



Office of
Environment
& Heritage

Our Ref: DOC19/383085
Your Ref: MP 06_0143 MOD 4

Director Regional Assessments
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Attention: Ms Emma Butcher, Planning Officer

Dear Mr Witherdin

Re: Glades Estate Residential Subdivision (MP 06_0143 MOD 4)

Thank you for your email dated 7 May 2019 about the Glades Estate Residential Subdivision (MP 06_0143 MOD 4) seeking comments from the Office of Environment and Heritage (OEH). I appreciate the opportunity to provide input.

The OEH has statutory responsibilities relating to biodiversity (including threatened species, populations, ecological communities, or their habitats), Aboriginal and historic heritage, National Parks and Wildlife Service estate, flooding and estuary management.

We have reviewed the documents supplied and advise that, although we have no issues to raise about NPWS estate or historic heritage, several issues are apparent with the assessments for estuaries and flooding, biodiversity, and Aboriginal cultural heritage. These issues are discussed in detail in **Attachment 1** to this letter.

In summary, the OEH does not support the removal of the central corridor vegetation and rejects the argument that this would be adequately compensated by the 'embellishment' works that have been proposed. The only adequate offset for the loss of the central corridor would be to significantly increase the width of the eastern corridor protected area. This would require the loss of residential lots in the eastern part of the subdivision.

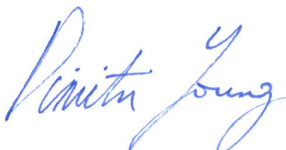
If the proposed modification is supported by the Department of Planning and Environment, the OEH recommends:

1. For biodiversity matters:
 - a. An area that is equal to or greater in size to the central corridor area (defined as the 'subject land' in the Section 75W report dated April 2019) be protected and managed for conservation purposes in the eastern part of The Glades Estate site.

- b. The additional conservation area should maximise the width of the riparian corridor, and, in particular, achieve at least a 100 m width to Moonee Creek and at least 50 m width for Skinners Creek, in accordance with the riparian zone requirements in Section E1 of the Coffs Harbour City Council Development Control Plan (DCP).
 - c. Measures to manage the additional conservation area should be included in the Vegetation Management Plan as required under Condition B15.
 - d. Condition B15 (2) should be updated to refer to the Coffs Harbour City Council Development Control Plan Appendix 2 Guideline for Preparing Vegetation Management Plans rather than the former Department of Natural Resources document.
2. For Aboriginal cultural heritage (ACH) matters:
- a. further consultation be undertaken with the Coffs Harbour & District Local Aboriginal Land Council and Jagun to determine what the ACH values are, and
 - b. that errors in the Aboriginal Cultural Heritage Assessment Report (ACHAR) which significantly affect the ability to interpret the information presented be rectified and the final ACHAR resubmitted prior to any final determination in this matter.
3. For flooding matters the proposed revised draft condition D6 Filling of the Site be amended as follows:
- D6.1 All parts of residential lots suitable for dwellings and all residential roads are to be located above the '1% AEP Catchment + 5% AEP ocean + climate change' flood level in accordance with drawing PS01-K210 as per the Flood Assessment: The Glades Development, Lot 1 and 2 DP725785, Pacific Highway, Moonee Beach, NSW, Martens Consulting, January 2018. This is scenario five (5) in the flood assessment with a predicted flood level varying between 3.5 - 4.2m AHD for the site.
 - D6.2 All stormwater treatment infrastructure such as swales and basin are to be located above the 5% AEP flood level.

If you have any further questions about this issue, Ms Rachel Lonie, Senior Conservation Planning Officer, Conservation and Regional Delivery, OEH, can be contacted on 6650 7130 or at rachel.lonie@environment.nsw.gov.au.

Yours sincerely



31 May 2019

DIMITRI YOUNG
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Contact officer: RACHEL LONIE
6650 7130

Enclosure: Detailed OEH Comments – Glades Estate Residential Subdivision (MP 06_0143 MOD 4)

Attachment 1: Detailed OEH Comments – Glades Estate Residential Subdivision (MP 06_0143 MOD 4)

The subject land is Lot 1 and Lot 2 DP 725785 at the Pacific Highway, Moonee Beach. The proposed modification seeks to reconfigure the subdivision pattern to change the residential development from 524 lots to a total of 555 lots within eleven stages and reduce the open space areas from 45 ha to 43 ha. The additional 31 lots are proposed in an area that was identified to be retained and protected as open space to provide a wildlife corridor in the original Major Project development. The modification also involves modifying site levels and noise mitigation measures.

