



Development Tribunal – Decision Notice

Planning Act 2016, section 255

Appeal number:	25-032
Appellant:	Queensland Fire Department
Assessment manager:	Harald Weber
Co-respondent (applicant):	Two Rivers Community School
Site address:	267 McIver Road, Mareeba Qld 4880 and described as Lot 71 on SP 292140—the subject site

Appeal

The tribunal's jurisdiction has been enlivened pursuant to section 229 and item 1 of table 3 of schedule 1 (Appeals) of the *Planning Act 2016* arising from the decision of the Assessment Manager to approve the development application's requirements of NCC 2022 Part G5 Construction in bushfire prone areas dated 3 September 2025.

Date and time of hearing:	29 October 2025 and 24 February 2026
Place of hearing:	Online
Tribunal:	John Eylander—Chair Christopher Sheeran—Member
Present:	Daniel Marsh—Appellant Harald Weber—Respondent Rebecca Gilding—Co-respondent Dr Paul Clancy—Fire Engineer

Decision:

The Development Tribunal (Tribunal), in accordance with section 254(2)(d) sets aside the assessment manager's Development Application Decision Notice dated 3 September 2025 and orders the assessment manager to remake the decision pursuant to the Queensland Fire Department Amended Advice dated 20 August 2025.

Background

1. The hearing of this matter on 29 October 2025 commenced but was hindered by the absence of the fire engineer who produced the fire engineering report. The parties were given time to file any further material before recommencing the hearing on 24 February 2026.

2. This appeal is by the Queensland Fire Department ("QFD") of the assessment manager's Development Application Decision Notice to approve the new construction of classrooms at the Two Rivers Community School outside Mareeba in Far North Queensland.
3. The QFD gave an Amended Advice dated 20 August 2025 to the assessment manager stating in the general comments that the Fire Engineering Report ("FER") does not demonstrate compliance with G5P2 generally as follows –

(a) The advice stated:

The FER fails to demonstrate performance (compliance) to G5P2. i.e., the additional requirements that are proposed are insufficient in the FER and significantly less than the prescriptive requirement for the respective class of building.

*The proposed design does not have provisions for any of the multiple buildings to provide for sheltering of occupants that are unable to evacuate. This is the **objective and the performance** requirement.*

*QFR referral agency advice guides emphasised the importance of prescriptive provisions for QFR to respectively limit additional advice to only firefighting water supplies and perimeter access. However, in this application, the apparent deficiencies in the fire safety system subject to performance solution has necessitated **advice to all the specific areas of G5P2.***

QFR considers the FER does not demonstrate compliance to G5P2 generally as follows:

G5P2 - *The current design identifies that none of any of proposed buildings at this site will be constructed and occupied by people who may not be able to readily evacuate.*

G5P2 (a) - *There is no indoor environment with the required tenability for occupants to shelter. Beyond the characteristics of the flame front bushfire attack, there is no analysis for the sub items of (a) being sub items (i) to (viii). Furthermore, the sheltering as a fallback provision to evacuation, is to an outdoor area without analysis of consequential fire actions at the site. This is significantly less than the benchmark standard established by the prescriptive provisions.*

QFR notes that the FER proposes that occupants evacuate to an outdoor open space, which is therefore considered to be inadequate for the safety of occupants.

G5P2 (b) - *The vehicle access to the site for firefighting purposes is only partial and the firefighting capacity is limited by G5P2 (c).*

QFR requires that perimeter vehicle access for the site be provided for emergency crews.

G5P2 (c) - *The firefighting water supply is not sufficient. This Performance Solution states that the client is supplying two 5000 litre tanks that complies with local council requirements only. There is no justification or analysis applied to this in respect of fire exposure and consequential fires. The application (by way of this FER) is stating from 6 buildings to 16 buildings to be constructed on this site. QFR would be severely impeded in protecting the site*

should QFR resources be responded to the school. The nominated water supply volume, as documented, is insufficient.

QFR requires that a AS2419 compliant Hydrant System be installed.

G5P2 (d) - *The safe access requirement within the site has not been demonstrated and is non-compliant. The FER states that occupants are “able” to evacuate prior to a bushfire and that no further requirements of G5P2 apply. The QFR view is that the objective and requirement have not been met as the FER provides no further analysis other than the impact of the fire front attack and assumes that the single road to the school reinforces evacuation before the fire. The buildings for the site have no sheltering performance as required by G5P2. Furthermore, the FER states that occupants can evacuate, which is in contrast to the experiences of major bushfire events. Those experiences were written into the NCC as requirement for certain class 9 buildings to provide sheltering. This requirement is for the purpose of life safety that not all occupants have sufficient time, or roads that are unimpacted by bushfire effects such that they can evacuate.*

For the above reasons the Assessment of the FER is deemed 'Not Suitable'.

