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Our Ref: 211053

09 Dec 2021

Ashwin Nair
 Shire of Serpentine Jarrahdale
 6 Paterson Street
 Mundijong WA 6123

Dear Ashwin

Re: Your request for a review of the Bushfire Management Plan (dated March 2021) for a proposed building extension and building replacement and Bushfire Emergency Evacuation Plan, Serpentine Retreat Centre, 48 Lewis Road Serpentine.

My desktop review of this Bushfire Management Plan (BMP) is conducted in my capacity as an experienced and accredited BPAD Level 3 Bushfire Practitioner (Accreditation No 27795). I have over 45 years' experience and competencies in bushfire, emergency and risk management.

My review methodology is to work through the subject Bushfire Risk Management Plan and make any necessary comments against items of the content - in the order that it is written. A summary statement of the review is provided.

The Intent of the Review – Establish the Following Items

1. If the author is working within their accreditation level as established by section 6.14: 'WA Bushfire Accreditation Framework' of the Guidelines (WAPC 2017 v1.3);
2. If all the content sections and level of detail provided in the BRMP satisfies the requirements established by the Guidelines (WAPC 2017 v1.3);
3. If all potential bushfire impact assessment inputs have been correctly determined, including the application of the BAL determination methodology established by AS3959:2018;
4. If all the potential fire scenarios have been identified and analysed;
5. If the bushfire emergency plan assessment is aligned to an accepted National and State standard;
6. If all potential bushfire hazard issues have been identified;
7. If bushfire protection measures have been identified; and
8. If all relevant responsibilities have been correctly identified for the implementation and maintenance of the applicable bushfire protection measures.

Review Comments

1. The document author is an accredited BPAD Level 3 Bushfire Practitioner. Guidelines for Planning in Bushfire Prone Areas, section 6.14.3 Level 3 Bushfire Planning - Performance, requires a BPAD Level 3 to develop a Bushfire Management Plan for "Vulnerable land use".
2. *Proposal Detail*: Provides the correct regulatory context (State Planning Policy 3.7 (SPP 3.7), Guidelines (WAPC 2017 v1.3), Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design (WAPC Nov 2019).
3. *Regulatory Implications*: – **incorrect information**. SPP 3.7 deals with the planning requirements associated with bushfire prone areas and is not subject to a Class of building.
 - I. SPP 3.7 & associated legislation
 - Does not distinguish between building classes. Applies to habitable or any specified building
 - Does not address construction standards
 - (Potentially) All development/use needs to address SPP 3.7
 - II. Planning Act & NCC
 - Limits required construction to 1, 2, 3 & 10a
 - Voluntary or Decision Maker application of NCC is available as an optional condition.
4. Proposal Details: Introduction – Proposal Description: **Requires clarity**
The BMP states "...the proposal is not intended to increase the capacity of the facility". It is unclear if there will be an increase in visitation to the facility in the future.
5. *Identification of bushfire hazard issues (section 4)*: **Details incorrect information, requires further reporting evidence considering the broader landscape, eg, wind interaction with the scarp etc**. Bushfire hazard issues and potential fire behaviour must be explored and analysed to determine potential threat to the site and during evacuation. The BMP states (P18, para 6 & 9) "Both routes provide evacuation in the opposite direction to an advancing fire" and "... it is unlikely that the route via Lewis Road to the South Western Highway would not be available." There are implications for enhanced fire activity for a fire located in a region of downslope winds. The scarp having in the past displayed fire channelling (vorticity-driven lateral spread) and medium to long distance spotting. A bushfire event in this area will likely compromise evacuation routes.
6. *Acceptable Solutions*:
 - I. *Element 1 – location (section 5)*: **Incorrect information**

The BMP states "... consideration of the bushfire hazard level is not relevant to a development site) and "Element 1 is not applicable in this instance..."), however;

The position statement establishes that:

- The source of risk (the hazard) to be considered in Element 1 is the "level of bushfire exposure" from the type and extent of bushfire prone vegetation and the topography of the land on which it exists; and
- "Consideration should be given to the site context" which includes the land both "within and adjoining the subject site". The "hazards remaining within the site should not be considered in isolation of the hazards adjoining the site, as the potential impact of a bushfire will be dependent on the wider risk context."

