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RF&A

Your Reference: DEV2019/1035
Our Reference - RFA19-036

8 August 2019

Mr W Witt
Old Pub Lane Pty Ltd
c/- Ethos Urban
PO Box 205
FORTITUDE VALLEY Qld 4006

By email: warren@bwadvisory.com.au

Dear Ms Witt,

**Re: - Bushfire Hazard Assessment Report – 43-77 Old Pub Lane,
Greenbank**

Rob Friend & Associates Pty Ltd has been asked to undertake an assessment of the bushfire hazards relative to the development application over the abovementioned subject site.

A site inspection was undertaken on the 31st July 2019 to ascertain the validity of the bushfire hazard mapping over the property and adjacent properties as mapped in the Logan Planning Scheme (2015) Bushfire hazard overlay Version 5.1 mapping (see Figure 4). We also considered the relevance of the State Planning Policy (2016) Natural Hazards, Risk and Resilience hazard mapping (see Figure 5).

Development Proposal

Old Pub Lane Pty Ltd has lodged a Priority Development Application for the preliminary approval of a material change of use over the subject site (see Figure 1). The development will include health care services, business, warehouse facilities, retail, childcare services and indoor sports and recreation facilities.

**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**

Approval no: DEV2019/1035
Date: 21 October 2019



Queensland
Government



Figure 1: Proposed Concept Plan with bushfire hazard setbacks (28 South Environmental, 2019)

Further Issues

As a result of Old Pub Lane Pty Ltd lodging the development application, the Department of State Development, Manufacturing, Infrastructure and Planning issued a "Further Issues" letter dated 26th June 2019. The letter identified the following issues relevant to bushfire:

Bushfire Risk

2. There is a large patch of vegetation that intrudes into the 100m assessment area to the north-east of the site (adjacent to the existing Greenbank Shopping Centre). The bushfire risk assessment does not provide details about this area of vegetation, which could potentially be a bushfire hazard and is within 100m of the proposed child-care centre.

Confirm that this area of vegetation is a non-bushfire prone hazard class. If this area of vegetation is assessed as a bushfire hazard area, the bushfire risk assessment must be updated to mitigate the risk of the bushfire hazard in relation to the proposed child-care centre.

3. Confirm the proposed arrangements to manage any bushfire in the retained vegetation on the western part of the site (area nominated as future land resumption).

4. Confirm if any hazardous materials are proposed to be stored in the warehouse storage facility and any impacts this may have on the bushfire assessment.

Our response to these issues is considered below.

Site Description

- The subject site is located at 43-77 Old Pub Lane, Greenbank and described as Lot 1 on RP184067, covering an area of 20,100 square metres (see Figure 2).
- The subject site is zoned Priority Development Area under the Logan Planning Scheme 2015 V5.1.
- The subject site contains existing structures associated with its previous use as a learn to swim school and a parking lot within the central portion of the site, and vegetation over the western half and along the eastern boundary.
- The subject site is accessible from Old Pub Lane to the south and Pub Lane to the north.
- To the north of the subject site is a large property with a current development application over it which contains the existing Greenbank Shopping Centre within the eastern portion, and the remainder of the property is predominantly vacant land with vegetation and informal pathways (see Figure 3).
- To the west is an interstate railway line servicing Brisbane to Sydney. Adjacent to the line is vegetation and rural, residential lots. The subject site is predominantly surrounded by rural, residential lots.
- A review of the State Government's Regulated Vegetation Management Areas mapping indicates none of the vegetation within the subject site or the property to the north is mapped.
- The landform over the site is generally less than 5 degrees slope and as such is considered to be flat for the purpose of bushfire hazard mapping.



Figure 2: Aerial Photo of Subject Site (Queensland Globe, 2019)



Figure 3: Site Plan of property to the north (28 South Environmental, 2019)

Bushfire Hazard Mapping

Logan Planning Scheme 2015 V5.1

The Logan Planning Scheme 2015 (V5.1) Bushfire Hazard Risk Areas mapping, maps the western half of the subject site as within a potential impact buffer area. The mapping shows the vegetation to the west of the subject site is Medium Bushfire hazard, the vegetation to the south-west and south of the sit are mapped as a combination of Medium and High bushfire hazard (see Figure 4).

