



Office of
Environment
& Heritage

DOC17/318643
SSD 8126

Mr David Gibson
Team Leader – Social Infrastructure Assessment
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Michelle Niles

Dear Mr Gibson

Redevelopment of the UNSW Cliffbrook Campus, 45-51 Beach Street, Coogee (SSD 8126)

I refer to your letter dated 9 June 2017 to the Office of Environment and Heritage (OEH) seeking comments on the above State Significant Development (SSD) proposal.

OEH has reviewed the Environmental Impact Statement (EIS) and certain Technical Papers and provides comments on biodiversity and flood risk management at Attachment 1. Please note OEH is unable to provide comment on Aboriginal cultural heritage matters at this time; this should not be taken as support or otherwise for the proposal.

If you have any queries regarding this matter please contact Marnie Stewart, Senior Regional Operations Officer, on 9995 6868 or marnie.stewart@environment.nsw.gov.au.

Yours sincerely

S. Harrison 31/07/17

SUSAN HARRISON
Senior Team Leader Planning
Regional Operations

Enclosure

ATTACHMENT 1: Office of Environment and Heritage (OEH) comments for the Redevelopment of the UNSW Cliffbrook Campus, 45-51 Beach Street, Coogee (SSD 8126)

1. Biodiversity

Identification of vegetation types and EECs

- Section 3.1 of the Biodiversity Assessment Report (BAR) identified all of the native vegetation on site as the OEH 2013-classified vegetation community *S_HL06: Coastal Headland Banksia Heathland*, equivalent to PCT 1822 *Heath-leaved banksia – Scrub She-oak heath on sandstone headlands in the Sydney basin*, and ruled out the presence of either of the two OEH 2013 vegetation communities – *S_HL03* and *S_HL04* – that constitute the EEC Eastern Suburbs Banksia Scrub, on the basis of “analysis of biometric plot data (including flora inventory and structural data)”. This could not be checked as the raw plot data was not provided; only a summary of floristics for each considered vegetation community was provided (in Appendix 1 of the BAR).
- Notwithstanding the above, the BAR also stated that “In the northern most portion of the vegetation patch, the presence of taller vegetation layers containing Heath-leaved Banksia (*Banksia ericifolia*) and Sydney Red Gum (*Angophora costata*) growing on deep, podsolised, sandy soils suggested that parts of the subject site may have once supported Eastern Suburbs Banksia Scrub”. It is not explained why this area was not mapped or identified as a separate vegetation zone.
- Further, the Biodiversity Management Plan by Narla Environmental (2017), while not reviewed in full by OEH, refers to Eastern Suburbs Banksia Scrub being present on site (e.g. Table 4).

Recommendation: complete set of plot/transect raw data sheets and flora inventory lists should be provided to OEH for review, and clarification provided regarding the presence or absence of Eastern Suburbs Banksia Scrub. Consideration should be given as to whether the area potentially (or previously) representing the EEC should constitute a separate vegetation zone in the assessment.

Site attribute assessment

- Site attribute scores for plots could not be checked since plot data sheets were not provided except for one plot (#3) which was provided as a “sample” in Appendix 2 of the BAR. The data sheet for this plot shows several errors:
 - point transect hits on leaf litter have been included in ‘Native Ground Cover (Other)’ – this is not consistent with the definition in the FBA
 - tallying of point transect hits for ‘Exotic Plant Cover (Ground component)’ is incorrect – 60 hits from a maximum 50 points. Total EPC score for Plot 3 (including ground, mid-storey and over-storey components) should be 120.5 (not 140.5).

These errors have been transferred into the Credit Calculator and Table 6 of the BAR.

Recommendation: complete set of plot/transect raw data sheets and flora inventory lists should be provided to OEH for review.

Offset credit requirements

- The BAR has determined that no ecosystem credits are required to offset the proposal. The Credit Calculator determined that impacts to 0.027 ha of PCT 1822 would require 0.42 ecosystem credits. However, as the PCT is not a threatened ecological community, and Table 10 of the BAR determined that no habitat is present for ecosystem credit species, no offset is required for impacts to PCT 1822.
- The BAR further determines that no species credit species occur on site and therefore, no species credits are required to offset the proposal.

Recommendation: although no credits are required to be purchased and retired to offset impacts to biodiversity (provided Eastern Suburbs Banksia Scrub is confirmed to be absent or not impacted), OEH recommends the mitigation measures outlined in Section 5.3 of the BAR be implemented to minimise impacts during construction and operation of the proposal.

Landscape features

- Native vegetation cover assessment – OEH questions the validity of the statement in Section 2.2 of the BAR that vegetation mapped by OEH as 'Urban Exotic/Native', and used in the native vegetation assessment, is "largely native", nor that this vegetation would be in benchmark condition. Nevertheless, no difference is expected to the before-development and after-development scores given the very small amount of vegetation to be removed by the proposal.
- The area mapped on Figure 5 as OEH 2013 'Urban Exotic/Native' vegetation is not consistent with the shapefile supplied with the assessment, nor with the OEH 2013 vegetation GIS layer.
- Connectivity assessment – the connecting link described in Section 2.3.3 of the BAR has not been mapped.
- Patch size – the vegetation used to identify and calculate patch size has not been mapped and it is unclear how a patch size of 2.17 ha was derived (OEH calculated a patch size of 2.13 ha using the OEH 2013 vegetation mapping, with the presumption that all the 'Urban Exotic/Native' vegetation is in moderate–good condition). Nevertheless, the resulting patch size score results in the same value of 1 as determined in the BAR.

Recommendation: no action required, for noting.

2. Flood risk management

From a floodplain risk management perspective, the *Flood Study for Redevelopment of UNSW Cliffbrook Campus* (Kustom Engineering, 2017) follows accepted floodplain risk management practice and is considered reasonable.

The consultant has developed DRAINS hydrological model and 2D HEC-RAS hydraulic model. The models have been utilised to determine existing overland flow behaviour for existing scenario and to assess flooding impacts for post development scenario.

The potential impacts of climate change due to increase in rainfall intensity has been assessed for the 1% AEP flood event.

The flood study has adequately identified the flood hazard classification for pre-and post-development scenarios for the 1% AEP and the PMF.

Section 8.3 of the flood study outlines the proposed evacuation strategy for the site and section 8.4 provides specific recommended mitigation actions proposed to be incorporated into the final development, including the development's Emergency Management Plan. OEH supports all proposed measures.

The proposed floor levels of the basement car park and the Lower Ground floor of the Eastern Entrance have a freeboard allowance 0.15 m and 0.075 m above the 1% AEP respectively. Item (f) of the recommended actions, suggests greater freeboard for the lower ground floor or alternatively the south-eastern entrances to the lower ground floor be sealed off and designed to include flood proof doors for a minimum height of 0.5 m. OEH acknowledges this recommendation but highlights that it is prudent to achieve a minimum freeboard of 0.5 m for the lower ground floor level similarly at the entrance of the basement carpark.

(END OF SUBMISSION)