



Our Ref:7018F3:JT/ec

Tuesday, 5 February 2008

Ms Sue Whyte  
President  
Catherine Hill Bay Progress Association  
Via Email

Attention: Ms Sue Whyte

Dear Sue

**Re: REVIEW OF ECOLOGICAL & BUSHFIRE – Middle Camp (Catherine Hill Bay)**

Please find attached my opinion of the development application. I trust that the information meets your requirements.

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

Yours faithfully

John Travers  
Director  
**Travers environmental**



## **REVIEW OF ECOLOGICAL & BUSHFIRE ASSESSMENT PREPARED FOR 3A SUBMISSION FOR DEVELOPMENT OF LANDS AT MIDDLE CAMP (CATHERINE HILL BAY)**

I have been requested by the *Catherine Hill Bay Progress Association* to undertake a review of the *Coal & Allied Operation Pty Ltd 3A Application* for the proposed development of land at Middle Camp Catherine Hill Bay.

The applicant has prepared an application within the Middle Camp lands involving a number of dwellings and the dedication of Coal & Allied land holdings for conservation corridors within the surrounding locality.

The proposal for this area involves development of 300 residential dwellings on 50ha with the balance of the lands (530ha) being dedicated to the NSW Government for conservation purposes.

### ***Ecological Matters***

*Harpers Somers O'Sullivan* has now undertaken surveys and assessment of the proposed development as considered by the concept plan.

This has been a much more comprehensive assessment than those undertaken previously within this site; however there are a number of deficiencies both in the level of ecological survey undertaken on the site, and the interpretation of the survey results that in the end do not provide sufficient ecological analysis given the depth of the documentation provided.

The documentation provides copious survey data for consideration but does not provide a level of detail or specific discussion on the possible loss of habitat values within each individual development estate.

Most notably is the lack of clear expression to what the development actually is within Section 1.3. It portrays more about the conceptual conservation planning rather than the development itself. This then transcends into the documentation whereby there is little information written about ecological and or environmental impact upon this or that species. For example there is no discussion or assessment on the federally listed marine and migratory species, White Bellied Sea Eagle *Haliaeetus leucogaster*. Migratory and marine listed species are matters of National Environmental Significance and the impact of the proposed action is required to be assessed in accordance with the EPBC Act Significant Impact Guidelines for NES matters.

There is little argument or persuasion on why the lack of survey for orchids or other species such as *Pultenaea maritima sub sp maritima* or *Rutidosis heterogama* should

be acceptable other than that there is more habitat being protected which is regarded as being acceptable.

Given the strategic location of this development area being between the coastal Munmorah State Recreation Area to the south, the hinterland / lake front Lake Macquarie State Conservation Area to the south west and Wallarah National Park to the north, there should be ecological information provided to advise the reader of the importance of this central location.

Targeted threatened species searches have not been undertaken within the conservation lands for several threatened flora species including *Diuris praecox*, *Cryptostylis hunteriana* and other cryptic orchids. Whilst the survey of the development lands is required for legislative reasons there is a lack of rigor presented in the ecological report to understand the conservation landscape that is proposed to be managed in perpetuity as a conservation precinct. In other words what occurs in the conservation land?

The documentation continually reiterates the presence of potential habitat in the conservation lands but does not provide an expert assessment of that landscape to allow effective decisions to be made.

The report states that several of the threatened orchids, which have potential habitat, could not be comprehensively surveyed to provide information on whether they occur within the site (p.38) yet they went onto advise that these threatened orchids cannot be discounted as occurring within the site.

If this is the case, the proposal cannot guarantee a no net impact in accordance with the DECC's Guidelines for Threatened Species Assessment which were to be complied with under the direction of the DGR's Key Assessment Requirements for Flora and Fauna Impact.

This assessment also did not survey *Cryptostylis hunteriana* within its flowering period. This is not an acceptable conclusion considering that the report recognises that this species has potential habitat within the northern portions of the development estate. If this species is not surveyed within its flowering period across the whole site, including conservation lands, the statement that this species is adequately protected within suitable habitat in the conservation lands cannot be justified.

On more specific assessment matters it is hard to quantify the level of both flora and fauna survey undertaken on this site, for example, it appears that the fauna survey is lacking within the development estates. Although it is recognised that this area is predominantly cleared and therefore provides limited habitat, it can still be utilised as foraging habitat for bats and owls and therefore needs to be adequately surveyed.

Without adequate depiction of the survey locations and detail on the hours spent on each survey technique, it is hard to justify that the level of survey undertaken meets the requirements of the required methodology (e.g. DGR's) for this application or a valued expert judgement that such works would not be required in this particular circumstance.

A threatened species and community assessment has been undertaken. Despite assessing the chance of occurrence for several threatened herpetofauna as being either moderate to high or moderate, the herpetofauna survey has been undertaken whilst the majority of local frog species are considered torpid. Given the proximity of

the site to local drainage lines and suitable reptile habitats, it is considered that this level of survey is inadequate and cannot be relied upon without further justification.

Nocturnal bird survey is recognised within the report as being less than that required by the survey guidelines.

In summary the ecological report, whilst having a perceived depth to its documented structure, did not provide a depth of understanding and in particular provide simple statements about the ecology of the area - for example, the importance of the species, populations or communities and whether the retained conservation lands would adequately compensate for the loss of the development lands.

