Our ref: DOC21/444549-12
Your ref: SSD-9351535

Ms Megan Fu

Principal Planning Officer
Infrastructure Assessments
Planning and Assessment Division
Department of Planning, Industry and Environment
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Dear Ms Fu

John Hunter Hospital Health and Innovation Precinct Project (SSD-9351535) – Review of EIS

I refer to your e-mail dated 31 May 2021 in which the Planning and Assessment Division (P&A) of the Department of Planning, Industry and Environment (the Department) invited Biodiversity and Conservation Division (BCD) for advice in relation to the John Hunter Hospital Health and Innovation Precinct Project (SSD-9351535).

BCD have reviewed the Environmental Impact Statement, including relevant appendices, in relation to impacts on biodiversity and flood risk assessment. BCD also reviewed the Biodiversity Assessment Method data provided for the project on 21 June 2021.

BCD's recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**. If you require any further information regarding this matter, please contact Robert Gibson, Senior Regional Biodiversity Conservation Officer, on 4927 3154 or via email at huntercentralcoast@environment.nsw.gov.au

Yours sincerely

STEVE LEWER
Acting Senior Team Leader Planning
Hunter Central Coast Branch
Biodiversity and Conservation Division

Enclosure: Attachments A and B

Date: 25 June 2021

Attachment A

BCD's recommendations

John Hunter Hospital Health and Innovation Precinct Project

Biodiversity

1. BCD recommends that the proponent demonstrates how potential roosting sites for the Large-eared Pied Bat, Little Bent-winged Bat, Large Bent-winged Bat, and Eastern Cave Bat have been considered and for any identified that they have been adequately surveyed. If surveys have not met BCD survey guidelines then BCD recommends additional surveys are conducted.

2. BCD recommends that the proponent provides details of the Plant Community Types considered to match each of the on-ground vegetation communities and provides the degree of confidence in each match.

3. BCD recommends that in the 'Avoid and Minimise' section of the BDAR a table of the measures to be implemented before, during and after construction to avoid and minimise the impacts of the project is provided.

4. BCD recommends that further details are provided on targeted searches of for large forest owls and the Eastern Osprey, and how they meet BCD survey requirements.

5. BCD recommends that all nest boxes in trees that may be cleared for this project are moved to trees in the adjacent forest that are outside of any development footprint.

6. BCD recommends that maps are prepared that present the additional information required in by the BAM.

Flooding and flood risk

7. BCD recommend that:

    a. The proponent should assess the potential for stream bank erosion in receiving streams in accordance with the Newcastle DCP Stormwater & Water Efficiency for Development Technical Manual (City of Newcastle 2017).

    b. The need for additional scour protection measures at the watercourse crossings should be assessed during detailed design.

8. The proponent should assess the impacts of the proposal on coastal wetlands in accordance with the Newcastle DCP Stormwater & Water Efficiency for Development Technical Manual (City of Newcastle 2017).

Attachment B

BCD's detailed comments

John Hunter Hospital Health and Innovation Precinct Project

Biodiversity

1. Further consideration of potential impacts to threatened microbats is required

The assessment of potential impacts to threatened microbats by the John Hunter Hospital Health and Innovation Precinct project does not appear to have considered local, manufactured structures (such as buildings, culverts etc…) as possible roosting sites. Figure 4.2 'Ecosystem credit Species Records' in the BDAR shows local records of the Little Bent-winged Bat and Large Bent-winged Bat. The assessment of likely impacts on the Large-eared Pied Bat, Little Bent-winged Bat, Large Bent-winged Bat and the Eastern Cave Bat, presented in Table 6.2 'Likelihood of impacts to SAII entities' of the Biodiversity Development Assessment Report (BDAR) discounted any impacts to those species because of the absence of caves or tunnels in the project area. However, as described in BCD's Threatened Biodiversity data Collection (TBDC) these microbats can also roost in culverts and old buildings. This is highlighted by the recent discovery of a roost site of Little Bent-winged Bat and Large Bent-winged Bat in a culvert of Dark Creek at Jesmond; about 1.7 kilometres north of the proposed Acute Services Building of this project.

