

20 January 2016

ADDENDUM TO THE BUSHFIRE HAZARD ASSESSMENT REPORT FOR STAGE 11 OF SPRING MOUNTAIN ESTATE, GREENBANK - UPDATED BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT

This addendum to the Bushfire Hazard Management Plan prepared for Stage 11 of Spring Mountain Estate by Jensen Bowers Group dated 29 October 2014 provides an updated bushfire attack level (BAL) assessment, in accordance with AS3959-2009 – Construction of Buildings in Bushfire Prone Areas.

BACKGROUND

At the time the abovementioned report was prepared, it is noted the construction of Stage 11 had not yet commenced, with the only clearing having taken place at that time being within the road reserves. The report at that stage was based upon the clearing rationale as outlined by the Vegetation Clearing and Management Plan prepared by Saunders Havill Group. Pursuant to this document, vegetation located outside of respective building envelopes would be retained, which resulting in particular parcels of land retaining significant areas of bushland within their boundaries.

Subsequent to a site inspection conducted on 18 January 2016, Sub-Stage 11A of the development was completed in full with Sub-Stage 11B substantially completed. All clearing activity across both Sub-Stages had been completed. As observed on the site inspection, the clearing methodology that had been implemented on-site was considerably different to that upon which the original Bushfire Hazard Management Plan had been prepared. More clearing, particularly internal to individual allotments, has been carried out. From a bushfire safety perspective, this result represents an improvement upon that which was originally envisaged.

The following paragraphs provide relevant detail with regard to the bushfire hazard assessment as completed post-subdivision construction.

VEGETATION COMMUNITIES AND EFFECTIVE SLOPE ANALYSIS

The prevailing vegetation communities and effective slope remain unchanged from that identified in the original report. However, the extent of vegetation which is capable of supporting bushfire activity in some locations has been modified by the extent of clearing which has been undertaken.

In the first instance, the area of vegetation originally classified as Closed Scrub has been significantly modified in order to rehabilitate (including weed management), stabilise (erosion management) and formalise drainage for the creek located in this area, and to form access bridges across the waterway, servicing lots 1114 to 1119. These works have significantly changed the context of the vegetation in this location to the point where its ability to support any tangible level of bushfire activity is limited. The vegetation retained in this location is substantially fragmented by the road and driveway bridges such that connectivity to nearby vegetation is removed. The works undertaken within the creek itself also limit the ability for the regrowth of significant levels of vegetation. Whilst some regrowth can be expected, particularly with regard to understorey regrowth, it is not anticipated the fuel load in this exclusive area will increase to a level where it would present a significant fire risk. The (non-continuous) strip of vegetation in this location is less than 20m in width and is not within 20m of other classified vegetation and therefore constitutes low-threat vegetation in accordance with Section 2.2.3.2 of AS3959-2009.



Figure 1: Example of bridge crossing the waterway fronting lots 1114 to 1119, further fragmenting this narrow strip of vegetation

Elsewhere across Stage 11, vegetation originally identified for retention subject to the Vegetation Clearing and Management Plan within the boundaries of several allotments, has been cleared. This activity accounts for most of the changes to the BAL classifications across Stage 11, where clearing both within and outside of building envelopes has occurred. In many cases, this results in considerable separation distance between the building envelope and adjoining vegetation located on the far-side of fire trails which surround Stage 11. In terms of bushfire protection, separation distance remains a critical protection measure, especially from radiant heat exposure.

A small number of allotments continue to contain classified vegetation internal to the lot boundaries which remains consistent with the original assessment contained within the Bushfire Hazard Management Plan prepared by Jensen Bowers Group. To this end, the BAL classifications remain unchanged. Likewise, for those lots with building envelopes which remain within 5-10m of the rear or side allotment boundary, classifications remain unchanged.

With regard to lots 1108, 1109, 1119 and 1120 at the western edge of the subdivision, vegetation in the area of a rocky outcrop is retained, as originally envisaged though to a reduced extent. The original vegetation retention rationale indicated that vegetation would be retained across the entire rear boundary length of lot

1119. Instead, vegetation in this location was either sparse or has since been removed such that the extent of vegetation associated with the rocky outcrop is reduced in its extent compared with that which was originally envisaged. Each of the abovementioned lots continue to maintain an immediate interface with this small patch of vegetation and therefore, remain subject to the BAL specifications as identified on the revised Bushfire Management Plan (BMP), attached.