The position statement also recognises:

- That the proposed development site and its surrounding land may be part of an area "identified for development or intensification of land use prior to the release of SPP 3.7"; consequently

- Consideration by decision-makers "should also be given to improving bushfire management of the site and surrounding area, thereby reducing the vulnerability of people property and infrastructure to bushfire"; and
- The application of mitigation measures to lessen the risk to the broader area would include improvements to the local road network (including emergency access ways), improvements/additions to firefighting water supply and increasing separation distance from the hazard.

Refer above #3

I. Element 2 – siting and design: **Opinion** (p21)

- It is my opinion, to improve the threat from a bushfire to people and structures, APZ's for existing buildings, not forming part of the development application, should be a condition with the BMP Responsibilities (condition of approval). The Guidelines do not state APZ's must be installed and maintained around existing buildings.

II. Element 3 - Vehicular Access: **Incorrect information – Emergency Access Way (EAW)**

The intent of vehicular access is "To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event". The BMP states the EAW gates are locked, and evidence has not been provided in the BMP from the Shire of Serpentine Jarrahdale advising the EAW will be maintained and remained unlocked. Without this evidence, the EAW does not meet the intent of this element "... available and safe during a bushfire event", therefore the EAW is not compliant. The BMP states the EAW is compliant.

As a result of the EAW not being compliant, A3.1 exceeds the acceptable solution of 200 metres. Access to two different destinations is approximately 440 metres.

EAW is not detailed on a map.

7. Vegetation classification: **Compliant**

I agree with the vegetation classification assessment.

8. Bushfire Emergency & Evacuation Planning: **Requires additional information. Some information detailed within the Plan is not correct and will potentially expose people to unnecessary risk.**

I. Emergency Evacuation Plan Checklist

- The Emergency Evacuation Plan Checklist, response is "short distance". The checklist requires descriptive information.
- Conflicting information regarding closure "January or February" (checklist) & December, January & February" (BMP).
- EAW not detailed on the Emergency Evacuation Diagram.
- Evacuation or survival table. Some information contained in "Triggers" and "Actions" are not correct.

Summary

In my opinion, in context of the proposal and the potential bushfire threat to people and the existing (operating) Serpentine Retreat Centre facility, can be improved by implementing significant risk reduction measures.

The Bushfire Management Plan is unclear if there will be an increase in visitation. If the intent is to increase visitation, in my opinion, the risks to people will then not be tolerable.

The landscape scale bushfire threat has not been appropriately analysed, or the impact on the subject site, off site vehicular access and Emergency Planning.

The Bushfire Management Plan has recognised in the Preface the intent of the Policy (SPP 3.7) "The intent of the policy is "to preserve life and reduce the impact of bushfire on property and infrastructure". The proposed land-use because it will invite visitation by people unfamiliar with the locality is classified as a "Vulnerable development". The Bushfire Management Plan in my opinion has not considered all risk reduction measures, for

example, all buildings to install and maintain APZ's (Condition of approval). There are considerable risk reduction measures that can be implemented but have not been considered, rather the Bushfire Management Plan comments why risk reduction measure should not be implemented or the implementation and maintenance of risk reduction measures are voluntary.

The Emergency Access Way is locked, and evidence is not provided to ensure the Emergency Access Way will be maintained and the gates will remain unlocked. If evidence is not provided, the Emergency Access Way cannot be considered as an alternative route. Access to two different destinations is achieved approximately 440 metres from the site via Lewis Road, therefore Element 3: Vehicular Access, A3.1 does not meet the acceptable solutions.

It is my view, the reviewed Bushfire Management Plan and Bushfire Emergency Planning documents do not establish a suitable basis, with respect to planning for bushfire for Vulnerable Land Use, on which a decision maker can confidently approve the development application.

Yours sincerely



Mike Scott
Director
Bushfire Prone Planning