The ''Species Credit' threatened bats and their habitats: NSW survey guide for the Biodiversity Assessment Method' (OEH, 2018) requires all potential habitat, including culverts and old buildings, to be identified on the subject land. Any potential habitat identified then requires survey as per BCD's threatened bat survey guidelines. If breeding habitat is identified then this will generate a species polygon in the Biodiversity Assessment Method 2017 (BAM) assessment, which may then generate species credits to be offset by the project.

Recommendation 1

BCD recommends that the proponent demonstrates how potential roosting sites for the Large-eared Pied Bat, Little Bent-winged Bat, Large Bent-winged Bat, and Eastern Cave Bat have been considered and for any identified that they have been adequately surveyed. If surveys have not met BCD survey guidelines then BCD recommends additional surveys are conducted.

2. Matching on-ground vegetation to Plant Community Types requires more explanation

Section 3.2.1 'Plant Community Types and Vegetation Zones' describes features of three native woody vegetation communities on the project area and gives the Plant Community Type (PCT) that they have been matched to. The discussion does not include which PCTs were considered before a final match was made, nor the degree of confidence of the match.

Recommendation 2

BCD recommends that the proponent provides details of the Plant Community Types considered to match each of the on-ground vegetation communities and provides the degree of confidence in each match.

3. A table of the measures to avoid and minimise impacts is required

Table 26 of the BAM requires that a table of the measures to be implemented before, during and after construction to avoid and minimise the impacts of the project is required to be

included in the BDAR. This must include details of the proposed action, timing and responsibility of these measures. Such a table does not appear to be presented in the BDAR.

Recommendation 3

BCD recommends that in the 'Avoid and Minimise' section of the BDAR a table of the measures to be implemented before, during and after construction to avoid and minimise the impacts of the project is provided.

4. More information is required on survey effort for Large Forest Owls and the Eastern Osprey

Appendix E 'Species-credit Species Survey Methods' of the BDAR describes the survey effort for the Barking Owl, Powerful Owl and the Eastern Osprey. Sixteen stag watching survey and targeted owl call playback sites in the study area are shown in Figure 4.1 'Species-credit Species Survey Locations'. However, sampling details with respect to suitable hollow-bearing trees for large forest owls, are unclear; and targeted searches for roost / nest sites for the Eastern Osprey are not shown.

In comparison, Figure 4-1a 'Fauna habitat sheet 1 of 2' in the 'Technical Paper 1 – Biodiversity Assessment Report: Newcastle Inner City Bypass: Rankin Park to Jesmond (Dated June 2018) by GHD (2018) shows at least 60 hollow-bearing trees in the western part of the project area where two targeted owl surveys were conducted. Although, the diameter and height above ground of the hollows in those trees is not provided, it is likely that some of these hollows may offer suitable habitat to the forest owls or represent large roost trees for raptors. It is unclear in the BDAR were these areas of potential habitat considered in the impact assessment on these species.

BCD's survey requirements for large forest owls and other tree-hollow dependent birds are provided in Section 5.3 of the 'Threatened Biodiversity Survey and Assessment: guidelines for Developments and Activities: Working Draft' (Dated November 2004) (DEC, 2004). BCD's requirements of sampling strategy are described in Section 5.1 of the same guideline. Species-specific survey requirements may also be provided in the TBDC. BCD, therefore, recommends that further information is provided on the determination of the sampling design, survey limitations, habitat assessment, sampling methods and effort, for forest owls and the Eastern Osprey (including the location of the Eastern Osprey searches to be shown on a map).

Recommendation 4

BCD recommends that further details are provided on targeted searches of for large forest owls and the Eastern Osprey, and how they meet BCD survey requirements.