Figure 2: View to the north-east toward the southern rocky outcrop area from the fire trail access between lots 1105 and 1106

Notwithstanding the above, it is further noted the vegetation in this particular location is consistent with Woodland pursuant to Table 2.3 of AS3959-2009, rather than Open Forest as originally classified. There is very little in the way of ground or surface (shrub) layer, instead the understorey comprises either grass or rock, particularly on the southern slopes. With specific regard to a separate rock ledge occurring on lot 1107, the vegetation retained in this location is sparse with trees and comprises no understorey. Grass and shrubs are limited in extent by the rocky nature of the ground. Consistent with the other rocky outcrop to the north, this area is consistent with Woodland, rather than Open Forest pursuant to Table 2.3 of AS3959-2009. Refer to Figure 2.

The fire trails prescribed by the original Bushfire Hazard Assessment Report have been constructed, surrounding Stage 11. These trails must remain maintained in perpetuity either by the Council or local rural fire brigade, for access and vegetation management purposes. Access easements over some freehold

allotments exist, their purpose to enable frequent linkages to the constructed road network. It is important these easements are maintained and available for Council and rural fire brigade access on occasion.

UPDATED BUSHFIRE MANAGEMENT PLAN AND BAL ASSESSMENT

This addendum includes an updated Bushfire Management Plan (BMP), attached. This plan replaces that included within the original Bushfire Hazard Assessment Report Prepared by Jensen Bowers Group. Again, this addendum does not replace that original report, but provides additions post-subdivision construction detail. The bushfire management provisions identified at Section 7 of the original report remain entirely relevant and are altered by this addendum.

ADVICE FOR LANDOWNERS

As per the original Bushfire Hazard Management Plan, landowners and occupants are responsible for ensuring their own level of awareness and understanding with regard to bushfire risk and bushfire behaviour. This addendum and the original report are prepared for the purposes of development assessment and building construction. The risk mitigation measures adopted seek to reduce the level of exposure to buildings and occupants from bushfire risk. However, additional mitigation measures remain the responsibility of landowners. These include:

- Adopting a landscaping rationale which does not inadvertently introduce bushfire risk further within property boundaries
- Undertaking landscaping design so as to limit potential risk to any buildings
- Property maintenance to reduce fuel build up
- Appropriate building design to limit vulnerable elements exposed to radiant heat or ember attack
- Consideration of on-site static water supply, separate from the reticulated water network
- Awareness of adjoining fire trails, with an undertaking to notify the Council if any maintenance is required
- Community awareness and participation, ensuring neighbours are aware of bushfire risk
- Preparation of a household bushfire survival plan, as recommended by the Queensland Rural Fire Service
- Ensuring adequate home and contents insurance coverage is obtained and that it covers bushfire events.

In terms of building construction, it is strongly recommended that dwellings are located as far away as possible from any adjacent vegetation. Not only does this reduce building construction costs, it also reduces risk. Ideally, all property owners are strongly encouraged to site dwellings either outside of any risk areas or within BAL-12.5 or BAL-19 areas. Likewise, property owners are strongly discouraged from siting any buildings within BAL-40 or BAL-FZ areas.

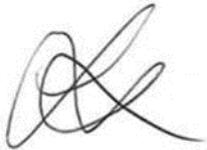
Importantly, unless a property is well prepared, it is always safer to leave the area well in advance of any particular fire threat on severe, extreme and catastrophic fire weather days. Defending a property is physically, mentally and emotionally challenging. To this end, self-evacuation ahead of any emergency is always recommended. You must not maintain a 'wait and see' approach or rely wholly on emergency services for advice or warnings to evacuate. Maintaining a household bushfire survival plan is of the utmost importance, as is being aware of the day-to-day fire danger rating for the region during annual fire seasons.

Whilst the provisions of this addendum and that of the original report seek to prevent the loss of property and reduce risk to life, bushfire behaviour varies across days and seasons as a function of day-to-day conditions. This results in significant difficulties in estimating more extreme bushfire events. These reports do not remove or resolve bushfire risk. The manner in which properties are maintained and the actions of landowners and occupants after construction has been completed is of vital importance, particularly with regard to landscaping

and general dwelling maintenance. Even if your property is not subject to any BAL specifications, it is recommended that relevant property mitigation measures identified in Section 7 of the Bushfire Hazard Assessment Report are considered.

The provisions of the attached Bushfire Hazard Assessment Report prepared by Jensen Bowers Group and the updated Bushfire Management Plan prepared by MWH Global are to be complied with, in full. Should there be any queries or additional information required, please do not hesitate to contact Laura Gannon on 07 3029 5006.

Yours sincerely

A handwritten signature in black ink, appearing to be 'L. Gannon', written in a cursive style.

Laura Gannon
Managing Consultant - Planning, Risk and Resilience
MWH Australia Pty Ltd

This document has been prepared for the benefit of PEET Limited. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person. This disclaimer shall apply notwithstanding that the document may be made available to other persons for an application for permission or approval to fulfil a legal requirement.

