NSW GOVERNMENT | Office of Environment & Heritage

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SSD-8699

Mr David Gibson
Social Infrastructure Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Ms Teresa Gizzi

Dear Mr Gibson

Redevelopment of Greenwich Hospital (SSD-8699) – 97-115 River Road Greenwich - Environmental Impact Statement

Thank you for your letter of 11 February 2019 received by the Office of Environment and Heritage (OEH) requesting comments on the Environmental Impact Statement (EIS) for the above State Significant Development.

OEH appreciates the Department providing it with an extension in which to provide its comments.

OEH has reviewed the relevant documents and provides recommendations and comment in Attachment A.

If you have any queries regarding this matter, please contact Janne Grose on 8837 6017 or janne.grose@environment.nsw.gov.au

Yours sincerely

22/3/19

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Attachment A

Redevelopment of Greenwich Hospital (SSD-8699) – 97-115 River Road Greenwich - Environmental Impact Statement

Office of Environment and Heritage (OEH) has reviewed the following documents:

- Environmental Impact Statement (EIS) – January 2019
- Biodiversity Development Assessment Report – 18 January 2019
- Landscape Plans – 2018
- Stormwater Management Report – March 2018
- Arboricultural Impact Assessment (AIA) – 16 February 2018
- Bushfire Hazard Assessment Report – 21 Mar 2018

and provides the following comments.

Biodiversity

Species credit species

The assessment undertaken for identifying habitat suitability for threatened species is considered inadequate by OEH. The following step under section 6.4 of the BAM needs to be applied in its entirety: Step 3 Identify candidate species credit species for further assessment. This must include the reasons for determining why a predicted species credit species is unlikely to have suitable habitat on the subject land or specific vegetation zones (see section 6.4.1.19 of the BAM). Depending on the outcome, the subsequent steps of section 6.4 may also need to be applied.

Table 8 of Appendix 3 refers to targeted surveys for *Chalinolobus dwyeri* (Large-eared Pied Bat) and *Myotis macropus* (Southern Myotis) but these were not carried out. Instead, microbat recordings were made using an Anabat Express as part of a general fauna survey of the site during November and December of 2017. For Southern Myotis, these recordings were used to determine that the species was not present at the site, because it was not recorded. However, a targeted survey or an expert report is required to confirm the presence/absence of a species credit species at a site (see section 6.3.1.3 of the BAM). Alternatively, a species may be assumed to be present under step 4 of section 6.4 of the BAM. Furthermore, where a targeted survey is carried out, it must be in accordance with section 6.5. While it is considered that insufficient details are given in the BDAR about the timing, methods and efforts used for the fauna survey (refer to section 6.5.1.5 of the BAM), it is clear that the survey effort was not in accordance with survey requirements for acoustic detection for this species, which is 16 detection nights over a minimum of four nights (see *'Species credit' threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method* (OEH 2018)). As such, the presence or absence of Southern Myotis needs to be determined in accordance with step 4 of section 6.4 of the BAM.

The title of Table 8 of Appendix 3 states that the table indicates "also where presence was assumed" but assumed presence is not indicated in the table. Under section 6.4.1.21 of the BAM, an assessor must establish whether each of the species credit species is present, or is likely to use suitable habitat, on the subject land (or specific vegetation zones) by either (a) assuming it is present, or (b) undertaking a threatened species survey in accordance with Section 6.5, or (c) obtaining an expert report in accordance with subsection 6.5.2. Furthermore, under section 6.4.1.23 a species that is assumed to be present on a development site must be further assessed under step 5 of section 6.4 i.e. the area or count, and location of suitable habitat for the species, must be determined.
Table 8 of Appendix 3 refers to "expert report" but this is not referred to in the main body of the BDAR. The use of expert reports must follow section 6.5.2 of the BAM.

Table 7 of Appendix 3 notes there is "suitable potential nesting habitat on site" for *Haliaeetus leucogaster* (White-bellied Sea-Eagle) but Table 8 of Appendix 3 excludes this species from being a

candidate species credit species (see the column "Confirmed candidate species" of Table 8). As previously stated, step 3 of section 6.4 of the BAM needs to be applied.

