

Your reference : MP10\_0190  
Our reference : DOC11/9996  
Contact : Marnie Stewart 9995 6861

Mr Daniel Cavallo  
Metropolitan and Regional Projects North  
Department of Planning  
GPO Box 39  
SYDNEY NSW 2001

Attention: Ben Eveleigh

Dear Mr Cavallo

**Re: Exhibition of Environmental Assessment for Wet 'n' Wild Sydney, Reservoir Road, Prospect (MP10\_0190)**

I refer to your letter received by the Department of Environment, Climate Change and Water (DECCW) on 22 February 2011 requesting comment on the Environmental Assessment for the proposed new Wet 'n' Wild Sydney, Reservoir Road, Prospect (MP10\_0190).

DECCW has reviewed the relevant documentation and provides detailed comments on the proposal in Attachment 1. In summary, the Environmental Assessment does not identify that the subject site is adjacent to the Prospect Nature Reserve and the EA has not considered the potential impacts of the proposed development on the conservation values of the reserve. In addition, the EA has not addressed the relevant provisions in *State Environmental Planning Policy (SEPP) (Western Sydney Parklands) 2009* relating to the nature reserve. DECCW has also raised significant concerns with regard to biodiversity aspects of the proposal.

If you have any queries regarding this matter please contact Marnie Stewart, Conservation Planning Officer, on 9995 6861.

Yours sincerely

*G Howard 29/3/11*

**GISELLE HOWARD**  
Director, Metropolitan Branch  
Environment Protection and Regulation

The Department of Environment and Climate Change is now known as the Department of Environment, Climate Change and Water







**ATTACHMENT 1 – DECCW comments on the Environmental Assessment for the proposed new Wet 'n' Wild Sydney MP10\_0190.**

**1. State Environmental Planning Policy (SEPP) (Western Sydney Parklands) 2009**

Clause 14 in SEPP (Western Sydney Parklands) 2009 states:

**14 Development in areas near nature reserves or environmental conservation areas**

- (1) *This clause applies to development on land in the Western Parklands that is in, or adjoins:*
  - (a) *a nature reserve (within the meaning of the National Parks and Wildlife Act 1974), or*
  - (b) *an environmental conservation area shown on the Environmental Conservation Areas Map.*
- (2) *Development consent must not be granted to development on land to which this clause applies, unless the consent authority has considered the following:*
  - (a) *whether the development is compatible with and does not detract from the values of the nature reserve or environmental conservation area,*
  - (b) *any management plans applicable to the nature reserve or environmental conservation area,*
  - (c) *whether the development has been designed and sited to minimise visual intrusion when viewed from vantage points in the nature reserve or environmental conservation area.*

In section 4.1.2, the Environmental Assessment (EA) states that "the site is not near any nature reserve". Given that Prospect Nature Reserve is located immediately to the south of the site, it is considered that the EA has not addressed the matters for consideration in clause 14 in the SEPP.

**2. Impacts on DECCW estate - Prospect Nature Reserve**

The EA does not identify that the subject site adjoins Prospect Nature Reserve, which is a highly significant site at the local and regional level. It contains one of the largest reserved remnants of Cumberland Plain Woodland (CPW), and provides habitat for a number of significant flora and fauna populations, including a roosting site for Eastern Bentwing-bats, and known populations of the Eastern False Pipistrelle, Large-footed Fishing Bat, Eastern Freetail bat and the Grey-headed Flying Fox. The vegetation on site contains one of the most diverse examples of ground cover species anywhere on the Cumberland Plain. The vegetation also contains winter flowering species, which are an important foraging resource for species such as the critically endangered Regent Honeyeater and the endangered Swift Parrot.

The reserve is also gazetted as a Special Area under the *Sydney Water Catchment Management Act 1998* (SWCM Act) and listed as Schedule 1 under the *Sydney Water Catchment Management Regulation 2008*. As a Special Area, Prospect Nature Reserve is managed in accordance with the Special Areas Strategic Plan of Management (SASPOM) (SCA & DEC 2007) and is subject to access and land use restrictions under the SWCM Regulation 2008. Special Areas protect the water supply by acting as a buffer zone to help stop nutrients and other substances that could affect the quality of water entering the storages.

