



Office of  
Environment  
& Heritage

Our Ref: DOC18/824482  
Your Ref: SSD 9575

Ms Karen Harragon  
Director Social and Other Infrastructure Assessments  
Department of Planning and Environment  
GPO Box 39  
Sydney NSW 2001

Attention: Ms Aditi Coomar, Principal Planner

Dear Ms Harragon

**Re: Public exhibition of State Significant Development Application for New Tweed Valley Hospital (SSD 9575)**

Thank you for your letter dated 29 October 2018 about the public exhibition of the State Significant Development Application for the New Tweed Valley Hospital (SSD 9575) 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, historic heritage, estuaries and flooding or Aboriginal cultural heritage, several issues are apparent with the assessment for biodiversity. These issues are discussed in detail in **Attachment 1** to this letter.


The OEH recommends that:

1. The Biodiversity Development Assessment Report (BDAR) and Biodiversity Assessment Method (BAM) assessment be revised to address the issues identified in Attachment 1 - Appendix 1 to this letter, and the amended BAM assessment and revised BDAR submitted to the OEH for review. This may occur as part of the Response to Submissions Report.
2. Prescribed impacts must be better described and the measures to avoid and mitigate these impacts must be demonstrated in the revised BDAR.
3. The OEH should be provided with an opportunity to review the Biodiversity Management Plan and its sub plans.

4. The areas of retained vegetation in the north of the development site that are coastal wetlands under the Coastal Management SEPP be appropriately rehabilitated and protected in perpetuity. This may include establishment of a Biodiversity Stewardship site, zoning for environmental conservation, and/or the preparation and implementation of a Vegetation Management Plan.
5. The DPE consider the adequacy of the bushfire protection measures in consultation with the Rural Fire Service to ensure that there is agreement on the requirements for bushfire protection.
6. Should a greater bushfire asset protection zone (APZ) be required, or if there is inadequate space for the APZ on the subject site without the need for further vegetation removal or modification, then the OEH advises that the BDAR would need to be revised and resubmitted to fully consider the impacts on biodiversity values.

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](mailto:rachel.lonie@environment.nsw.gov.au).

Yours sincerely

 4 December 2018

**DIMITRI YOUNG**  
**Senior Team Leader Planning, North East Branch**  
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Contact officer: RACHEL LONIE  
6650 7130

Enclosures:  
Attachment 1: Detailed OEH Comments – New Tweed Valley Hospital (SSD 9575)

## Attachment 1: Detailed OEH Comments – New Tweed Valley Hospital (SSD 9575)

### Background

The development site is at 771 Cudgen Road Cudgen located on part of Lot 102 DP 870722. The proposal involves a development application for a new Level 5 hospital for the Tweed area which includes:

- A Concept Proposal comprising:
  - a maximum building envelope for a nine-storey hospital with basement, rooftop helipad and plant rooms;
  - a maximum building envelope for a building accommodating supporting services;
  - a maximum floor area of approximately 65,000sqm;
  - the site layout, internal road layout, site access arrangements and car parking areas; and
  - a landscape masterplan identifying open areas and concept public domain treatments.
- Concurrent Stage 1 works comprising:
  - identification of the construction compound;
  - augmentation and connection of permanent services for the future hospital;
  - tree removal within the footprint of the construction works;
  - bulk earthworks and recycling of materials to establish the site levels;
  - piling and associated works;
  - stormwater infrastructure and associated retaining walls;
  - rehabilitation and revegetation of part of the wetland area; and
  - construction of temporary internal roads for use during construction.

### 1. Biodiversity

The OEH has reviewed the Biodiversity Development Assessment Report (BDAR), the submitted Biodiversity Assessment Method (BAM) assessment and supporting documentation. The BDAR finds the project will result in the removal of a total 1 ha of vegetation in Plant Community Type (PCT) 1302 Zones 4 and 8. Vegetation in Zones 1,2,3,5,6 and 9 will be retained. However, the BDAR states the project will not result in any direct impacts requiring offsets as the Vegetation Integrity (VI) scores for Zone 4 (10.6 ha) and Zone 8 (16.8 ha) fall below the threshold for PCTs that are not representative of a Threatened Ecological Community (TEC) or associated with threatened species habitat (i.e. VI  $\geq$  20).

