

Our Ref: A11001:NvD/JT

27 January 2011

The President
Catherine Hill Bay Progress Association

Attention: Ms Sue Whyte

via email: suewhyte.1980@bigpond.com



Dear Sue

**Re: Review of Bushfire Risk – Residential subdivision
at Catherine Hill Bay by Coal & Allied and Rose Group**

Please find attached my opinion of the bushfire risk posed to the proposed 556 lot residential subdivision at Catherine Hill Bay together with my review of the Bushfire Hazard Report by *Barry Eadie Consulting Pty Ltd.*

If you have any queries or require further information, please do not hesitate to contact our office on (02) 4340 5331.

Yours faithfully

A handwritten signature in black ink, appearing to read "John Travers".

John Travers
Managing Director
Travers bushfire & ecology



**Review of the 556 lot residential subdivision
at Catherine Hill Bay by Coal & Allied and Rose Group
on behalf of Catherine Hill Bay Progress Association**

Travers bushfire & ecology has been requested by the *Catherine Hill Bay Progress Association* to undertake a review of the *Coal and Allied and Rose Group* subdivision submission.

The current application is for a residential subdivision to create up to 556 residential lots, bulk earthworks and infrastructure at Montefiore St, adjacent to the historic township of Catherine Hill Bay. The development area adjoins large areas of unmanaged native vegetation.

The bushfire assessment for the project is not required (under Section 3A Major Projects) to be formally referred to the *NSW Rural Fire Service* for the provision of a *bushfire safety authority*. However, a Section 3A assessment does require that the RFS be consulted and that any development comply with *Planning for Bushfire Protection, 2006* (PBP, 2006).

I have reviewed the bushfire report undertaken by *Barry Eadie Consulting Pty Ltd* which is provided as Appendix J to the Environmental Assessment Report. This review has identified a number of inadequacies of the assessment in relation to the provision of adequate asset protection zones (APZs), access standards, water supply, emergency management arrangements and landscaping. These inadequacies are listed below.

APZs and Landscaping

- The report does not provide any mapping, sketches or diagrams to validate the locations of vegetation formations. The report does not attempt to accurately classify the vegetation to the south of Stages 2, 4 & 5. The report states that 'due to uncertainty it has been classified as Tall Heath consistent with the surrounding vegetation'. An accurate classification of this large parcel of vegetation is needed to determine the appropriate width of the APZ to ensure the safety of residents and their homes. It is not acceptable to determine asset protection zones based on any level of uncertainty.
- Based on the assumption that the supplied slopes and vegetation categories are correct then my calculations consider that the distances as recommended for the asset protection zones in the table within Section 4.4 are correct. There is however an error in the distances provided for BAL 19 & BAL 12.5 (row 6). These distances should read at 22 metres (not 19 metres) and 31 metres (not 27 metres). It appears that the assessment has misread the BAL Table 2.4.2 of AS3959 (2009). We can advise that the appropriate APZ distances should be drawn from using the slope *0-5 degrees* and using a vegetative category of *Scrub* (whilst recognizing the Tall Heath comparison with Appendix 2 of PBP 2006).

- The table within Section 4.4 of the report and the descriptions of the vegetation within Section 4.2 highlight that Stages 6 & 7 are separated by 'areas of vegetation' and 'Open Forest between the two sections'. (See figure below which was taken from the landscape plan). The table indicates that an APZ of 25 metres is required between the lots within Stages 6 & 7 and the bushland corridor. The accompanying APZ map to the bushfire report however does not show this APZ and the APZ is also not shown on the landscape plan. The landscape plan provides a visual depiction of a managed landscape with planted trees. In my opinion this would not require an APZ to be applied as the design is a default APZ. This inconsistency should be corrected and defined as either an unmanaged bushland corridor that requires an APZ or the land is a managed landscape that does not require an APZ.



Figure 1 – Zoom in of Stages 6 & 7 (Source; Landscape Plan)

- The bushfire report does not include an environmental assessment, Aboriginal heritage assessment or identify endangered species in the area as normally required in subdivision referral to the RFS. Further assessment needs to be undertaken to determine the effect that the APZs will have on any environmental / ecological constraints e.g. the identified *Tetratheca juncea* on site.
- The bushfire report does not provide comprehensive land management advice or suggested use of specialist bushfire expertise such that one could manage the landscape after development consent has been issued. Indeed it does not provide advice to the client on where information can be found on the standards required for the management of an APZ. Should this development be approved the consent

authority would be without the knowledge of a *Fuel management plan* being prepared.

Access Standards and Emergency Management Arrangements

The report limits its assessment on road design to one sentence which outlines the adequacy of Montefiore Street in providing access for firefighting services.

Planning for Bushfire Protection (2006) provides at least seventeen (17) acceptable specifications for public roads. The public roads not only include the existing Montefiore Street but also the proposed internal road network of the subdivision.

