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Mr Christopher Eldred

Senior Planning Officer
Regional Assessments
4 Parramatta Square
12 Darcy Street
Parramatta NSW 2150

By email: Christopher.Eldred@dpie.nsw.gov.au

Dear Mr Eldred

Biodiversity Development Assessment Report – Racecourse Road, Faunce Street and Young Street, West Gosford

I refer to the request, submitted on the 9 May 2023, asking for assessment of the Biodiversity Development Assessment Report for Busways at a site in Racecourse Road, Faunce Street and Young Street in West Gosford.

The Biodiversity and Conservation Division (BCD) Hunter Central Coast Branch's planning team has reviewed the small area Biodiversity Development Assessment Report, the arboricultural report and the bushfire assessment report. The branch's floodplain officers have reviewed the provided flood report, water cycle management plan, stormwater design and council's referral notes from the pre DA meeting.

BCD's recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**. If you have any further questions about this issue, please contact Karen Thumm, Senior Conservation Planning Officer, on 4927 3153 or at huntercentralcoast@environment.nsw.gov.au

Yours sincerely

Joe Thompson
Director Hunter Central Coast Branch
Biodiversity and Conservation Division
18/5/23

Enclosure: Attachments A and B

BCD's recommendations

Biodiversity Development Assessment Report – Racecourse Road, Faunce Street and Young Street, West Gosford

1. Surveys for the large-eared pied bat should be undertaken in accordance with the NSW survey guide for the BAM for 'Species credit' threatened bats and their habitats.
2. The demolition of buildings needs to be discussed in the BDAR as a prescribed impact in accordance with Chapter 6 of the BAM, and the polygon for the species should include the buildings.
3. BCD recommends the retention and enhancement of as many ecological values as possible; retention of trees and understorey, the use of the local PCTs in landscaping and the use of significant hollows wherever possible.
4. BCD requests clarification of the reference to masked owls and nest trees and roosts.
5. The design levels for the proposed development should be included in the model and it must be demonstrated that no change in flow direction, velocity or depth which causes hazard to the public road and footpath or other property occurs as a result of the proposed development. Central Coast Council generally requires no greater than 10mm impact offsite. Calculation of PMF flows need review.
6. The stormwater report needs to investigate Council's pipework at the proposed connection point to ensure that the system is not overloaded by the development causing additional concentrated flows in the public roadway.
7. Detailed analysis of true flow paths will be required to ensure that the subject development can be protected from overland flow entering the habitable spaces. Overland flow paths will need to be incorporated in the development to ensure they do not contribute to additional nuisance flows offsite or flooding of buildings on site.
8. It is recommended that alternative access routes be demonstrated to ensure the facility is able to provide bus services, especially school bus services, if the Racecourse Road Central Coast Highway intersection is flooded.
9. The stormwater retention and reuse components of Central Coast Council's DCP should be addressed by the civil design.
10. A full construction environmental management plan will be required including assessment of the need to construct sediment basins to manage runoff quality during construction.

BCD's detailed comments

Biodiversity Development Assessment Report – Racecourse Road, Faunce Street and Young Street, West Gosford

Biodiversity

1. Surveys for the large-eared pied bat should be undertaken in accordance with the NSW survey guide for the BAM for 'Species credit' threatened bats and their habitats in order to exclude the possibility of impacts on an SAI species

The BDAR report assumes presence of the large-eared pied bat, *Chalinolobus dwyeri*, and the removal of all its habitat on site. As the large-eared pied bat is a potential Serious and Irreversible Impact (SAII) species, BCD requires more information to be able to come to an informed decision about whether the impacts will constitute an SAI. The Threatened Biodiversity Data Collection (TBDC) states that derelict buildings are potential breeding sites for the large-eared pied bat and the BDAR states that the buildings on site will be demolished. No pre-clearance checks for breeding habitat in the buildings have been undertaken. Further, no surveys for this species have been carried out during their breeding season to indicate whether this species is breeding in the vicinity. Without this information it is not possible for BCD to adequately assess the impacts of this development on this potential SAI species. If the species is detected breeding in the area, a more detailed SAI assessment will be required.

Recommendation 1

Surveys for the large-eared pied bat should be undertaken in accordance with the NSW survey guide for the BAM for 'Species credit' threatened bats and their habitats.

2. The demolition of buildings needs to be discussed as a prescribed impact in accordance with Chapter 6 of the BAM

Chapter 6 of the Biodiversity Assessment Method (BAM) describes the demolition of buildings as a prescribed impact. Table 5.2 of the BDAR should therefore explain why the demolition of human made structures may or may not be a prescribed impact. Impacts are assumed in the following Tables 5.3 and 5.4, although the cause of the impacts are not recognised as being prescribed. This should be corrected.

The species polygon for the large-eared pied bat needs to include the buildings which will be demolished in accordance with 5.2.6 (Step 6 – habitat condition) of the BAM.

Recommendation 2

The demolition of buildings needs to be discussed in the BDAR as a prescribed impact in accordance with Chapter 6 of the BAM, and the polygon for the species should include the buildings.

3. BCD encourages the retention of as many trees and native mid- and understorey plants as possible in the landscaping

The BDAR report states that 113 trees will be removed, which is 80% of the trees on site, due to their condition, that they are an exotic/weed species or their position on the site. It is recommended that as many trees as possible are retained on site, in order to provide some on-going ecological value to the site, and that all landscaping uses plants from the two Plant Community Types (PCTs) on site. It is noted that only one side of the site is required to be

maintained as an Asset Protection Zone, which would restrict the amount of vegetation to be retained on the north-eastern side.