The BDAR states a 100m buffer is to be retained to the existing vegetation except zone 5, as well as one *Ficus obliqua* near the existing residence. A 10m wide vegetated buffer is also proposed to be retained and enhanced along the property boundaries, but this is not continuous and at one point along the boundary is within the 50m wide bushfire Asset Protection Zone (APZ) to the proposed hospital building.

#### BAM assessment tool and BDAR

The OEH has identified several technical issues as detailed in Appendix 1. These matters have been discussed with the consultant, Greencap, and will be addressed in a revised assessment. This includes that the development footprint (including roads, APZs, sediment basins and any construction zones) has not been mapped or adequately described in the BDAR. Any vegetation within the development footprint should be regarded as a total loss, and this would include areas identified for ongoing landscaping.

#### *Recommendation*

1. The BDAR and BAM assessment be revised to address the issues identified by OEH in Appendix 1 below. The amended BAM assessment will be submitted to the OEH for review. This may occur as part of the Response to Submissions Report.

### Prescribed impacts

The BDAR notes the project has the potential to result in prescribed biodiversity impacts as per 3.2.4 of the BAM but it only considers impacts on water quality. Although reference is made to a future Biodiversity Management Plan that will address these matters, the OEH notes that adequate consideration has not been given to these matters.

As the BDAR notes the stormwater management system is at a concept development stage only. The preliminary works for the project include sediment basins as described in Stage 1 Early Works AR-DWG-10-100 by Bates Smart. No buffers are provided between the sediment basins and the wetland vegetation. The sediment basins are described as bio-retention swales in the MUSIC modelling but there are insufficient details on their design and management. The Landscaping Proposal does not map or describe these basins or any vegetation treatment for them. It is also not clear how bio-retention basins will be consistent with the bushfire protection measures.

Further information is required to demonstrate that that impacts on the vegetation communities and habitat values in the adjoining wetland areas from changes to water quality and water quantity have been adequately avoided and mitigated.

The impacts of development that have not been considered or have been deferred for further consideration to a future Biodiversity Management Plan and its sub plans (Vegetation Management Plan, Water Quality Management Plan and Fauna Management Plan) include:

- the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range
- impacts on movement of threatened species (such as koalas) that maintains their lifecycle or
- impacts of vehicle strikes on threatened species of animals or on animals that are part of a threatened ecological community.

The BDAR must provide details on these other prescribed biodiversity impacts and demonstrate how impacts have been avoided and mitigated. This should include consideration of movement of animals such as koalas, impacts of vehicle strikes and connectivity. It is noted that there are numerous koala records nearby, including on the roadside adjacent to Zone 1 and near the existing house.

Consideration should be given to how connectivity could be maintained through the site including for koalas. A corridor along the western boundary could be considered to reduce vehicle strikes but would need to be designed in light of the development footprint and APZs.

### *Recommendations*

2. Prescribed impacts must be better described and the measures to avoid and mitigate the impacts must be demonstrated in the revised BDAR.
3. The OEH should be provided with an opportunity to review the Biodiversity Management Plan and its sub plans.

### Coastal SEPP and vegetation retention and protection

The site contains both Coastal Wetlands and a proximity area for coastal wetlands. *State Environmental Planning Policy (Coastal Management) 2018* (the Coastal SEPP) therefore applies.

Under the Coastal SEPP, development consent must not be granted to development on land identified as “proximity area for coastal wetlands” or “proximity area for littoral rainforest” unless the consent authority is satisfied that the proposed development will not significantly impact on:

- (a) the biophysical, hydrological or ecological integrity of the adjacent coastal wetland or littoral rainforest, or

- (b) the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland or littoral rainforest.

In addition to the considerations under the BAM, the EIS should demonstrate how the Coastal SEPP has been addressed including considering the impacts on the proximity areas of stormwater detention and the design, construction and maintenance of sediment ponds.