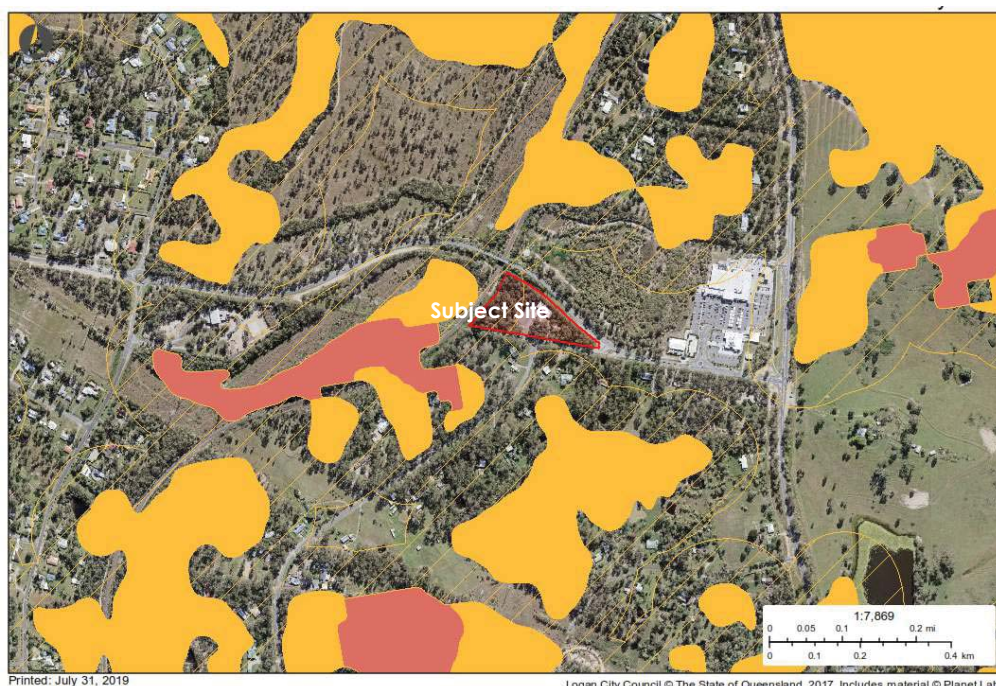


Figure 4 Logan Planning Scheme 2015 V5.1 Bushfire Hazard Overlay Map

State Planning Policy (2016) Natural Hazards, Risk and Resilience

A review of the State Government's State Planning Policy, Natural Hazards, Risk and Resilience bushfire hazard mapping indicates it is the same as the Bushfire risk areas mapping in the planning scheme and as such no commentary will be made with respect to the SPP mapping (see Figure 5).



Figure 5 State Planning Policy (2016) Natural Hazards, Risk and Resilience Map

Findings and Observations

Subject site:

- The subject site will undergo extensive clearing as a natural consequence of the proposed development
- There will be a narrow corridor 30 metres in width that will be retained along the western boundary. We note this may be cleared in the future to accommodate any potential expansion of the Interstate Railway line.
- The subject site contains no hazardous vegetation and the retained corridor is too narrow and isolated from any surrounding vegetation to present any significant hazard to the development.

Vegetation to the west and south west (see Photographic Plate 1):

- The neighbouring properties surrounding the subject site are maintained and managed by the landowners and are not mapped with the exception of being covered by impact buffers.
- The vegetation to the west of the interstate railway line was observed to contain patchy, open *Corymbia citriodora/Eucalyptus crebra* woodland.
- The vegetation is separated from the subject site by approximately 64.3 metres.
- We note the closest structure to the vegetation to the west is a warehouse facility which is not considered a relevant structure for assessment under the AS3959-2009

Vegetation to the north and north east (see Photographic Plate 2):

- The vegetation to the north and north east is patchy and inconsistent. There are no significant patches and there is bare ground (see Photographic Plate 3).
- The vegetation was observed to include *Acacia* regrowth and cleared areas with isolated, individual *Eucalypt* specimens.
- The vegetation is a corridor of approximately 85 metres in width at its widest.

Discussion

As the bushfire risk areas mapping in the Logan City Planning Scheme is based on the SPP bushfire hazard mapping, the methodology used in that mapping is relevant to this site and the understanding of the potential bushfire risks to the proposed development.

We note the methodology contained in the Natural Hazards, Risks and Resilience Bushfire technical guidelines is based on *Leonard et. al (2014)*¹. Section 2.2.1 of that report, and relevant to the subject site, contains a section on Patch and Corridor filtering. This part of the methodology seeks to filter out small areas or patches of a particular bushfire hazard i.e. patches of less than 1 Hectare in area or corridors less than 100 metres in width.