Currently there is minimal connectivity across the site, but the site would offer some value to birds using the area in transit to the reserve to the east and to areas in the surrounds. BCD encourages use of tree and understorey retention and landscaping to support the remaining ecological values of the site.

As hollow bearing trees have not been assessed it is difficult to determine whether there are significant hollows which could be retained for use as 'nest-boxes' in the remaining trees. It is noted that the proponent does not consider it possible to provide nest boxes, due to the lack of large trees to put them in. However, BCD requests that significant hollows are retained whenever possible.

Recommendation 3

BCD recommends the retention and enhancement of as many ecological values as possible; retention of trees and understorey, the use of the local PCTs in landscaping and the use of significant hollows wherever possible.

4. BCD requests clarification of the reference to masked owl nest trees and roosts

On page 49 of the BDAR there is a reference to masked owl nest trees and roosts. As there are no further references to masked owls or records or surveys, BCD requests clarification of this part of the report.

Recommendation 4

BCD requests clarification of the reference to masked owls and nest trees and roosts.

Flooding and flood risk

5. The provided overland flood study does not provide adequate impact assessment

The provided flood study does not appear to take into account the changes in level for the proposed development. It can be expected that overland flows from Faunce Street and Young Street will continue to pass onto the site and not be managed by the proposed stormwater infrastructure. Inspection on site showed that Young Street has no kerb and gutter and no stormwater drainage on the uphill side of this development. Offsite flows from the extended catchment can therefore be expected to flow onto the development site.

Very small scale maps are provided for pre and post development and these indicate that flows across Racecourse Road increase as a result of the development. The degree to which flows are increased is not able to be determined from the provided information. The study provided appears to show an increase in flow depth and hazard across Racecourse Road. The post development PMF (probable maximum flood) map indicates a depth by velocity product in excess of 0.6 across Racecourse Road in one location which would equate to a minimum of H3 hazard, unsafe for vehicles, children and the elderly. It can be expected that flows which are not captured by the on site stormwater will flow down each access driveway and over the footpath and roadway towards the Entertainment Grounds Development. The access driveway ramps to the development may also be hazardous during a local flood event.

The post development assessment has also assumed that the internal stormwater system will be fully effective at capturing all flows within the site and has not considered any blockage. The PMF assessment has subtracted the 1% flows by assuming that the on site detention system will be fully functional. This is unlikely to be the case because on grade pits are largely

ineffective in intense rainfall events due to limited inlet capacity. The treatment of PMF flows needs to be justified.

Recommendation 5

The design levels for the proposed development should be included in the model and it must be demonstrated that no change in flow direction, velocity or depth which causes hazard to the public road and footpath or other property occurs as a result of the proposed development. Central Coast Council generally requires no greater than 10mm impact offsite. Calculation of PMF flows need review.

6. The existing stormwater pipework in Racecourse Road is unlikely to be adequate to serve the development.

The stormwater design indicates that flows on the development site will be collected and piped to a large on site detention tank in the southwestern corner. This is proposed to be discharged via a 750mm pipe directly into Council's stormwater infrastructure. The size of the pipework in Council's system is not disclosed on plan. Surge at the pit is also considered likely given the proposed pit geometry. A single on site detention pit and single discharge point may not be appropriate for a development of this size.

Recommendation 6

The stormwater report needs to investigate Council's pipework at the proposed connection point to ensure that the system is not overloaded by the development causing additional concentrated flows in the public roadway.

7. The development has not considered how buildings will be protected from offsite flows

Significant cut is proposed on the eastern and northern side of the development in the area where offsite overland flows are likely to enter the development. The proposed freeboard of 150mm is unlikely to be adequate to protect buildings from offsite flows.

Recommendation 7

Detailed analysis of true flow paths will be required to ensure that the subject development can be protected from overland flow entering the habitable spaces. Overland flow paths will need to be incorporated in the development to ensure they do not contribute to additional nuisance flows offsite or flooding of buildings on site.

8. The traffic impact assessment has not considered the level of service of the Racecourse Road, Central Coast Highway intersection

The corner of Racecourse Road and Central Coast Highway is a known trouble spot for flooding from local catchment, Brisbane Waters and Narara Creek. This location is frequently cut by flood waters. The flood waters from Brisbane Waters and Narara Creek do not impact the development site however the development relies on Racecourse Road as its prime access point. The other surrounding roads are narrow and steep and may not provide alternative routes which are suitable for large rigid vehicle access in the event that Racecourse Road is cut. This could significantly impact service levels and may be very problematic for school bus services in the event that Racecourse Road is not trafficable in a southerly direction.

Recommendation 8

It is recommended that alternative access routes be demonstrated to ensure the facility is able to provide bus services, especially school bus services, if the Racecourse Road Central Coast Highway intersection is flooded.

9. The development has not addressed the on-site retention requirements of the Central Coast Council DCP

Central Coast Council DCP chapter 3.11 requires retention and reuse of stormwater on site to mitigate increased volumes of discharge from development. These components are also important for stormwater quality. The provided civil design proposes proprietary treatment products with no WSUD or retention or reuse of stormwater included. Stormwater from this site will discharge into Brisbane Waters via combination of piped flow and overland flow down Racecourse Road.

Recommendation 9

The stormwater retention and reuse components of Central Coast Council's DCP should be addressed by the civil design.

10. The development requires significant bulk earthworks and has not provided adequate detail for management of stormwater during construction.

Drawings show cut in excess of 7 metres in portions of the site and fill up to 3metres to achieve design levels. The erosion and sediment control commitments are generic in nature and not suited to a site with this degree of earthworks.

Recommendation 10

A full construction environmental management plan will be required including assessment of the need to construct sediment basins to manage runoff quality during construction.