. In its submission, the authority raised sections 112 and 115 of the Act, and how these might relate to the owner's consent application. This issue of whether the later stages of a staged construction project for a new building constitute alterations to the earlier stages has been considered in Determination 2004/5.[8] In that determination, it was stated that, when staging a new building:

> … the fit-out of a particular area in the shell of a new building to suit the needs of the first tenant is part of the construction of the building and cannot be treated as an alteration to an existing building. The various building consents were all for stages of construction, not for alterations. In other words, [the Chief Executive] takes the view that a building is to be treated as a new building under construction until all of it is actually completed and ready for use.

5.15. Put another way, the building work covered at each stage of a staged construction project for a new building should all be considered as part of the iterative building work required to complete the building; and the building work at later stages does not constitute an alteration to work already completed under earlier consents.

5.16. As the Act does not prescribe how staging is intended to operate in practice, I consider it appropriate for designers to coordinate with authorities about how the various aspects of the staged building work should be grouped, so that each stage of the work can satisfy the section 49 test in its own right until the point when all the stages are completed, and the building is finished and ready for use.

5.17. In this context, the compliance of one stage should not rely on future stages. However, it will be necessary in some circumstances to design one stage with consideration of the intent of future stages.

5.18. I also consider that buildings, once all stages of construction are complete, are intended to operate in a particular way. Therefore, all of the stages should accurately reflect and address, where necessary, this intended operation, particularly where it is a question of demonstrating compliance for the purpose of section 49. This includes in any plans, specifications and other specialist design documentation being provided as evidence of compliance, including peer reviews.

5.19. This does not mean that where the details of an aspect of detailed design for a future stage are not yet complete, an earlier stage cannot proceed. However, there does need to be sufficient information at each stage for an authority to be able to gain a clear picture of how the completed building will eventually operate and how the various stages will work together to achieve its overall compliance.

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[7] Section 43(4), Building Act 1991.

[8] *Determination 2004/5 Fire safety provisions in a medical centre building* (issued 31 March 2004), at paragraph 5.3.2.

The authority's reasons for refusal

5.20. Section 50 specifies that an authority's reasons for refusing to grant a building consent must be given in writing.

5.21. In its letter of 26 March 2026, the authority stated that its reason for refusing the owner's application was that it "is not satisfied, on reasonable grounds, that the proposed BC99898 complies with the relevant Building Code Clause C provisions." The letter also referenced version 2.4 of the fire report, as showing a clear intention to install ASRS and racking, which the authority considered showed that the building was "not being designed for its intended use".

5.22. The covering email with the refusal letter also had attached for "reference" an extract from the authority's RFI report but did not state how this related to the refusal.

5.23. The owner subsequently responded to the refusal letter, pointing out that in refusing to grant a building consent, an authority must do more than simply communicate its decision in writing, but must specifically consider those aspects of the design that it believes do not comply with the Building Code or the Act, and provide sufficient explicit, specific, clear and valid reasons why it believes compliance has not been achieved, including any shortcomings in the plans and specifications, so the owner can consider what is necessary to remedy the situation.

5.24. The level of information an authority is required to provide in a refusal has been considered in numerous previous determinations, including those referred to by the owner in its letter.[9] An authority must provide sufficiently clear reasons and information so that owners understand what the compliance issues are and how they might go about rectifying them.

5.25. In this case, the authority responded to the owner's concerns in two emails providing further detail on its reasons. In its email of 31 March, it stated: "The intention to install [the ASRS with racking] raises concerns about whether the building is designed for its intended use", and "Code reason refusal is based on C4.3…. As statement [sic] like "the ORS space is specifically designed to prevent fire occurring" is not a reason to accept the design, so C4.3 is not met."

5.26. Other reasons given included:

5.26.1. the changes made to the report during processing and the removal of the ASRS from the plans, but with the stated intention to install it later, means the building is not being designed for its intended use

[9] *Determination 2024/041 Regarding the authority's refusal to grant a building consent for building work to replace the existing fire alarm system in a cool store* (issued 13 August 2024); and *Determination 2021/010 Regarding the refusal of a building consent for alterations to an existing students' hall of residence at 217 Willow Park Drive, Masterton* (issued 31 May 2021).

5.26.2. the PS2 does not take into account the final building design

5.26.3. "There are too many uncertainties around the ORS, failure modes, operational functionality, and life safety."

5.27. The authority expanded on these reasons in its email of 8 April 2026.

5.28. The issue of the removal of the ASRS and racking from the plans, and the impact this had on the PS2, and the perceived completeness of the fire report and associated plans was discussed at the technical meeting. During the meeting, it was identified that the way the processing for the owner's consent application had been arranged, with the third-party processor reviewing the application and making the final recommendation to refuse the consent, meant that communications between the parties and their representatives were sometimes difficult. This caused inconsistencies between what was agreed in the pre-application meeting in July 2025 and the approach subsequently taken through the RFI process and in the refusal decision.

5.29. As a result, it is unclear whether the authority, when issuing its refusal letter of 26 March, was aware that the owner had changed the submitted consent documentation to remove the ASRS and racking at the request of the third-party processor.

5.30. Based on my above discussion about staged consents, it is reasonable to expect each stage of the construction project to reflect the intended final operation of the completed building, particularly as it relates to compliance with clauses C1-C6.

5.31. As the ASRS and racking had been removed from the building consent application, including from the fire report, the application did not demonstrate how the building, once completed, would be configured to ensure it complied with the life safety requirements of the Building Code with respect to fire.

5.32. However, taking into account the series of events that led to the removal of the ASRS and racking from the application, and then to the authority's refusal, and the inconsistent communications associated with these events, I do not consider the reasons articulated in the authority's refusal letter of 26 March and its subsequent emails gave the owner the information it needed to understand the authority's concerns and what it needed to focus on if it was to satisfy the authority of the building's compliance in a future application.