1.0 Biodiversity

The modification proposes to remove an area of 1.75 ha of native vegetation to create the additional 31 residential lots. This area was identified to be Open Space - Category 1 Natural Areas where the development and management of open space is directed at environmental protection, vegetation rehabilitation and improving habitat ecology. The Flora and Fauna Assessment (FFA) prepared by JWA dated February 2018 assesses the environmental impact of this proposal.

The OEH does not accept the argument outlined in the FFA that the 'significant habitat enhancement works' that are proposed to offset the loss of native vegetation adequately offsets the loss of biodiversity values arising from this clearing and the associated impacts of an additional 31 residential lots.

Major Project approval conditions

Retention of the 'Central Wildlife Corridor' was required as part of a network of open space intended to connect northern and southern buffer zones and habitat areas and which forms part of a regional corridor that was mapped by the OEH (NPWS Key Habitats and Corridors database). Together with conditions such as B5 (7) to consider fauna crossings & B15 (3) (vii) that specified the Vegetation Management Plan (VMP) consider the retention and rehabilitation of wildlife corridors and wildlife crossings, the Major Project approval clearly intended that the central corridor was part of a comprehensive strategy to retain, protect and rehabilitate wildlife corridors and habitat.

Condition B15 of the Major Project approval required a detailed VMP be prepared to the satisfaction of the certifying authority. In particular, condition B15 was to include:

- Identification and mapping of all native vegetation, including abundance codes and outline the methodology for ongoing management of all native vegetation, detailing the Initial and Follow Up Maintenance works required.
- Identification and mapping of all noxious and environmental weeds as listed on Council's web site, including abundance codes and outline the methodology of removal
- and ongoing management of all such listed weeds, detailing the Initial and Follow Up Maintenance works required.
- Detail of revegetation and compensation (koala feed trees, riparian and wetland species) treatment including cross sections, use local provenance plant species, densities, quantities, and protection of retained vegetation.
- Rehabilitation works and longer-term habitat management and maintenance measures to create and manage Wallum froglet habitat areas
- Riparian and stream rehabilitation requirements
- Identification and detail of fire and drought refuge areas along the creeks; retention and rehabilitation of wildlife corridors; wildlife crossings; and related traffic calming and speed control devices. Detail of exclusion fencing arrangements to provide barriers (where required) to koala movement, as well as detail of koala warning signage and street lighting arrangements for early detection of koalas in movement corridors/roadways.
- Compensatory koala habitat revegetation is to be provided on site for secondary koala habitat to be removed from the site

- Maintenance, monitoring and reporting schedule
- Information regarding the timing of the works.

The one-page document labelled *Annex H Plan 4 Vegetation Management* that was part of the original Major Project package does not satisfy condition B15. It does not appear that this condition has yet been triggered with a construction certificate application to the Coffs Harbour City Council.

Proposed offset measures duplicate existing conditions

The proposed new condition B15(A) includes actions that are already required under B15 such as assisted natural regeneration, planting of native shrubs and ground covers, measures to monitor and control weeds and fauna exclusion fencing. The proposed rehabilitation and revegetation offset areas as described in Figure 16 dated 22 February 2018 also duplicate offset areas and actions that are already identified in *Annex H Plan 4 Vegetation Management*. For example, existing forest, swamp and mangrove communities (mapped as dark green) were already required to be protected and enhanced and fenced to allow rehabilitation to occur in the earlier plan. Areas mapped in olive green were already required to be rehabilitated with revegetation utilising existing seed source and fencing to aid re-establishment, and heath communities mapped with an olive hatching were already required to be revegetated and slashing cease to allow natural recovery.

The OEH has concluded that the proposed rehabilitation outcomes (new condition B15A) will not provide any significant habitat or connectivity enhancement in addition to what is already required by the Major Project approval conditions.

Use of BBAM

The consultant has applied the BioBanking Assessment Methodology (BBAM) to calculate possible offset requirements for the loss of vegetation. The results have indicated that 74 ecosystem credits would be required to offset the loss of this vegetation. However, the assessment has only partially applied the BBAM as no assessment of patch sizes or vegetation condition assessment or consideration of species credit species was included. It would be expected that a complete BBAM assessment would generate species credit species requirements as well as the ecosystem credit requirements that are discussed.

Further, the paperbark swamp forest is a red flag area. Under the BBAM this required the Director General (now Secretary) to be satisfied that all reasonable measures to avoid impacts on red flag areas had been considered. The main issue however, in relation to using the BBAM, is that the areas that have been assessed as creating ecosystem credits are areas that are already required to be protected and rehabilitated through the implementation of a VMP as required by the Major Project approval.

