

Our Ref: 18COLL02: NVD/JT
SSD Ref: 9536
NSW RFS ref: D18/6890

Friday 31st May, 2019

Health Infrastructure
C/- Colliers International

Level 30, Grosvenor Place
225 George Street
SYDNEY NSW 2000

Attention: Bonnie Custance

Dear Bonnie

**Re: Bushfire conditions
Wyong Hospital Expansion, Hamlyn Terrace**

Travers bushfire & Ecology are responding to the NSW Rural Fire Service (RFS) submission's made in relation to SSD 9536, and set out in its letter dated 4th March 2019, and in particular, Conditions 6, 7 & 8 which state the following:

6. Construction of the roof, southern, eastern and western elevation(s) of the proposed works shall comply with section 3 and section 7 (BAL 29) Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel Framed Construction in Bushfire Areas – 2014 as appropriate and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006.

7. Construction of the northern elevation(s) of the proposed works shall comply with section 3 and section 6 (BAL 19) Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel Framed Construction in Bushfire Areas – 2014 as appropriate and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006.

8. A minimum 1.8m high radiant heat shield made of non-combustible materials shall be constructed adjacent to the hazard to the south and west. All posts and rails shall be constructed of steel. The bottom of the fence is to be in direct contact with the finished ground level or plinth. The location of the radiant heat shield shall be as generally shown in Schedule 1 – Bushfire Protection measures of the submitted bushfire report prepared by Travers bushfire & ecology (dated November 2018, Reference 18COLL02).

In response to the SEAR's we are required to demonstrate compliance with the bushfire protection measures outlined within *Planning for Bush Fire Protection 2006 (PBP)*.

Although the state significant development (SSD) is exempt from the need for a bushfire safety authority, consultation with the NSW Rural Fire Service (RFS) is encouraged and *Travers bushfire & ecology* made contact with the NSW Rural Fire Service (RFS) (Craig Casey) via a pre-DA application on the 15th August 2018. In response RFS issued a *Pre-DA Advice Summary* on 27 September 2018, followed by their recommended conditions on 4th March 2019.

Prior to the issue of their conditions the NSW RFS provided the following pre-DA advice in relation to the BAL rating for the development:

The proposed building is being built closer to the unmanaged bushfire hazard vegetation than the existing buildings and a better bushfire outcome should be achieved and acknowledge the proximity of the proposed building to the hazard. This could be accomplished by an upgrade to the construction level of the western, southern, and eastern elevations and roofing to BAL 29 and a 1 level downgrade to the construction level of the northern elevation to BAL 19 for the shielded northern elevation should be considered.

The final bushfire protection assessment report, prepared by this firm was updated to address the RFS pre-DA advice and provided further justification to retain the BAL 19 / 12.5 approach based on the fact that;

- the defensible space allows compliance with $<10\text{kW/m}^2$ (with inclusion of a radiant heat barrier) and therefore BAL 12.5 could be considered compliant,
- we were already optimising the design by voluntarily increasing BAL design to BAL 19.
- the building is not located any closer to the hazard than the existing hospital building to the east (the existing building is provided with a setback of 20m).
- the proposed APZ (and radiant heat barrier) provides the required level of protection for the building along with increased protection for existing buildings to the east

We note that the RFS position regarding the BAL rating has remained unchanged from the pre-DA response through to the issue of the recommended consent conditions.

Following our review of the conditions listed in the RFS letter (dated 4th March 2019) further discussions with Craig Casey (RFS) have occurred to ascertain the reasoning behind the BAL 29 requirement. The decision to retain the BAL 29 is based on the potential for the 1.8m high radiant heat barrier to fail (i.e. lack of maintenance etc.) and therefore the RFS recommendation for BAL 29 to provide additional redundancy in the overall design.

The most recent consultation with RFS (Craig Casey) occurred via email (dated 15/5/19 and attached) and phone correspondence (20/5/19) to discuss and agree the removal of the fence (Condition 8) based on the increased construction standards and location of building entry and exit points.

Based on the revised calculations undertaken by *Travers bushfire & ecology* the removal of the fence results in the building being exposed to radiant heat levels of 10.35kW/m^2 and only an increase in radiant heat by 0.35kW/m^2 . Whilst this is over the 10kW/m^2 (threshold required for safety of occupants entering or exiting a building) there are no exits or entries to the building with this area and therefore the proposal will comply with the performance criteria outlined in PBP.

As a result the NSW RFS have agreed (via telephone conversation 20/5/19) that Condition 8 can be removed and the requirement for the fence is no longer applicable. This is based on the increased building construction (in compliance with Condition 6 & 7) which will provide additional redundancy in the overall design. On this basis NSW Health accepts the recommended conditions 6 & 7.

Should you require further information, please do not hesitate to contact Nicole van Dorst or the undersigned on 4340 5331 or info@traverseecology.com.au.

Yours faithfully



John Travers

BA Sc. / Ass Dip / Grad Dip / BPAD-Level 3-15195 (FPA)

Principle bushfire consultant – **Travers bushfire & ecology**



**Travers bushfire & ecology employs a
Bushfire Planning and Design (BPAD) Accredited Practitioner**

John Travers and Nicole van Dorst are BPAD consultants. Both are certified by the Fire Protection Association. FPA Australia administers the Bushfire Planning and Design (BPAD) Accreditation Scheme. The Scheme accredits consultants who offer bushfire assessment, planning, design and advice services. It accredits practitioners who meet criteria based on specific accreditation and competency requirements, including a detailed knowledge of the relevant planning, development and building legislation for each State and Territory. Through the Accreditation Scheme, BPAD Accredited Practitioners are recognised by industry, regulators, fire agencies, end-users and the community as providers of professional bushfire assessment, planning, design and advice services. The Scheme provides an enhanced level of confidence for government and the community that practitioners are accredited by a suitably robust scheme that is administered by the peak national body for fire safety. Note: L3 is the highest level and L1 is the lowest level.



Wed 15/05/2019 11:05 AM

Nicole van Dorst

Wyong Hospital Extension (RFS REF: D18/6890)

To: 'Craig Casey'

 You forwarded this message on 17/05/2019 12:41 PM.

Hi Craig,

Following on from our phone conversation yesterday, I was hoping to get your opinion in regards to the Wyong Hospital redevelopment site and in particular the removal of the radiant heat barrier / fence.

After many discussions with the client (Minister for Health) they are adopting the BAL 29 construction standards as an additional redundancy in the building design. However in light of the acknowledgement that the fence may fail (as per my previous conversation with you) they are questioning the need for fence (aesthetic reasons).

In removing the fence the expected radiant heat impact on the building would be 10.35kW/m². Whilst this is over the 10kW/m² there are no exits or entries to the building with this area (apart from the carpark on the ground level).

Happy proceed via the formal way if you believe we have merit in this approach.

Kind regards



Nicole van Dorst | *Manager, Bushfire Services*

Travers bushfire & ecology

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