- (b) The Fire Mains (including booster and/or pumps) were deleted by the FER and this was deemed to be not suitable as Queensland Fire and Rescue requires Fire Mains (Hydrant System) to be installed as per the 'NCC 2022 G5P2 Additional bushfire requirements for certain Class 9 buildings (a)(viii) and (c)'.
 - (c) Vehicular access for large isolated buildings, deleted by the FER, was deemed to be not suitable as Queensland Fire and Rescue requires Vehicle Access to be installed as per the 'NCC 2022 G5P2 Additional bushfire requirements for certain Class 9 buildings (b)'.
4. The Development Application Decision Notice relevantly provided for –
- (a) *3. Fire extinguishers to be provided and installed in accordance with Clause E1D14 of the NCC Vol 1. and Australian Standard 2444. and*
 - (b) *“NOTICE OF PERFORMANCE SOLUTION TO READ: This building has been subjected to a fire engineering analysis with regards to varying the bushfire provision of part G5D4 and specification 43. As such no alterations shall occur in these areas without the approval of a competent building certifier.”*
5. At the first day of hearing, the assessment manager and co-respondent relied on the FER and the Green Tape Solutions Bushfire Hazard Assessment and Management Plan dated 24 February 2026.
6. The FER provided at page 15 - 16 under 4.3 Assessment –

*Bushfire consultants, Green Tape Solutions, have assessed the Bushfire Attack Level (BAL) at a maximum BAL-12.5 for the subject site with an Asset Protection Zone (“APZ”) of 30.9 m, as shown in Figure 3-3. An APZ of 36.8 m is provided to reduce the radiant heat flux such that it does not exceed 10 kW/m² for any building on the site, as seen in Figure 3-4. It is believed that the performance requirements are sufficiently detailed to be addressed directly. Achievement of the performance requirements is explained below in italics” [and **bold**]:*

G5P1 Bushfire Resistance

A building that is constructed in a designated bushfire prone area must be designed and constructed to—

- (a) *reduce the risk of ignition from a design bushfire with an annual exceedance probability not more than 1:100 years, or 1:200 years for a Class 9 building; and*

The design bushfire is taken from the Bushfire Report (see details in Section 7) page 20 Table 6 and last paragraph. The buildings will not experience a heat flux of greater than 10 kW/m² from the design bushfire such that an APZ of 36.8 m is maintained from the construction edge.

Table A.35 of the SFPE Handbook 5th ed. p 3451 indicates that the critical heat flux for ignition of most materials is 10 kW/m² for an unlimited exposure period; that is, a lower bound value as in many materials critical ignition flux reduces with exposure duration. The buildings are constructed in accordance with AS 3959 BAL-12.5, which gives appropriate resistance to ignition and ember attack. Therefore, during exposure to the design bushfire, the risk of ignition is well reduced, satisfying (a).

- (b) *take account of the assessed duration and intensity of the fire actions of the design bushfire; and*

The buildings are constructed to BAL-12.5. (a) shows that the incident design bushfire flux on external walls is no greater than 10kW/m². As assessed in (a), this is below most materials critical heat flux for indefinite exposure and will not cause ignition. Thus, the buildings are expected to withstand the duration and intensity of the design fire.

- (c) *be designed to prevent internal ignition of the building and its contents; and*

(a) shows that the incident design bushfire flux on external walls is 10kW/m² and will not cause ignition. The heat transferred to inside is less and thus will prevent internal ignition.

- (d) *maintain the structural integrity of the building for the duration of the design bushfire.*

Response to (a) applies and gives justification.

G5P2 Additional bushfire requirements for certain Class 9 buildings

*A building that is constructed in a designated bushfire prone area and occupied by people who may be **unable** to readily evacuate the building prior to a bushfire must, to the degree necessary—*

During extreme or catastrophic fire danger rating periods, the school will be vacant. For moderate or high fire danger rating periods, a bushfire safety management plan is provided which assures that occupants can readily and reliably evacuate before untenable conditions within the building. Occupants attend the school frequently and are familiar with available paths and will be reliably instructed and guided by teachers. The APZ provides occupants a clear line of site (sic) to the unkept vegetation which will assist in earlier notification during moderate or high fire rating periods as well as smoke ingress to the site which will ensure early evacuation. The bushfire safety

management plan instructs the staff on procedures to efficiently notify relevant wardens and evacuate to safety.

A safe assembly area is proposed on the southern boundary of the school site, as shown in Figure 4-1. In accordance with AS 3959 Appendix B, the design bushfire shall have a flame front of 100 m at a temperature of 1090 K. The design bushfire is located at the far edge of the APZ, as shown in Figure 4-2.

The dimensions of the radiant panel for the design bushfire were tested against the received 10 kW/m² with an APZ of 36.8 m, as shown in Figure 4-3.