5. Any nest boxes on trees to be cleared must be replaced

The BDAR does not discuss the fate of nest boxes in trees that would be cleared if the project is approved. Figure 4-1a 'Fauna habitat sheet 1 of 2' in the 'Technical Paper 1 – Biodiversity Assessment Report: Newcastle Inner City Bypass: Rankin Park to Jesmond (Dated June 2018) by GHD (2018) shows at least 30 nest boxes that occurs in the western and central part of the project area.

BCD recommends that any nest box on a tree to be removed for this project is:

1. Subjected to a pre-clearing survey, conducted by an appropriately qualified and experienced ecologist, in which all signs of use and current occupancy are recorded;

2. Moved and secured to a tree within the adjacent forest that is outside of any development footprint (or if the nest box is unable to be moved that a new nest box that targets the same guild of animals is established in its place);

3. Removed under the supervision of appropriately qualified ecologist and that any native fauna occupants are assessed and either given to wildlife carers or relocated in a way that gives them the best chance of survival with the next box in a new location; and

4. That the movement of the next boxes is done in a way that meets the consent conditions for which they were established.

Recommendation 5

BCD recommends that all nest boxes in trees that may be cleared for this project are moved to trees in the adjacent forest that are outside of any development footprint.

6. Changes to some maps are required

Some maps in the BDAR do not fully meet BAM requirements. New maps are required to show the following features:

- Cadastre
- Strahler Stream Order (streams are shown on all nine Figures in the BDAR, but steam order is not shown)
- Native vegetation extent presented at no more than 1: 10,000 scale (Figure 2.1 'Site Map' is presented at 1:24,000 scale)

Recommendation 6

BCD recommends that maps are prepared that present the additional information required in by the BAM.

Flooding and flood risk

7. The waterways capacity to accommodate increases in flows has not been assessed

The proponent has not assessed the impacts on the bed and bank stability of watercourses adjacent to the project site.

Many of the watercourses within the vicinity of the project are currently undergoing active erosion and scouring, by way of active head cuts (refer to Water Quality and Watercourse Assessment, Newcastle Inner City Bypass Environmental Impact Assessment, RMS, 2016).

The proposed detention basins have the potential to adversely affect stream erosion by altering the downstream hydrology. The basins are likely to increase the duration of peak flow rates and the volume of discharge. The need for additional stabilisation measures at the detention basin outlets should be investigated further in detailed design.

City of Newcastle's Development Control Plan (DCP) 2012 requires an erosion assessment for first order streams. The assessment is required to demonstrate that the Stream Erosion Index (SEI) is no greater than 2, where the SEI is expressed as the ratio of 'post development flow exceeding the stream forming flow' to 'pre development flow exceeding the stream forming flow'. The requirements of this assessment are provided in S7.06 of the DCP and S4.15 of the Stormwater and Water Efficiency for Development Technical Manual.

Recommendation 7

BCD recommend that:

1. The proponent should assess the potential for stream bank erosion in receiving streams in accordance with the Newcastle DCP Stormwater & Water Efficiency for Development Technical Manual (City of Newcastle 2017).
2. The need for additional scour protection measures at the watercourse crossings should be assessed during detailed design.

8. Water quality impacts have not been assessed

The proposal has not assessed the impacts on coastal wetlands that could be affected by additional flows generated by the project.

The project is located at the headwaters of two sub-catchments of Dark Creek, which drain to sensitive wetland environments in the Hunter River floodplain, including the SEPP 14 and Ramsar wetland.

For catchments draining to coastal wetlands, City of Newcastle requires an assessment to consider changes to the drying and flooding hydrology of the wetland. The requirements of this assessment are provided in S7.06 of the DCP and Appendix 8 of the Stormwater and Water Efficiency for Development Technical Manual.

Recommendation 8

The proponent should assess the impacts of the proposal on coastal wetlands in accordance with the Newcastle DCP Stormwater & Water Efficiency for Development Technical Manual (City of Newcastle 2017).