Page 26 of the BDAR infers that the Large-eared Pied Bat and Southern Myotis are dual credit species (with either their foraging or roosting habitats constituting species credits). This is not the case and both are full species credit species.

A species polygon for suitable foraging habitat for the Large-eared Pied Bat is shown in Figure 18 of Appendix 1 of the BDAR. This is incorrect and needs to be revised in accordance with section 6.4 (steps 5 and 6) of the BAM. The *'Species credit' threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method* (OEH 2018) can also be referred to for information on the features and approach required to develop the polygon (see Tables 1 and 2). Importantly, all habitat on the subject land needs to be included in the polygon, including all breeding habitat on or within 100 m of the subject land and the area immediately surrounding the feature. Breeding habitat is considered present on the subject land if there is potential breeding habitat and breeding individuals of the target species. Any breeding habitat identified is a potential serious and irreversible impact (SAII) and would require assessment under section 10.2 of the BAM. Following on from the previous point, the species credits required for the Large-eared Pied Bat needs to be revised.

Powerful Owl

Ninox strenua (Powerful Owl) is not mentioned in the BDAR but the site needs to be assessed for habitat suitability for this species following section 6 of the BAM. This is because BioNet holds many records for this species on adjacent lots and the site most likely contains suitable habitat i.e. 11 hollow-bearing trees have been identified on-site, with at least one of these trees containing more than one hollow (see Table 6 of Appendix 3), and eight large trees (with a DBH greater than 50 cm) were sampled in vegetation zone 1 and one large tree was sampled in zone 2 (see Appendix 3).

Prescribed impacts

Prescribed impacts have not been addressed in accordance with section 6.7 of the BAM, they have only been addressed very briefly on page 28 of the BDAR. While non-native vegetation (see section 6.7.1.3) is providing habitat for threatened species (in terms of the landscaped gardens), other prescribed impacts may also apply and require consideration, for example: human made structures (e.g. buildings, sewer and stormwater pipes); caves, crevices and cliffs (it is noted that a "low escarpment" is referred to on page 7 of the BDAR and the site compromises the Gymea and Hawkesbury soil landscapes); and occurrences of rock (it is noted that "natural rocky terraces" are referred to on page 3 of the BDAR and the soil landscapes are characterised by rock outcrops). Furthermore, the area of weed infestation shown in Figure 17 of Appendix 1 could also be a prescribed impact if it provides habitat for threatened species. Prescribed impacts also need to be assessed in accordance with section 9.2 of the BAM.

Mitigation measures

The BDAR states "Best practice hygiene protocols are to be observed if there is any indication of Phytophthora infection" (page 32). This is inadequate and instead measures must be taken from the outset to prevent outbreaks and/or infections, for example see https://www.rbgsyd.nsw.gov.au/Science/Plants/Pests-Diseases/Phytophthora-Dieback/Disinfection-procedures and http://www.environment.gov.au/biodiversity/invasive-species/publications/management-phytophthora-cinnamomi-biodiversity-conservation. This should be incorporated in Table 10 of the BDAR.

Measures also need to be included in the design of lighting on site, to minimise impacts on bats. These measures should be incorporated into Table 10 of the BDAR.

Online resources

Please note the following resources are available online to help with the application of the BAM: the *Biodiversity Assessment Method Operational Manual Stage 1* (OEH 2018) at https://www.environment.nsw.gov.au/Research-and-publications/Publications-search/Biodiversity-Assessment-Method-Operational-Manual-Stage-1 and the *'Species credit' threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method* (OEH 2018) at https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Threatened-species/species-credit-threatened-bats-survey-guide-180466.pdf. Also, OEH

suggests that in future, the consultant use the BDAR checklist provided in Appendix 10 of the BAM prior to finalising a BDAR.