For the radiant heat exposure of the safe assembly area, the buildings are constructed to withstand a BAL-12.5 and shall shield the safe assembly area from the radiant heat. As seen in Figure 4-4, the radiant heat exposure at the safe assembly area is 0.92 kW/m² at no less than 140 m from the design bushfire at the edge of the APZ. Therefore, occupants are extremely unlikely to experience a heat flux of greater than 1 kW/m² which satisfies the critical heat flux for initiation of pain of 1.4 – 1.7 kW/m² and the solar constant is about 1 kW/m² (SFPE Handbook 5th ed. pg 2656).

Regarding brigade intervention, the Bushfire Report shows that the design heat exposure on site is 10 kW/m² which is sufficiently low to allow access by firefighters with PPE, personal protection equipment. They are most unlikely to face any building fires as the buildings are designed to resist BAL12.5, exceeding 10 kW/m².

A hydrant system is not required by the BCA E1D2(1)(a) because the buildings are less than 500 m². DtS does not require hydrants. Nonetheless, the water supplied is 2x 5000 L fire water storage tanks as advised by the client, Section 8, is sufficient.

Vehicle access to the school is provided by Chewko Road, as seen in Figure 3-2. A road around the perimeter of the school is provided, as seen in Figure 3-3.

Therefore, occupants are able to readily evacuate the building prior to a bushfire. No further requirements of G5P2 apply. This bushfire safety management plan is submitted with the FER.”

7. The assessment manager and co-respondent organised for Dr Paul Clancy, fire engineer who co-authored the FER, to speak to the assessment and respond to the Amended Advice from the QFD. This evidence is discussed below.

Jurisdiction

8. Section 229(1) of the PA provides that schedule 1 of the PA states the matters that may be appealed to a tribunal. Section 5 of the schedule provides that the matters stated in table 3 of the schedule ('table 3') are the matters that may be appealed only to a tribunal.
9. Item 1 of table 3 provides an appeal may be made against a development approval for building work to the extent the building work required code assessment against the building assessment provisions.
10. Accordingly, the Tribunal's jurisdiction has been enlivened pursuant to section 229 and item 1 of table 3 of schedule 1 (Appeals) of the *Planning Act 2016* arising from a building advisory agency appeal.

Decision framework

11. The onus rests on the appellant to establish that the appeal should be upheld (section 253(2) of the PA).
12. The tribunal is required to hear and decide the appeal by way of a reconsideration of the evidence that was before the person who made the decision appealed against (section 253(4) of the PA).
13. The tribunal may nevertheless (but need not) consider other evidence presented by a party with leave of the tribunal or any information provided under section 246 of the PA (pursuant to which the registrar may require information for tribunal proceedings).
14. The tribunal is required to decide the appeal in one of the ways mentioned in section 254(2) of the PA.

Material considered

15. The material considered in arriving at this decision was:
 - (a) Form 10 Notice of appeal, grounds for appeal and correspondence accompanying the appeal lodged with the Tribunals registrar on 15 September 2025
 - (b) All Construction Approvals Development Application Decision Notice dated 3 September 2025
 - (c) Queensland Fire Department Amended Advice dated 20 August 2025
 - (d) Email correspondences between the parties dated 12 August 2025
 - (e) Sotera Life Design Consulting Fire Engineering Report Rev 2-3
 - (f) Bloom Fire Consulting Peer Review Rev 1-3
 - (g) Green Tape Solutions Bushfire Hazard Assessment and Management Plan dated 24 May 2025

Findings of fact

16. The tribunal makes the following findings of fact:
 - (a) The buildings are classified as Class 9b, a rise in storeys of one, and a maximum fire compartment size of 260 m².
 - (b) The project comprises multiple buildings located within a bushfire-prone area, with identified medium bushfire risk to the north and east of the site.
 - (c) The (FER) outlines that all buildings are to be constructed in accordance with AS 3959 for BAL-12.5 conditions, with an Asset Protection Zone (APZ) of at least 36.8 m established to mitigate bushfire exposure.
 - (d) The FER also identifies that the site will remain unoccupied during Extreme or Catastrophic Fire Danger Rating periods.
 - (e) A designated external safe assembly area has been proposed at a distance of approximately 140 m from the design bushfire at the edge of the APZ, with a calculated radiant heat exposure of 0.92 kW/m².
 - (f) The FER adopts a structured performance-based approach utilising the BCA Performance Requirements G5P1 and G5P2 in lieu of Specification 43. The method of justification is consistent with BCA Clause A2G2 and is supported by a bushfire hazard assessment and a peer review process.

- (g) The assessment appropriately considers key bushfire attack mechanisms, including radiant heat exposure, and aligns elements of the design with AS 3959 construction requirements.
- (h) The establishment of an Asset Protection Zone (“APZ”) and the consideration of Fire Danger Ratings as part of the operational strategy are consistent with accepted bushfire safety principles.

