Attachment 9

Preliminary Bushfire Constraints, prepared by Australian Bushfire Protection Planners Pty Ltd, September 2009

Our Reference B091068

EG Property Group
Level 4,
346 George Street,
Sydney
NSW 2000

ABPP
Australian Bushfire
Protection Planners Pty Ltd
ACN 083085474
Bushfire Mitigation Consultants

Attention: Jeremy Spinak

Re: Preliminary Bushfire Constraints – Jacaranda Ponds - Glossodia

Dear Jeremy,
I have reviewed Figure 3 - Constraints / Opportunities plan prepared by Travers Bushfire & Ecological for the Jacaranda Ponds development precinct, Spinks Road, Glossodia and provide the following preliminary advice on the potential bushfire constraints [Asset Protection Zones] to future residential development on the site. I have also listed, by comparison, defendable space requirements for non-residential development and the Asset Protection Zone requirements for *'Special Fire Protection Purpose Development'* on the site.

Background to Assessment:
The site inspection undertaken on the 25th August, in the company of Mr John Travers confirmed that the southern boundary to the site is formed by Currency Creek and that the vegetation in the creek corridor consists of River-flat Eucalyptus Forest to varying widths. The remainder of the site contains grassland vegetation which is grazed and numerous pockets of Cumberland Plain Woodland, much of which has a grazed understorey – refer to Figure 2 – Vegetation Condition Travers Bushfire & Ecology.

The topography of the land within the site rises gently from the flood plain of Currency Creek, which varies between RL 32 metres to RL 42 metres, to a ridgeline that runs between 300 metres and 150 metres to the south of the northern boundary of the site. This ridgeline rises from RL 76 metres at the knoll to the southwest of James Street to RL 80 at the western boundary of the site.

From the knoll southwest of James Street, the ridgeline splits into two ridges that fall to the east to RL 42 metres – refer to Figure 1 below.

Figure 1 – Topographic Map of Development Site.

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The northern face of the ridgeline falls to the north, forming a series of watercourses and over-land flow paths that discharge to the north, that are separated by low spur-lines which fall to the north. The gradient of this land also falls to the north at between 6 – 10 degrees whilst the southern face of the ridgeline falls to the south at 8 – 9 degrees with steeper gradients in the gully lines.

The Figure 3 Constraints/Opportunities Plan prepared by Travers Bushfire & Ecology provides a strategy for the retention of the EEC vegetation within the site.

In summary this strategy retains and enhances a 50 metre wide corridor of River-flat Forest along the northern side of Currency Creek; a 70 metre to 116 metre wide corridor of Cumberland Plan Woodland along the northern ridgeline and a 70 metre wide corridor of Cumberland Plain Woodland along the western boundary with a 50 metre wide corridor of Cumberland Plain Woodland along the eastern boundary. The strategy also retains six of the larger isolated pockets of Cumberland Plain Woodland on the southern face of the northern ridgeline and a Waterbird Reserve to the two large dams on the site.

Bushfire Prone Land Map:

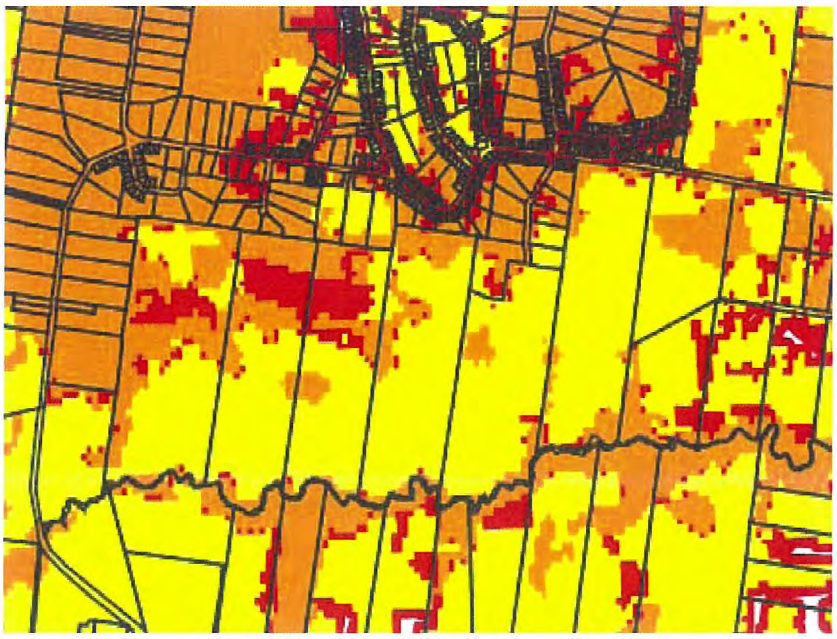
Figure 2, below is an extract of the Hawkesbury Bushfire Prone Land Map that records most of the vegetation on the site is Category 2 [Shrub-land; Open Woodland & Grassland] Bushfire Prone Vegetation. This is represented by the yellow on the map. The Cumberland Plain Woodland on the ridgeline and in the pockets has been mapped as Category 1 [Forest & Woodland] Bushfire Prone Vegetation and the River Flat Forest along Currency Creek is also mapped as Category 1 [Forest & Woodland] Bushfire Prone Vegetation.