DECCW's main concern is to ensure that the development has no adverse effect on the natural and cultural values of the adjoining nature reserve. In order to assist DOP in its assessment of the proposal, a copy of DECCW's *Guidelines for developments adjoining land and water managed by the DECCW* is attached which provide detailed advice on DECCW requirements and issues which should be addressed.

In addition, the following specific comments are provided below in regard to potential impacts upon the nature reserve.



## Fauna

The EA and Biodiversity Impact Assessment (BIA) do not adequately assess the potential impacts of the proposal on the fauna of Prospect Nature Reserve. The significantly higher levels of noise and light from operation of the park are likely to have an effect on fauna within the nature reserve, particularly bird and bat species, including threatened bat species. As discussed above, Clause 14 in the SEPP (Western Sydney Parklands) 2009 (as stated in section 4.1.2 of the EA) includes that for development near nature reserves, that 'development consent must not be granted, unless the consent authority has considered... whether the development is compatible with and does not detract from the values of the nature reserve'.

## Runoff, weeds and edge effects

As the slope on Reservoir Road generally falls toward the reserve, there will likely be increased water runoff into the reserve which may also lead to increased weed management issues. In order to minimise impacts on the natural and catchment values of the reserve, mitigation measures must be incorporated into the proposal, including measures to divert water away from the nature reserve and erosion and sediment controls, especially during the construction phase.

## **3. Biodiversity**

### Ecological values of site

The BIA states that the site contains remnants of CPW. The EA states that CPW is listed as endangered at the state level and threatened at the Federal level. This is incorrect, as CPW is listed under both state and Federal legislation as a critically endangered ecological community (CEEC) (which has been acknowledged in the BIA).

The BIA states that the CPW remnants on site are degraded and have been subject to a number of disturbances. However, the BIA also states that 50 native species (including a number of tree, shrub, herb and grass species) have been recorded on site. Such species diversity suggests that the remnants on site are quite resilient and are of at least moderate conservation value.

The BIA also recorded two threatened microbat species on site, those being the Eastern False Pipistrelle (*Falsistrellus tesmaniensis*) and the Eastern Bentwing-bat (*Miniopterus schreibersii oceanensis*).

The 'Native Vegetation of the Sydney Metropolitan Catchment Management Authority Area (draft)' report (DECCW 2009) has mapped the vegetation surrounding the dam in the centre of the site as a remnant of Freshwater Wetlands of the Coastal Floodplains endangered ecological community (EEC). The BIA has mapped the dam as part of the 'exotic/disturbed grass/pastureland' zone, i.e. it has not been mapped as an EEC. Given some characteristic species of Freshwater Wetlands of Coastal Floodplains EEC, such as *Juncus* sp. and *Persicaria* sp, have been recorded within this 'exotics' zone, DECCW considers that the presence of a Freshwater Wetland EEC on site should be further investigated (or an assessment should be provided justifying that the area does not meet the definition of the EEC).

### Impacts on ecological values on site

The BIA does not adequately assess the impact of the proposal in the following areas:

- the proposed cut and fill required to create the wetland and water reuse area in the north of the site, and its potential impacts on the water table and the hydrological regime of the CPW remnant immediately adjacent to it;



- protection of native vegetation during the construction phase including safeguards against adjoining development, trampling and soil compaction, rubbish dumping and erosion.
- the potential impact on the Green and Golden Bell Frog (GGBF). Although this species was not recorded on site DECCW considers there is some likelihood that the GGBF occurs on site, given the species has been recorded in Prospect Nature Reserve, the amphibian surveys on site were limited, and the habitat for the species, as described in Appendix A of the BIA, appears to occur on site (i.e. permanent water body with fringing vegetation adjacent to open grassed areas); and
- Appendix D of the BIA provides an assessment of the impacts on CPW and threatened bats on site, using the factors set out in Appendix 3 of the 'Guidelines for Threatened Species Assessment Under Part 3A of the EP&A Act' (DECC & DPI 2005) and concludes there is unlikely to be a significant effect on any biota from the proposal. However, the factors in the guidelines do not assess the significance of impact and this conclusion in the report is questioned by DECCW

#### Proposed mitigation and amelioration measures

Section 6.6 and 6.7 lists a number of proposed mitigation and amelioration measures for the proposal, which are supported.