Offset requirements

In conclusion, and as previously advised, the OEH does not support the removal of the central corridor vegetation and rejects the argument that this would be adequately compensated by the 'embellishment' works that have been proposed. The only adequate offset for the loss of the central corridor would be to significantly increase the width of the eastern corridor. This would require the loss of residential lots in the eastern part of the subdivision.

Should the proposal to remove the central corridor be supported by the Department of Planning and Environment (DPE), the OEH's preferred configuration for the proposed residential subdivision is to retain and protect more vegetation along Moonee Creek and Skinners Creek to protect water quality, aquatic and terrestrial habitat and to provide an adequate and viable wildlife corridor.

To offset the loss of the central corridor at area of at least the same size as the additional area to be for residential use (and preferably larger) should be required to be protected and managed for conservation purposes in the eastern part of the subdivision. This would ideally seek to maximise the width of the riparian corridor, and, in particular, achieve at least a 100 m width to Moonee Creek and

at least 50 m width for Skinners Creek, in accordance with the riparian zone requirements in Section E1 of the Coffs Harbour City Council Development Control Plan (DCP). An alternative subdivision configuration should aim to achieve these widths as a minimum. This would require a commensurate reduction of residential lots in the eastern edge of the subdivision.

Recommendation

1. If the proposed modification is supported by the DPE, the OEH recommends:
 - a. An area that is equal to or greater in size to the central corridor area (defined as the 'subject land' in the Section 75W report dated April 2019) be protected and managed for conservation purposes in the eastern part of The Glades Estate site.
 - b. The additional conservation area should maximise the width of the riparian corridor, and , in particular, achieve at least a 100 m width to Moonee Creek and at least 50 m width for Skinners Creek, in accordance with the riparian zone requirements in Section E1 of the Coffs Harbour City Council Development Control Plan (DCP).
 - c. Measures to manage the additional conservation area should be included in the Vegetation Management Plan as required under Condition B15.
 - d. Condition B15 (2) should be updated to refer to the Coffs Harbour City Council Development Control Plan Appendix 2 Guideline for Preparing Vegetation Management Plans rather than the former Department of Natural Resources document.

2.0 Aboriginal cultural heritage

The OEH has reviewed the documentation provided in support of the 75W modification application and notes the inclusion of an Aboriginal Cultural Heritage Assessment Report (ACHAR) (ERM 9 January 2019). We have reviewed the ACHAR and note that the assessment process included field survey and consultation with local Aboriginal community members compliant with clause 80C of the *National Parks & Wildlife Regulation 2009*.

The OEH further notes that the results of the Aboriginal cultural heritage assessment process provided in the report indicate that no tangible evidence of traditional Aboriginal subsistence activities or occupation (Aboriginal objects) were located within the lands subject to assessment. However, we also note that concerns were raised by members of the Jagun Aged & Community Care (Jagun) Aboriginal organisation who are one of the Registered Aboriginal Parties (RAPs) for the project. We note that the ACHAR contains several typographical and referencing errors. Many of these do not affect the reader's ability to understand the outcomes of the assessment process.

We note that Section 3.4 of the ACHAR provides details of the RAP comments on the proposed assessment methodology. The OEH notes that Jagun expressed concerns regarding the fact that the project area is "surrounded by highly significant cultural areas". We also note that Jagun requested specific information regarding the locations of cut and fill activities within the project area. Section 3.4 indicates that these concerns have been addressed elsewhere in the report however the references to the sections where these concerns have been addressed are missing. In its review of the ACHAR the OEH could find no place where these concerns were further discussed or addressed.

We have reviewed the proposal and subject lands with reference to the 2017/18 ACH landscape mapping project for Coffs Harbour City Council and note that a large section of the subject lands falls within a 'known' area of Aboriginal Cultural Heritage (ACH) significance. We also note reference in the ACHAR review of previous archaeological studies (Section 5.4.1) that the area is known to be part of a traditional Aboriginal travel route. This information, combined with the concerns regarding significant cultural values surrounding the subject lands raised by Jagun, warrants further investigation of the likely non-tangible ACH values which may form constraints to the proposed inclusion of these lands in the broader 'Glades Estate' development.

We further note that several emails included in Appendix H as evidence of provision of the draft assessment methodology appear to have gone from Stephanie Moore (ERM) to Stephanie Moore (ERM) with no other addresses.