Reasons for the decision

- 17. The Tribunal identifies there are a number of areas where the assessment is incomplete or not sufficiently substantiated in demonstrating compliance with Performance Requirements G5P1 and G5P2.
- 18. The consequences associated with evacuation to an outdoor area during a bushfire attack have not been fully assessed.
- 19. With respect to G5P2(b), the evidence provided does not adequately demonstrate that vehicle access to and within the site is sufficient to support safe emergency response and evacuation. The FER does not include a detailed assessment of access arrangements for emergency vehicles, including large fire appliances, or the operational capability of these routes under bushfire conditions.
- 20. In relation to G5P2(c), the proposed firefighting water supply comprises two 5,000-litre galvanised steel tanks provided in accordance with the Mareeba Shire Planning Code for Bushfire Protection, serving the entire site, which includes multiple buildings. However, the adequacy of this provision has not been substantiated through any detailed analysis or calculation of the overall firefighting water demand for the site.
- 21. It is further understood that the building certifier identified the absence of a hydrant system as a non-compliance with the BCA Clause E1D2. This was confirmed by the certifier during the hearing. However, the FER states that a hydrant system is not required under BCA Clause E1D2(1)(a), as the buildings are less than 500 m² and therefore do not trigger a Deemed-to-Satisfy requirement. This discrepancy has not been clearly reconciled or addressed within the FER.
- 22. In addition, there is no demonstrated means for the fire brigade to effectively connect to or utilise the available water supply. Based on the information provided, the available water volume is unlikely to support meaningful firefighting operations.
- 23. In relation to G5P2(d), the assessment does not sufficiently demonstrate that safe on-site access is maintained during a bushfire event. The reliance on a single evacuation route presents a potential risk, and there is no supporting analysis to confirm that evacuation can be undertaken safely under the design bushfire conditions. The building design also does not demonstrate any shelter-in-place capability.
- 24. Additional concerns have been identified within the documentation. The FER does not include sufficient detail regarding vehicular access for emergency services, including access for large isolated vehicles. The absence of a fire hydrant system further limits the effectiveness of firefighting response. While ongoing maintenance of the APZ is referenced, the responsible party for ensuring this is not clearly defined. Further, there is limited information provided regarding hazard identification, potential consequential fire scenarios, and the overall fire brigade intervention strategy.
- 25. It is acknowledged that the adopted design intent relies on the site being unoccupied during Extreme or Catastrophic Fire Danger Rating periods. However, bushfire events may still occur during Moderate to High conditions when the site is occupied. In this

context, reliance solely on evacuation without detailed assessment of tenability and operational constraints introduces uncertainty in demonstrating compliance with the Performance Requirements.

26. Based on the above, it is the Tribunal's finding that the assessment does not adequately demonstrate compliance with Performance Requirements G5P1 and G5P2. In particular, the provisions relating to tenability, emergency access, firefighting water supply, and safe evacuation have not been sufficiently addressed or substantiated.
27. It is further acknowledged that designing buildings for internal tenability during bushfire events may not be the primary intent of the proposed strategy, particularly where evacuation is relied upon. However, it is reasonable to expect that adequate firefighting infrastructure is provided to support fire brigade intervention. In this regard, the provision of a compliant fire hydrant system is considered necessary.
28. In summary, it is the Tribunal's finding that the current proposal does not provide an adequate level of fire safety for occupants or emergency responders. A compliant fire hydrant system in accordance with AS 2419 is required for the development. The provision of two 5,000-litre tanks as the sole firefighting water supply is not considered adequate.
29. It is acknowledged that the FER has undergone a thorough peer review process, however, it is not evident that the fire brigade has been adequately engaged as part of this process. This may have contributed to differences in understanding regarding certain aspects of the proposed design.
30. The Tribunal, in accordance with section 254(2)(d) of the PA sets aside the assessment manager's Development Application Decision Notice dated 3 September 2025 and orders the assessment manager to remake the decision pursuant to the Queensland Fire Department Amended Advice dated 20 August 2025.

John Eylander
Development Tribunal Chair

Date: 19 May 2026

Appeal rights

Schedule 1, table 2, item 1 of the *Planning Act 2016* provides that an appeal may be made against a decision of a Tribunal to the Planning and Environment Court, other than a decision under section 252, on the ground of -

- (a) an error or mistake in law on the part of the Tribunal; or
- (b) jurisdictional error.

The appeal must be started within 20 business days after the day notice of the Tribunal decision is given to the party.

The following link outlines the steps required to lodge an appeal with the Court.

<http://www.courts.qld.gov.au/courts/planning-and-environment-court/going-to-planning-and-environment-court/starting-proceedings-in-the-court>

Enquiries

All correspondence should be addressed to:

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