Landscaping

The EIS notes 5 key landscaping zones are proposed for the development (Zones A, B, C, D and E). It notes it is proposed to plant locally occurring indigenous species in Zone A on the eastern side of the site with species from the Coastal Enriched Sandstone Dry Forest (pages 23, 24 and 69). Within Zone C, the EIS indicates it is proposed to establish a plant community generally consistent with the Coastal Sandstone Gallery Rainforest and with the Coastal Sandstone Foreshores Forest (pages 23, 24 and 69). For Zone B, the EIS notes 'new plantings will use species sympathetic to the era of the building' (ie Pallister House) and for Zone E it proposes to use plants which 'emphasise seasonal change and colour' (page 69). Section 10.7 of the EIS however notes it has been recommended that the species included in any landscape plans be informed by locally native species (page 86) and Section 8 of the BDAR indicates the Landscape Plan will aim to reinstate native vegetation associated with PCT 1776 across the site (page 39).

OEH recommends the landscaping for all five landscaping zones at the site uses a diversity of native trees, shrubs and groundcover species from the relevant local native vegetation communities (local provenance material) that occur or once occurred in this location to improve biodiversity rather than use exotic species and non-local native species.

The AIA indicates tree cover will be enhanced by planting advanced specimens and it notes the 131 trees which are nominated for removal will be replaced in greater numbers than the trees removed (page 46). It is unclear how many replacement trees are proposed to be planted and the RTS should address this. In terms of mitigating the urban heat island effect, improving biodiversity, habitat etc at the site OEH recommends:

- advanced size local native trees are planted to replace the existing trees to be removed, as the benefits that the existing trees provide can take decades for a juvenile tree to replace
- the trees that have been approved for removal are replaced at a ratio greater than 1:1
- the RTS provides details on the pot container size of the replacement trees, the number of trees to be planted and the plant species.

The Greater Sydney Region Plan - A Metropolis of Three Cities includes an objective (30) that urban tree canopy cover is increased and The North District Plan includes Planning Priority N19 (increasing urban tree canopy cover and delivering Green Grid connections). The Plans note that the NSW Government has set a target to increase tree canopy cover across Greater Sydney to 40 per cent. Greenwich Hospital is encouraged to increase the urban tree canopy cover.

Enough area needs to be provided for on the site to allow the planted trees to grow to full maturity.

Asset Protection Zone

The EIS recommends all grounds within the subject site excluding the rainforest vegetation in the south west corner and the heritage land associated with Pallister House will be managed as an Inner Protection Area (IPA) (section 10.12, page 92). If the development is approved it is important that a condition of consent is included which ensures that the rainforest vegetation in the southwest corner of the site which adjoins Gore Hill Reserve is not managed as an IPA.

Building Design

OEH recommends where possible that the proposed development incorporates a Green Roof or Cool Roof into the building design. The benefits of Green Roofs and Cool Roofs are outlined in the OEH (2015) Urban Green Cover in NSW Technical Guidelines which can be found at the following link: http://climatechange.environment.nsw.gov.au//Adapting-to-climate-change/Green-Cover

Green roofs can have a strong regulating effect on the temperature of roofs and building interiors, reducing the energy needed for cooling and the impact of the Urban Heat Island effect. The provision

of green roofs would increase habitat and biodiversity at the site, particularly if local native plant species are used from the relevant native vegetation community.

Aboriginal Cultural Heritage

Please note that OEH has decided not to provide comments on Aboriginal cultural heritage matters at this time. This does not represent OEH support for the proposal and this matter may still need to be considered by the consent authority.

Flood

Hospitals are classified critical uses and facilities that need to remain operational during an emergency, while senior living is classified vulnerable development as occupiers would have difficulties to self-evacuate in a major flood event.

OEH understand that, there is no overland flow flood study available to provide information about flooding within Lane Cove LGA. Therefore, it is prudent to undertake a preliminary assessment to investigate whether the vicinity of the project is impacted by overland flow for the full range of events up to the probable maximum flood (PMF).

If the vicinity of the proposal is impacted by overland flow, the principles of the Floodplain Development Manual (2005) need to be considered. Consideration may include, but not be limited to, the following issues:

- the use of PMF for habitable floor level to ensure no over floor inundation;
- the preparation of an emergency management response plan to ensure safe access to the development, this may include safety signs to guide the community and health services in major flood events.