The OEH considers that unless evidence that these emails, with an attached proposed survey methodology, were actually sent to RAPs, then they should be removed from the report as they do not constitute evidence of consultation. We also note that the proposed survey methodology in question is missing Figure 2.1 with only a heading describing the figure. This effectively means that the proposed survey methodology, if sent to the RAPs at all, was sent incomplete. The OEH further notes final comments by Jagun on the Draft ACHAR further reinforce their concerns over highly culturally significant areas which do not appear to have been addressed.

In summary, the OEH notes several typographical and formatting errors which affect the readers ability to determine the extent of consultation and how RAP concerns have been addressed. We also note that the 2017/18 ACH landscape mapping project for Coffs Harbour City Council data, comments from some RAPs and previous archaeological assessments indicate known ACH values within the subject lands. These values do not appear to have been identified or addressed in the ACHAR.

Recommendation

2. The OEH recommends that:

- a. further consultation with Coffs Harbour & District Local Aboriginal Land Council and Jagun be undertaken to determine what the ACH values are, and
- b. that errors in the ACHAR which significantly affect the ability to interpret the information presented be rectified and the final ACHAR be resubmitted prior to any final determination in this matter.

3.0 Flood risk management

The following assessment and comments relate to the modification to site levels (bulk earthworks) and associated proposed changes to development conditions D6 Filling of the Site (D6.1 and D6.2) and E16 Fill Contour Plan as outlined in Appendix B Revised Draft Conditions in the Modification under Section 75W Report. The proposed changes are:

D6 Filling of the Site

~~1) All residential allotments shall be filled to a minimum of the design flood level plus minimum 600mm freeboard, with minimum fill levels of RL 4.75m AHD in accordance with the approved plans.~~ 1.) All proposed dwellings are to have a finished floor levels at 4.03 – 4.68 m AHD (0.5m higher than determined flood levels), in accordance with drawing PS01-K210 produced in the Martens Consulting Engineers Flood Assessment report dated January 2018.

~~2) Fill platforms must be set at a minimum of 2 metres above the 1 in 100 year flood level or the water table (whichever is the higher) in the southern open space areas that contain stormwater infrastructure, in accordance with AusPacific Engineers advice dated 4 April 2008. Finished levels must be to the satisfaction of Council.~~ 2) Should the proposed development footprint change, or significant changes to the proposed design levels and/or culvert design occur (as shown on Drawing PS01-A050), an updated flood model with detailed earthworks should be prepared at Construction Certificate stage.

Siteworks E16 Fill Contour Plan

Prior to the release of a Subdivision Certificate for the first stage of the project to be released a final contour plan shall be submitted to Council showing the location, depth and type of fill located on the site. ~~This shall include fill platforms of minimum of 2 metres above the 1 in 100 year flood level or the water table (whichever is the higher) in the southern open space areas that contain stormwater infrastructure, in accordance with AusPacific Engineers advice dated 4 April 2008~~

The Flood Assessment: The Glades Development, Lot 1 and 2 DP725785, Pacific Highway, Moonee Beach, NSW report (Martens Consulting, January 2018) assesses flooding of the site for the existing undeveloped condition and for the proposed developed condition modifying the bulk earthworks and fill levels in accord with the Modification 4 application.

The flood assessment models 1%, 5% AEP and PMF flood events in various combinations of rainfall and tailwater level. The results are consistent with existing flood modelling and modelling undertaken for adjoining development areas. Impacts of climate change have also been modelled for the 1% AEP flood with a 10% increase in rainfall and 0.9m increase in tailwater level (scenario 5 in the flood assessment) with a predicted flood level varying between 3.5 - 4.2m AHD for the site.

The proposed development should have residential lots and roads located above the 1% AEP climate change flood level. Stormwater treatment infrastructure, such as swales and basin, are to be located above the 5% AEP flood level.

The OEH does not support the proposed condition D6.2. Any significant changes to development footprint or design levels could result in impacts that affect adjoining properties and as such need to be assessed prior to the Construction Certificate stage.

The OEH does not have an objection to the removal of the second sentence of condition E16.

Recommendation

3. The OEH recommends amending draft condition D6 Filling of the Site as follows:

- D6.1 All parts of residential lots suitable for dwellings and all residential roads are to be located above the '1% AEP Catchment + 5% AEP ocean + climate change' flood level in accordance with drawing PS01-K210 as per the Flood Assessment: The Glades Development, Lot 1 and 2 DP725785, Pacific Highway, Moonee Beach, NSW, Martens Consulting, January 2018. This is scenario five (5) in the flood assessment with a predicted flood level varying between 3.5 - 4.2m AHD for the site.
- D6.2 All stormwater treatment infrastructure such as swales and basin are to be located above the 5% AEP flood level.