The BIA states that although the proposal will lead to the loss of 0.78 ha of CPW on site, this will be mitigated through the replanting of 1.5 ha of CPW on site. However, DECCW does not consider that this replanting will adequately offset the proposed impacts on the critically endangered CPW given:

- the majority of species proposed to be used in rehabilitation of the Woodland area, as listed in the Landscape Master Plan, are species that are not characteristic of CPW. Therefore, CPW will not be recreated. Note this information contrasts with section 6.7 of the BIA, which states that the Woodland area will be rehabilitated using local endemics.
- the EA discusses 'landscaping' of the Woodland area on site. In addition, section 3.4 lists the key design principles for landscaping, none of which includes conservation. The methods employed in landscaping are very different to those required for recreating an ecological community. If an ecological community is to be recreated, the primary management purpose of these areas must be conservation and it must be carried out by suitably qualified and experienced bush regenerators.
- the BIA states that the Woodland area will be managed in accordance with a Vegetation Management Plan (VMP). However, the EA also states that the VMP will be implemented for 5 years only. To adequately offset the losses of CPW, the CPW that is retained needs to be managed in perpetuity. Otherwise, once the VMP is no longer being implemented, the CPW will degrade over time, probably at a faster rate and to a worse degree than the current levels of degradation, given the intensive land use proposed.
- much of the 1.5 ha of CPW that is proposed to be replanted is within long, linear strips (particularly the areas in the southern, central and north-western sections of site). These will be subject to a high degree of edge effects and it will be very difficult to maintain plant species diversity. It is possible that, over time, these areas would not meet the definition of CPW.

It should also be noted that the species for propagation, listed in Landscape Master Plan, includes *Grevillea juniperina* (presumably *G. juniperina* ssp. *juniperina*, which is listed as a vulnerable species). Propagation and replanting of this vulnerable species is translocation which is not supported by DECCW.



#### 4. Aboriginal Cultural Heritage

##### Consultation Process

DECCW is satisfied that the consultation process undertaken for this project has been done in accordance with the Part 3A *Draft Guidelines for Aboriginal Heritage Impact Assessment and Community Consultation 2005*.

##### Archaeological Assessment

The Aboriginal archaeological assessment includes a detailed environmental and historical overview as well as a thorough archaeological review of the Cumberland Plain region. The soils of the subject land are classified as being residual, formed by *in situ* weathering of the parent material. Any archaeological material located in such soils is likely to be restricted to horizon topsoil and therefore vulnerable to both natural erosion and historical land use disturbance. Both factors greatly impact the potential archaeological significance of an area. DECCW supports the assessment that the soil profile for the subject land is moderately disturbed caused by both natural process and land use practises which has greatly diminished the overall archaeological potential.

The local archaeological context is well documented. There are 20 previously recorded Aboriginal sites on DECCW AHIMS within a 4km radius of the subject land. There were no previously recorded or registered Aboriginal sites within the subject land, although several low density artefacts scatters occur in relatively close proximity. The numerous archaeological studies in the local area are examined and an adequate site prediction model developed. The assessment concludes that evidence of Aboriginal occupation may exist within the subject land however it is predicted to be scant and consist of low density artefact scatters, with the possibility for individual stone artefact finds to occur. There is also a very low possibility for scarred trees of Aboriginal origin to be present. DECCW agrees with the general environmental and archaeological assessment of the subject land.

The site survey and assessment is documented, including the classification of an area of Potential Archaeological Deposit (PAD BC1) in the south east section of the subject land. The survey also resulted in the recording of five artefacts as an open scatter (BC1) and one isolated find (BC2). BC1 was located to the east of the creek on an exposed surface which is located within the area of (PAD BC1). The Aboriginal site survey and assessment meets DECCW requirements.

The management recommendations and the Statement of Commitments in relation to ACH are broadly supported by DECCW. The assessment recommends that the Aboriginal Archaeological Management Methodology outlined in Section 6.2 be adopted and form the basis of the Statement of Commitments for the project in conjunction with the other management recommendations.