Retained vegetation should be protected and managed over time. This would include weed management. Buffers to retained vegetation should be provided. The preferred mechanism for this is the establishment of a Biodiversity Stewardship site. If this option cannot be pursued (noting it is unlikely to be required to offset the development) an E2 Environmental Conservation zone should be considered and a Vegetation Management Plan (VMP) should be prepared and implemented to manage the land.

#### *Recommendation*

4. The areas of retained vegetation in the north of the development site that are coastal wetlands under the Coastal Management SEPP be appropriately rehabilitated and protected in perpetuity. This may include establishment of a Biodiversity Stewardship site, zoning for environmental conservation, and/or the preparation and implementation of a Vegetation Management Plan.

#### Bushfire Assessment

This development is a Special Fire Protection Purpose (SFPP) Development as listed under the *Rural Fires Act 1997*. The OEH has considered the findings of the *Bushfire Assessment SSD Concept Proposal–Tweed Valley Hospital –Cudgen* (Bushfire Assessment) by Land and Fire Assessments Pty Ltd (October 2018), as it affects the extent of vegetation that can be protected on the site and the amount of vegetation assessed as a loss for the purposes of the biodiversity assessment. Figure 19 of the BDAR identifies the vegetation to be retained and vegetation to be removed.

The Bushfire Assessment has determined that the required APZ is 50 metres from the classified vegetation edge based on the classification of the vegetation as Forested Wetlands – Coastal Swamp Forest and a flat slope with reference to Table A2.6-Appendix 2 of the *Planning for Bushfire Protection Guidelines 2006* (PBP 2006). However, vegetation along the western boundary is part of the mapped Coastal Wetlands. This area has not been identified in Figure 5 that describes the APZ distances. The APZ along the western side of the hospital building will be less than 50 m as the Masterplan Landscape Plan (Appendix D) shows the distance from the building as being only 44 m.

Figure 5 describes how the ‘effective slope’ was determined but does not provide contour or distance information that was used to conclude the slope is 0 degrees. A greater effective slope will result in a greater APZ requirement under the PBP 2006. Information provided does not indicate if the Rural Fire Service has given its support to the proposed bushfire measures. It should be confirmed that no clearing would be required in the adjoining Coastal Wetland to provide bushfire protection for the proposed development.

We also note the new *Planning for Bushfire Protection Guidelines PRE-RELEASE ISSUED August 2018* (PBP 2018) is in a ‘pre-release’ stage. The NSW Government is planning that these guidelines will be enacted concurrent with the National Construction Code in mid-2019. Once PBP 2018 becomes the legislated version of the document, applicants can no longer use PBP 2006 for development applications. It is noted the distances for APZs under the new guidelines would be greater.

The OEH has undertaken its assessment on the understanding that no vegetation will be required to be cleared either in the development site or adjoining properties to establish the required APZ. It is noted that APZs cannot be required on adjoining properties.

### *Recommendations*

5. DPE consider the adequacy of the bushfire protection measures in consultation with the Rural Fire Service to ensure that there is agreement on the requirements for bushfire protection.
6. Should a greater Bushfire asset protection zone (APZ) be required, or if there is inadequate space for the APZ on the subject site without the need for further vegetation removal or modification, then the OEH advises that the BDAR would need to be revised and resubmitted to fully consider the impacts on biodiversity values

## **2. Aboriginal cultural heritage**

The OEH has reviewed the *Tweed Valley Hospital Aboriginal Cultural heritage and Archaeological Report* prepared for NSW Health Infrastructure by Niche Environment and Heritage dated 11 October 2018.

The OEH notes the assessment undertaken to identify, describe and document Aboriginal cultural heritage values within the project area was undertaken in consultation with Aboriginal people in accordance with the SEARs. The OEH acknowledges the assessment did not identify any Aboriginal cultural heritage values within the study area and concluded that the proposed activity should proceed guided by four (4) precautionary recommendations. The OEH supports this approach.

## **3. Flood risk assessment**

The OEH has reviewed the *Tweed Valley Hospital – Flooding and Coastal Hazards Assessment* (BMT October 2018) (Appendix W). As it notes the operational parts of the Hospital site are located well above the Probable Maximum Flood (PMF) level.