The result of this filtering mechanism on bushfire hazard mapping, is that for small areas of high bushfire hazard potential, for instance, surrounded by a larger or dominant area of Medium bushfire hazard, the small patch of high bushfire hazard can effectively be mapped as medium bushfire hazard as a fire within the High area will not reach its maximum rate of spread or intensity before it moves in or back into the area of lesser bushfire hazard. Accordingly, an area of medium or high bushfire hazard potential of less than one hectare surrounded by a large area of low bushfire hazard and more than 100 metres away from another area of bushfire hazard can effectively be mapped as low bushfire hazard.

The reasoning behind this is that a small patch of vegetation of less than one hectare in area or 100 metres in width is not large enough for a fire burning within that area to grow to be such that it presents a significant threat to life and property or be such that its fireline intensity would be greater than 4,000 kW/m which is the cut off between low and medium bushfire hazard intensity.

Therefore, applying *Leonard et al. (2014)* methodology to the subject site and surrounds indicates the patches to the north-east and within the west are less than 100 metres in width. Consequently, the corridor to be retained within the subject site and the corridor to the north east of the subject site are narrow and not connected to any significant areas of vegetation being separated by roads and bare ground. Therefore, the vegetation should be considered the same as the surrounding areas which are not mapped as hazards. The vegetation should be considered not a bushfire hazard area or low bushfire hazard.

We do note the area of contiguous vegetation over a number of properties to the west of the railway line. A review of these properties from Pub Lane and using the latest aerial photography indicates this area has very little understorey with no understorey and is open, disturbed woodland, has undergone some clearing for the railway line and for the powerline easement (see Photographic Plate 1).

Furthermore, should this area become involved in a fire and that fire was moving toward the subject site, firstly the fire would need to cross the railway line and the cleared areas on both sides before it involved the corridor of vegetation within the west of the subject site and the first point of contact would be a warehouse. The warehouse will involve storage facilities but will not contain hazardous materials and will be for general public storage. The storage will be managed by the tenant to ensure that no hazardous materials through the management of the facility.

¹ Leonard, J., Newnham, G., Opie, K., and Blanche, R. (2014) *A new methodology for state-wide mapping of bushfire prone areas in Queensland*. CSIRO, Australia.

Therefore it is our belief that, the subject site is greater than 50 metres from the edge of the vegetation within the multiple lots to the west of the railway line and that a vegetation fire that involved that vegetation would not be of significant intensity that it would place life and property within the subject site at any significant risk.

Conclusion

Based on our assessment of the bushfire hazards and risk to the proposed development within 43-77 Old Pub Lane, Greenbank we have concluded: -

1. The area of vegetation to be retained within the subject site is not of a size or width that it would be of significant threat to life and property within the site and as such should be effectively considered to be an area of low bushfire hazard now and into the future.
2. The vegetation to be retained within the subject site and within the property to the north is not of a width to present a significant threat to life and property within the subject site and as such should be considered to be areas of low bushfire hazard.
3. While the vegetated properties to the west of the railway line is disturbed and fractured and while it has an understorey and groundcover and it is sufficiently separated from the proposed development that it does not present a significant risk to life and property within the subject site. That it is not likely that, a fire run will commence on its western edge with the powerline easement and move toward the site and grow to an intensity that it would threaten the retained vegetation within the subject site.
4. The area between the subject site and the vegetation to the west appears to receive a level of management because of the presence of the railway line and powerline easement and as such even with its integration with the area to be retained within the subject site and its lack of connectivity with any significant area of hazardous vegetation it does not present a significant risk to life and property within the subject site.

Recommendations

While we have determined the site is not affected by an area of high or medium bushfire hazard as determined by site investigations and interpretation of the available bushfire hazard mapping over aerial imagery and using *Leonard et al (2014)*, nevertheless, we make the following recommendations with regard to ensure the site is generally fit for purpose with respect to vegetation and structural fires: -

- 1) Access and fire hydrants are constructed and located in accordance with the *Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots* (Queensland Fire and Emergency Service, 2015).
- 2) A suitably constructed fence is to be located along the western boundaries.
- 3) All fencing should be constructed with non-flammable materials or from timber material specified in Appendix F – Bushfire Resistant Timber of AS3959-2018.
- 4) Any landscaping with the development is to be restricted to low flammability species.

If you need any additional advice with regard to this advice, please do not hesitate to contact us at your convenience.

Kind regards,



Rob Friend
Director
Rob Friend & Associates

Photographic Plates



Photographic plate 1: Google Street View image of the vegetation to the west, showing the railway line and powerline easement.



Photographic plate 2 – Google street view image of the vegetation to the north east of the subject site. Note the lack of understorey and groundcover. There are isolated trees and shrubs, there is no consistent or significant cover.