The red shown on the map is the buffer zone to the Bushfire Prone Vegetation. The whole of the site is therefore impacted by the Bushfire Prone Land Map and the requirements of Section 79BA & 91 of the *Environmental Planning & Assessment Act 1979* and Section 100B of the *Rural Fires Act 1997* apply to future development on the site.

The increased width of the vegetation along Currency Creek will modify the extent of the Category 1 [Forest/Woodland] Bushfire Prone Vegetation to the north of the creek line.

The recommended retention of the Cumberland Plan Woodland [Category 1 Bushfire Prone Vegetation] as shown on Figure 3 – Constraints/Opportunities, will also modify the extent of Category 1 vegetation along the western boundary of the site and fill in the 'gaps' along the northern side of the ridgeline. The mapped area of Category 1 Bushfire Prone Vegetation on the southern side of the ridgeline will also remain bushfire prone as the recommended pockets of Cumberland Plain Woodland are more than one [1] hectare in area and therefore deemed to be bushfire prone vegetation.

Figure 2 – Extract of the Hawkesbury Bushfire Prone Land Map.



Legend: Yellow – Category 2 Bushfire Prone Vegetation [Open Woodland/Grassland;
Orange – Category 1 Bushfire Prone Vegetation [Forest & Grassy Woodland];
Red – Buffer Zone to Bushfire Prone Vegetation

Asset Protection Zones [Refer to Appendix A]:

1). Development adjoining Currency Creek:

The recommendation is to revegetate a 50 metre wide riparian corridor along the northern side of Currency Creek. This corridor will increase the total width of vegetation to more than 50 metres, especially if a similar width is provided to the south as part of future development.

The Asset Protection Zone requirements are:

- Residential Development – 25 metres for Level 3 construction of buildings, measured from northern edge of unmanaged vegetation;
- Special Fire Protection Purpose Development – 60 metres, measured from the northern edge of unmanaged vegetation;
- Class 5 – 10 buildings – Defendable Space of > 25 metres.

2). Development to the south of the Cumberland Plain Woodland on the northern side of the ridgeline:

The gradient of this land varies between 6 – 10 downslope to the north and would have to be confirmed from site by survey. The Asset Protection Zone requirements are:

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- Residential Development – 20 metres for Level 3 construction of buildings, measured from southern edge of unmanaged vegetation;

- Special Fire Protection Purpose Development – 60 metres, measured from the southern edge of unmanaged vegetation;

- Class 5 – 10 buildings – Defendable Space of > 20 metres.

3). Development to the east of the Cumberland Plain Woodland corridor along the western boundary of the site:

The gradient of the land within this corridor land falls to the southwest between 6 – 10 downslope and would have to be confirmed from site by survey. The Asset Protection Zone requirements are:

- Residential Development – 20 metres for Level 3 construction of buildings, measured from southern edge of unmanaged vegetation;

- Special Fire Protection Purpose Development – 60 metres, measured from the southern edge of unmanaged vegetation;

- Class 5 – 10 buildings – Defendable Space of > 20 metres.

4). Development adjoining the separate pockets of Cumberland Plain Woodland:

The gradient of the land on which these pockets are located form an upslope aspect to development below the pockets and a downslope for development which is located above the pockets. The Asset Protection Zone will therefore vary depending on the siting of the development, and development type:

Downslope – Development above vegetation – Slope 10 degrees [to be confirmed by survey]

- Residential Development – 20 metres for Level 3 construction of buildings, measured from northern edge of unmanaged vegetation;

- Special Fire Protection Purpose Development – 60 metres, measured from the northern edge of unmanaged vegetation;

- Class 5 – 10 buildings – Defendable Space of > 20 metres.

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Upslope – Development below vegetation – Slope 10 degrees [to be confirmed by survey]

- Residential Development – 10 metres for Level 3 construction of buildings, measured from northern edge of unmanaged vegetation;

- Special Fire Protection Purpose Development – 40 metres, measured from the northern edge of unmanaged vegetation;

- Class 5 – 10 buildings – Defendable Space of > 20 metres.

5). Development adjoining the 50 metre wide corridor of Cumberland Plain Woodland to the east of the prolongation of James Street.