The proposed road layout for the subdivision does not meet all the acceptable solutions for public roads. For example:

- The subdivision does not provide perimeter roads on all boundaries. For example, perimeter roads are not provided to the east of Stages 1 & 3, west of Stages 6 & 7 or north of Stages 6 & 7 – see Figure 2 and Figure 3 below.



*Figure 2 – Stage 1 and Stage 3.
(Source; Landscape Plan)*



Figure 3 – Stage 6 and Stage 7.
(Source; Landscape Plan)

This lack of perimeter protection not only reduces the separation provided between the vegetation and the urban interface, placing residents at an increased risk, but also limits the accessibility of fire fighters to the bushfire front. This affects approximately 90 lots which provide direct frontage to this bushfire prone vegetation.

A fundamental tenant of PBP 2006 is the need for perimeter road access. The bushfire report does not provide reasons for this omission and why the subdivision design should deviate from PBP 2006.

In essence this design places all fuel management within the individual allotments and does not allow effective management of the hazardous fuels. Without this each individual allotment can-not work to protect their neighbor and or vice versa.

The Environmental Assessment Report (*ADW Johnson*) suggests that the provision of a perimeter road would compromise the ecological integrity of the site whilst the bushfire report states that a perimeter road would increase accessibility of the public to the conservation reserve. However, it is not explained within either report why the provision of a perimeter road would be inconsistent with biodiversity conservation objectives.

The perimeter road requirements of PBP 2006 can be a fire trail or in some cases a pedestrian pathway. In this instance the residential dwellings are not community title and as a result they are directly affected by unmanaged lands and therefore no dispensation of a perimeter road should be considered. The RFS must be requested to comment in this matter and the Department of Planning should seek the full

involvement of the RFS on this important issue and resolve the subdivision design and fuel management.

- The only perimeter road provided runs parallel to the southern boundary of Stages 2, 4 & 5 and has a length of approximately 1 km. *Planning for Bushfire Protection* states, within their acceptable solutions for public roads, that *'the perimeter road is linked to the internal road system at an interval of no greater than 500 metres in urban areas'*. The reason for this is to provide residents and fire fighters with an alternate egress away from the direct threat of bushfire and to ensure the safety of fire fighters and residents. This 1 km long perimeter road will compromise both the safety of residents and fire fighters. It is also not reasonable to assume that this landscape will be an urban area. The subdivision will be urban but within a much greater 'unmanaged landscape'. This requires considerable expertise and input into effective fire management planning. This has not been undertaken satisfactorily on this project.
- There are no APZs located on either side of the main access road (Montefiore Street). This road is approximately 1km long and provides the shortest route to the Pacific Highway whilst traversing through extensive bushland vegetation. This access requires re-planning so that this road is safe in the event of a fire and evacuation can occur without difficulty. The ongoing maintenance of an APZ along the road would also need to be considered e.g slashing or permanently removing fuels.

The only alternative to this main access is to the north of the site via a 3.5 km road through Catherine Hill Bay which also traverses extensive bushland vegetation. The number of potential residents (within the 556 lots) would put further strain on these existing access roads during emergency events.

- The above deficiencies in terms of access requirements will put major strain on any required evacuation measures. As there is no evacuation plan submitted with the application these matters cannot be considered. In view of the length of roads and the proposal not to provide perimeter roads which act as the default APZ then evacuation planning must be undertaken prior to any approval.
- The report does not deal with the existing volunteer nature of the local bushfire brigades or the fact that the nearest permanent NSW Fire Brigade station is located 18 kilometres away at Toukley. The Swansea station of the NSW Fire Brigades is the nearest NSW Fire Brigade station but is not permanently manned. The Catherine Hill Bay and the Nords Wharf stations are manned by community volunteers. There is a new station located within the Murrays Beach development which is manned by community volunteers from Nords Wharf brigade. The bushfire study must provide an assessment of the need for additional fire protection equipment (tankers) and / or additions to the existing infrastructure (buildings and fire fighters).
- There is no indication of the presence of fire trails within the adjoining conservation lands. Fire trails are an important element in the bushfire protection of the site and have been omitted from discussion within the bushfire study. In view of Section 66 of the Rural Fires Act the land manager must also have reasonable access to their lands to manage their hazardous fuels for the protection of the new incoming urban community with families and children.

Water Supply

Town reticulated water supply will be available to the development and the bushfire report by assumes that this supply is adequate. Due to the size of the subdivision and the extreme bushfire threat posed to the site, there will be increased pressure on water resources during a bushfire event. This can lead to low water pressure as well as exhausting water supply both for the proposed subdivision and the adjoining heritage village of Catherine Hill Bay.

Conclusion

In respect of the proposed 556 lot subdivision at Catherine Hill Bay the Bushfire Hazard Assessment Report does not comply with *Planning for Bushfire Protection 2006* in terms of;

- Road access
- Perimeter roads
- Evacuation and potentially
- APZ design.

Yours faithfully

A handwritten signature in black ink, appearing to read 'John Travers', with a large loop at the end of the name.

John Travers (*B. App.Sc. / Ass. Dip./ Grad Dip.*)
Managing Director
Travers bushfire & ecology