Flood levels on adjacent land to north are:

- 20 year ARI ~ 2.3m AHD;
- 100 year ARI ~ 3.2m AHD;
- Probable Maximum Flood (PMF) level ~ 8.0m AHD.

From the *Civil and Structural Report* (Bonacci October 2018) (Appendix X) the proposed finished floor level for the lowest level is RL 18.75m AHD.

The assessment of access to the proposed hospital site demonstrates that the hospital site has:

- access points to the hospital site / lot that are above the PMF flood event
- good access to populated areas in the 100-year ARI flood event to the south
- poor access to populated areas to the north with main roads being cut in 20-year ARI event.

Overall, the site is considered to be very satisfactory from a flood perspective as the operational portion of the hospital site is located above the PMF level as it meets the objectives and criteria of the NSW Floodplain Development Manual. There is also more than adequate freeboard so that future increases due to climate change will not impact the operational areas of the complex. Although the access to the north is flood affected, this is an issue that would be present for any development site chosen and the hospital will have access to a network of unaffected roads to the south.

## Appendix 1 BAM assessment and BDAR review – technical issues

1. Only vegetation zones that will be impacted should be used in the final version of the submitted BAM tool noting this will result in a reduced list of predicted species. However, the entire development site should be assessed as per 3.1.1.2 which does require plots, assigning PCTs and associated Vegetation Integrity (VI) scores and determining habitat suitability for threatened species (Step 4). In practice this means doing a first run BAM assessment (parent case) to consider all the biodiversity values across the development site and demonstrate avoid and minimise but the final submitted BAM (child case) will only have data entered for impacted vegetation zones.
2. The development footprint (including roads, APZs, sediment basins and any construction zones) has not been mapped or adequately described in the BDAR. We note the construction drawings all include the 'trunk line to trees' as the development footprint. Greencap to include this information and a shapefile of the development footprint as well as the development site (i.e. hospital building) in the revised BDAR and provide this and map data to the OEH for review.
3. Any vegetation within the development footprint should be regarded as a total loss in the BAM, and this would include areas identified for ongoing landscaping.
4. If Rainforest species are in the windrows, then this community will be considered as a Threatened Ecological Community.
5. 'Derived' is defined in the Operational Manual and this definition does not accord with the use in the BDAR for the vegetation communities. Greencap to review the description for these vegetation zones.
6. The wrong Mitchell landscape has been selected in the BAM tool. This should be amended to Lamington Volcanic Slopes.
7. The cover calculation does not include all vegetation within the 1500m buffer such as significant areas of vegetation along the coastline. This should be reviewed and if vegetation is not included in the cover estimate further discussion in a revised BDAR is required.
8. Further discussion is required for Zone 7 about why this is not considered to be the Threatened Ecological Community Swamp Oak Floodplain Forest.
9. Further discussion is required for why Zone 9 (Exotic Vegetation) did not have any plot data as BAM requires such if any native species are present.
10. The BDAR describes areas that did not require assessment comprise of approximately 16 ha of cleared farm land currently under cultivation, the custard apple tree orchard, unsealed roadways, the house and other areas of non-native vegetation that have no biodiversity values present. Zone 9 also has not been surveyed or assessed.
11. Areas that did not require assessment constituted approximately 70% of the entire site. The BAM requires assessments where any native species is present. The BDAR needs to describe why these areas were not surveyed.
12. For Step 4 (ecosystem species) in the BAM tool all 'derived' vegetation zones have been unchecked. The BAM tool user guide states that these can only be unchecked if indicated habitat constraints and geographic limitation are not relevant.
13. A possible record for the vulnerable listed *Macadamia tetraphylla* was identified during the site visit by OEH. Discussion in the BDAR is required on outcomes of the herbarium enquiry.
14. Vegetation mapping as shown in Figure 19 is poor. Tree canopies have not been included in the polygon, there is an individual tree (*E. grandis*) in mapped Zone 1, and polygons do not meet up properly. Greencap to revise mapping and vegetation descriptions as necessary in revised BDAR.
15. Koala survey needs to be done in accordance with OEH survey guidelines in all vegetation zones that will be impacted if this species is generated by the BAM as a species credit species.