6. Additional commentary on the ORS

6.1. The decision in this determination turns on whether the authority had grounds to refuse the application and whether it gave sufficiently clear reasons for doing so. As stated in paragraphs 1.9-1.10, I have not determined whether the proposed ORS, or the fire safety design incorporating it, complies with the Building Code.

6.2. However, the submissions and the discussion at the technical meeting identified a number of matters that are likely to require clearer treatment in a future building consent application. This is general commentary on issues raised and is not a detailed compliance review of the plans and specifications.

6.3. An ORS operates differently from a sprinkler system. The proposed ORS is intended to reduce the likelihood of ignition and sustained combustion by maintaining a reduced-oxygen atmosphere, whereas a sprinkler system responds after a fire has developed sufficiently to activate it. The underlying technology therefore seeks to contribute to satisfying the fire safety objectives of the Building Code in a different way from the fire safety systems and measures provided for in C/AS2.

6.4. The assessment should therefore address the performance of the complete fire safety design rather than treating the ORS only as a like-for-like replacement for sprinklers. Describing the ORS as a fire prevention or fire minimisation system does not, by itself, demonstrate compliance. Equally, the absence of a sprinkler system does not, by itself, establish that the design does not comply.

6.5. The fire engineering assessment should clearly define the intended configuration and operation of the building at the completion of each consented stage. This is particularly important here because the stage 2 arrangement, involving floor-level block stacking and manual loading and unloading, may present different occupancy, storage and operational conditions from the completed ASRS and racking configuration. I agree with FENZ that those stages could have materially different risk conditions.

6.6. I note the owner has referenced international standards to demonstrate a number of aspects of compliance. Overall, the supporting information should identify how the requirements of the standards relate directly to applicable Building Code performance requirements, the design assumptions, and how they contribute to the evidence demonstrating that each of the performance requirements will be met.

6.7. In terms of the staging issues, the assessment for earlier stages need not contain the detailed design of every element proposed for a later stage. It should, however, contain enough information about the likely final configuration to show that the earlier work will not prevent the completed building from complying with the Building Code. In this case, that may require an indicative but sufficiently developed racking and ASRS layout showing its relationship to the relevant features of the fire safety design, such as escape routes, detection and warning systems, emergency lighting and signage, and the operation of the ORS.

6.8. The application should explain how the complete design addresses the applicable fire safety performance requirements under the conditions relevant to the building. This should include a clearly stated design basis and the operating conditions relied on in the assessment.

6.9. In relation to clause C4.3, the application should explain the method relied on to demonstrate compliance, including how the design addresses the risk of occupants being exposed to untenable conditions during escape. If the assessment relies on the ORS preventing or limiting fire growth, relevant matters may include the following, depending on the design claims and compliance methodology:

6.9.1. the proposed storage arrangements,

6.9.2. potential ignition sources,

6.9.3. the production and movement of smoke and other products of combustion,

6.9.4. detection and warning,

6.9.5. occupant response and evacuation,

6.9.6. the consequences of the ORS being unavailable or operating outside its design parameters.

6.10. Because the ORS is central to the proposed fire safety strategy, the application should identify credible failure conditions and demonstrate how those conditions are addressed. The application should identify the relevant Building Code performance requirements, which may include clauses C3.9, C4.5 and C5.8, and explain how the design addresses the consequences of the ORS or another part of the fire safety system becoming unavailable or failing.

6.11. The assessment should not be limited to the mechanical reliability of individual components but should consider the performance of the system as installed and operated in this building.

6.12. The assessment should identify which failures are detected automatically, what warnings are given, what system redundancy or other protective measures are provided, and what operational responses are required. It should also explain the arrangements for ongoing inspection and maintenance.

7. Conclusion

7.1. With respect to the issue of staged consents, I consider that each stage of the building work and its associated consent is subject to the requirement in section 49.

7.2. In the case of the owner's building, the authority's refusal centred around the absence of the racking and ASRS from the plans (at the time of the refusal) and the implications of this on the building work's compliance with clause C4.3.

7.3. For the purposes of section 49, it was reasonable to expect the omitted information to be included to demonstrate that the completed building would comply. This did

not necessarily require the detailed design of the racking and ASRS. However, sufficient information was required to show where the racking would be located in relation to the other elements of the building's fire safety design, such as doors, emergency lighting and signage.

7.4. The plans and specifications did not provide sufficient evidence in relation to this part of the building design, therefore, the test under section 49 was not met, and there were grounds to refuse to grant the building consent under section 50.

7.5. I consider that the authority did not provide sufficient reasons in its refusal letter or subsequent communications. As a result, the owner was not given adequate information to understand the authority's concerns or what it would need to address in a future application. However, because I have determined that there were grounds for refusal, I confirm the authority's decision to refuse the building consent.

7.6. As a next step, the owner and the authority should use the findings and commentary in this determination to agree the scope and intended operation of each consent stage and to identify the plans, specifications and supporting evidence required for a new decision under section 49.

7.7. That process should address, in particular, the stage-specific storage, occupancy and operating conditions, the relationship of the proposed ASRS and racking configuration to the fire safety design, the compliance methodology and supporting evidence for the complete fire safety design, and the consequences of the ORS or another part of the fire safety system being unavailable or operating outside its design parameters. The authority will then need to assess the application on the plans, specifications and evidence submitted.

8. Decision

8.1. In accordance with section 188 of the Building Act 2004, I confirm the authority's decision to refuse to grant building consent BC99898. In doing so, I note that the authority's stated reasons did not adequately explain the grounds for its decision.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 6 November 2026.

Andrew Eames

Principal Advisor Determinations