##### Management Options and Recommendations

Aboriginal Archaeological Management Methodology proposes the following five key management options;

1. Test/Salvage of BC PAD1 (AHIMS #45-5-3972)
2. Management Plan for BC PAD1 (AHIMS #45-5-3972)
3. Aboriginal Cultural Assessment
4. Collection of BC1 (AHIMS # 45-5-3970) and BC2 (AHIMS # 45-5-3971)
5. Care and Control of Retrieved Artefacts.

The following comments relate to the specific management recommendations below:

1. Test/Salvage of BC PAD1 (AHIMS #45-5-3972)



## 2. Management Plan for BC PAD1 (AHIMS #45-5-3972)

It is noted that AHIMS # 45-5-3972 BC PAD1 may potentially contain significant Aboriginal cultural material based on previous archaeological excavation in nearby similar contexts. AHIMS # 45-5-3972 BC PAD1 (located on the eastern side of a natural drainage line in the northeast portion of the subject land) also contains a portion of site AHIMS # 45-5-3970 BC1, which is assessed as being of moderate archaeological sensitivity. It is recommended that the portion of AHIMS # 45-5-3972 BC PAD1 which is proposed for development impact be subject to prior combined test/salvage investigation. DECCW recommends that the current *DECCW 'Code of Practise for Archaeological Investigations of Aboriginal Objects in New South Wales'* be utilised as a guide to undertake the test/salvage operations and subsequent reporting.

DECCW supports the management recommendation for the development of a management plan for that portion of BC PAD1 that is not proposed for impact under the current proposal. The content of this plan will be guided by the results of the archaeological test/salvage program. DECCW supports the development of a final report of the excavation results and will provide further recommendations relating to subsurface impacts within the remaining area of PAD.

## 3. Aboriginal Cultural Assessment

DECCW supports further research into the historical and archaeological significance of the subject land to local Aboriginal groups. DECCW recommends that DoP and the proponent considers the request from the Darug Custodian Aboriginal Corporation (DCAC) to explore introducing Darug interpretive signage and themes into the design of the theme park in consultation with the Aboriginal stakeholders.

4. Collection of BC1 (AHIMS # 45-5-3970) and BC2 (AHIMS # 45-5-3971)
5. Care and Control of Retrieved Artefacts

In relation to the two recorded sites

- AHIMS # 45-5-3970 BC1; Low density artefact scatter; and
- AHIMS # 45-5-3971 BC2; Isolated find;

DECCW supports the view that the above sites are of '*low archaeological significance*'. This assessment is based the artefacts types being well represented and recorded within the local archaeological record. DECCW generally supports this assessment of significance. The recommendation that collected Aboriginal objects are subject to a Care and Control Agreement is not supported by DECCW as a Care and Control Agreement has not been negotiated with the local Aboriginal communities.

Further consideration should be given to the proposal for collection and re-location of known Aboriginal objects. DECCW recommends that objects are lodged with the Australian Museum. This option does not preclude the local Aboriginal community applying for a Care and Control permit from DECCW at a later date.

As the Care and Control application and assessment process may take some time or may not be supported by the Aboriginal community, it is recommended that objects are logged with the Australian Museum until such a time as a Care and Control Agreement is negotiated and approved. In the event that a Care and Control Agreement is not applied for or granted, it is appropriate that the objects remain in the Australian Museum.

Excluding the three recorded AHIMS sites the remainder of the subject land is considered to be disturbed and as having a low archaeological potential. In conclusion, subject to the management options and recommendations above, DECCW supports this assessment that there are no additional Aboriginal archaeological constraints to development proceeding.

## **5. Environmental Protection**

The proposal does not require an environment protection licence (EPL) at this stage under *Protection of the Environment Operations Act* (POEO Act). If in the future however, the proponents decide to include a cogeneration plant it may require an EPL from DECCW.

It is also noted that the EA mentions exceedences in noise levels at certain neighbourhoods during both construction and operation phases. In this regard, it is recommended that the proposed development comply with the requirements of the NSW Industrial Noise Policy, NSW Environmental Criteria for Road Traffic Noise and the Interim Construction Noise Guidelines.