One could argue that there has been sufficient survey, sufficient discussion and possibly sufficient analysis by the 10 authors / contributors to the ecological report but it is the lack of cohesion in the report that draws one to argue that there remains deficiencies that should be resolved.

This report does not state the type of natural resources, or the specific location of such resources, that would be lost by this development. It is not enough for the project ecologists to state that this project will have five important biodiversity outcomes or to provide statements on the presence of key varying habitat resources on site. What is required is a simple series of statements that those habitat resources, those species or those communities would not be significantly affected by the proposed development or if they are then significance should be apportioned.

Indeed what is important for a concept plan prepared for a Section 3A assessment on coastal lands is whether the plan demonstrates compliance with the requirements of the Director-General. At this stage the plan does not.

For example;

1. Table 3.3 Survey Dates, Type and Prevailing Conditions does not indicate the number of man hours spent each day on each survey type. The supply of sunset and sunrise times does little to add value to this survey effort table.
2. Figure 3-1 Fauna Survey Locations only shows the trapping transects undertaken, however in Section 3.2.7 the report states that various fauna survey techniques were undertaken such as targeted Grey-headed Flying-fox searches and bat echolocation call recordings using an Anabat II bat Detector, none of which have been depicted on mapping or verified in GPS locations or other more simpler explanations.
3. The surveys completed to date do not cover the entire site area of the proposal. For example, the fauna survey appears to be lacking in the proposed development lands resulting in a potential bias of results.
4. The supporting mapping does not adequately identify the survey effort undertaken, particularly fauna survey and threatened flora species targeted survey. There is no figure showing the location of fauna survey undertaken in the proposed development lands.
5. The survey completed within the site does not address the presence of threatened species and potential habitat for a wide range of species including; *Cryptostylis hunteriana*, Wallum Froglet and Masked Owl.

6. None of the surveys completed over the sites comprehensively assess the presence or absence of the cryptic threatened orchid species with recognised potential habitat within the subject site. To quantitatively assess these species updated survey must be undertaken within the recognised flowering periods for each of these species.
7. General flora surveys were undertaken in Winter (July/August) with only targeted surveys for threatened species occurring between August and October 2007; and not extending these surveys to cover the normal flowering periods of August to March.
8. Fauna surveys were undertaken in Winter (June, July, August).
9. There has been no supporting data or adequate commentary regarding the need to maintain or improve biodiversity values of the site; or more particularly the requirement to provide adequate responses to the 'key threshold assessment criteria' (S6.1 p104) as required by the DG's. There has been no subsequent commentary on impact avoidance or appropriate offsetting.
10. There has been no survey of hollow dependent fauna on the site and or mapping of such hollows.
11. There has been no commentary regarding the way the development forms a north-south coastal ecological barrier.
12. There is no supporting information regarding the hinterland riparian environments or the estuarine links (Middle Camp Gully) with the ocean and how they may be affected by increased development density.

In essence, the revised project does not provide sufficient ecological conclusions to determine if this development is suitable for this sensitive coastal landscape.

### ***Bushfire Matters***

I have reviewed the Bushfire Threat Assessment undertaken by *Harpers Somers O'Sullivan*. In my previous assessment I found that there was no mapping, sketches or diagrams provided to validate the locations of where slope and or vegetation was assessed within the body of the reports for Catherine Hill Bay. The latest assessment has now provided this information.

There are minor typographical errors within APZ tables 4-1, 4-2 and 4-3 for Development Estates A, B and C respectively. These errors are:

- Table 4-1 – Development Estate A - The eastern aspect recommends an APZ of 10m in column 4 but only advises of a 7m IPA in column 5.
- Table 4-2 – Development Estate B - One of the southern aspects requires an APZ of 10m in column 4 but advises of a 9m IPA and 5m OPA in column 5. The latter adds up to 14 metres.
- Table 4-3 – Development Estate C - The southern aspect requires an APZ of 16m in column 4 but advises of a 9m IPA and 5m OPA in column 5. The latter adds up to 14 metres.

There are also errors of interpretation when one reviews the Asset Protection Zone Development Estate figures (Figure 4-1 to 4-4) against Figure 1-4 of the Ecological Assessment Report. The figures show different Development Estate boundaries between each report, particularly Development Estate C which extends further to the west in Figure 4-3 of the bushfire report than the boundary depicted in the ecology figure.

There is no discussion in regards to the management of the three parks proposed within Development Estate B; it is unclear as to whether vegetation retention / rehabilitation is proposed within these areas. There is also no discussion in regards to the management of tree canopy vegetation located within 5 metres of a dwelling.

The report does not refer to the adjoining conservation area and the need for all bushfire protection measures to be complimentary. There is no indication of the presence of fire trails within the 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. There is no supporting information regarding varying landscapes that need management e.g. riparian, aquatic or terrestrial.

The attached fuel management plan does not provide clarity in its management approach. The plan gathers a range of rules and guidelines from other risk planning or prescriptive burning documents and fails to create what should be a well thought out approach to managing this particular landscape. The plan does not reflect what the ecology report was suggesting in terms of sensitive landscapes. As such, this plan should be fully rewritten by a competent practitioner in the field.

Yours faithfully

A handwritten signature in black ink, appearing to read 'John Travers', with a stylized, looping initial 'J'.

John Travers (B.ASc / Ass Dip)  
Managing Director  
**Travers environmental**

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