This corridor is not more than 50 metres in width and therefore, for the purpose of determining requisite widths of Asset Protection Zones the NSW Rural Fire Service permits the vegetation classification to the down-graded to 'Rainforest', rather than 'woodland'. The following Asset Protection Zones would be required in this case, based on a 10 degree downslope gradient to the development. Site survey would need to confirm gradient of the land:

- Residential Development – 10/15 metres for Level 3 construction of buildings, measured from northern edge of unmanaged vegetation;

- Special Fire Protection Purpose Development – 40/50 metres, measured from the northern edge of unmanaged vegetation;

- Class 5 – 10 buildings – Defendable Space of > 15 metres.

If you require any further information please contact the undersigned.

Yours faithfully,

Graham Swain.
Managing Director
Australian Bushfire Protection Planners Pty Limited
15.9.2009

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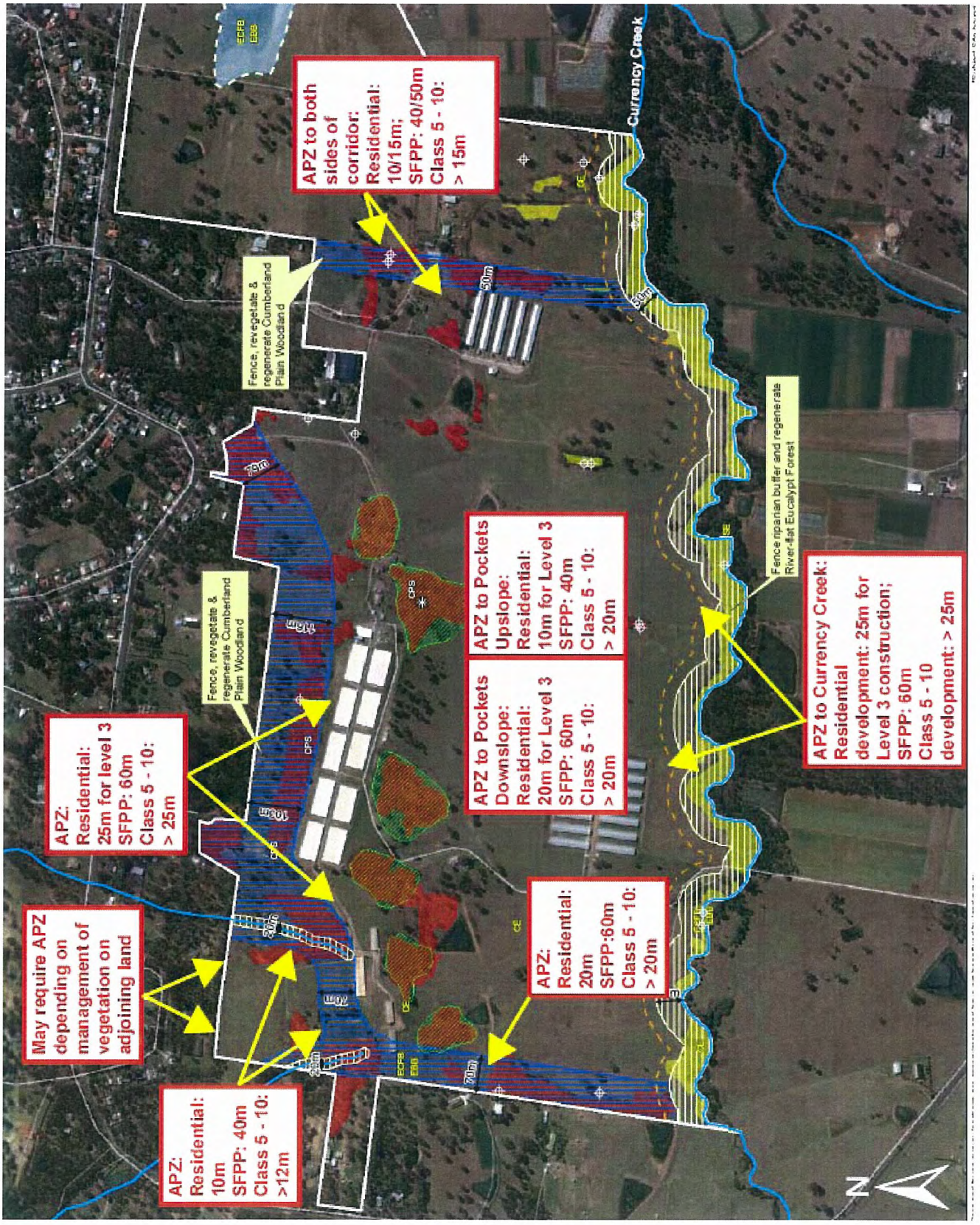
Attachment A – Plan of preliminary Asset Protection Zones



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