



Your ref: RZ/2/2021  
Our ref: DOC23/427117-12

Lynda Hirst  
Principal Strategic Planner  
Central Coast Council

By email: [lynda.hirst@centralcoast.nsw.gov.au](mailto:lynda.hirst@centralcoast.nsw.gov.au)

Dear Lynda,

**Request for advice – Tuggerah Gateway Planning Proposal – Central Coast LGA**

I refer to your planning portal request, dated 18 May 2023 seeking input into the Tuggerah Gateway Planning Proposal. This proposal directly relates to 42 hectares (ha) of land currently zoned a combination of RU6 Transition, MU1 Mixed Use and C2 Environmental Conservation at 60 Wyong Road, Tuggerah (Lot 2 DP1056960 and Lot 3 DP1084221). This proposal seeks to rezone the majority of the RU6 Transition land to R1 General Residential, with the remainder to be rezoned to C2 Environmental Conservation.

Biodiversity and Conservation Division (BCD) has reviewed the proposal and provides recommendations in **Attachment A** and detailed comments are provided in **Attachment B**. If you have any further questions about this issue, please contact Jayme Lennon, Senior Conservation Planning Officer, on 9585 6935 or at [huntercentralcoast@environment.nsw.gov.au](mailto:huntercentralcoast@environment.nsw.gov.au)

Yours sincerely

A handwritten signature in black ink that reads 'Joe Thompson'.

Joe Thompson  
**Director Hunter Central Coast Branch  
Biodiversity and Conservation Division**

23 June 2023

Enclosure: Attachments A and B

## BCD's recommendations

### Tuggerah Gateway Planning Proposal

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1. The Biodiversity Certification Application (BCA) should be formally submitted for review to ensure that the BCA and planning proposal assessment processes align. The alignment of these processes is shown in Biodiversity Certification Fact Sheet #4 which can be found at:

<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme/biodiversity-certification/biodiversity-certification-support>

2. The proposal should be amended to show further avoidance of impacts to high biodiversity values.

The scoping proposal should utilise the data obtained in the biodiversity assessments to consider how the proposed structure plan could become consistent with strategy 6.1-6.5 of the *Central Coast Regional Plan 2041*.

3. Further information is required regarding parameters used in the flood assessment including whether changed land use has been accounted for and whether the topography adopted post development matches that used in other reports.
4. Climate change assessment should be included in flood modelling and may be used to set available development areas.
5. The stormwater plan, civil works plan and flood report should be checked to ensure that consistent data is used for land use, topography and critical infrastructure such as channel profiles, culverts and site outlet works.
6. The proposed waterway should not be considered in any open space calculation and may need protective fencing due to the steep banks and high hazard flows predicted in this area.
7. The proponent needs to demonstrate that the proposed water treatment facilities and onsite detention (OSD) basins are feasible for engineering design and that they can be protected from damage in use and able to be maintained.
8. The proposal should demonstrate that water quality requirements can be met for all parts of the development.
9. The impact of future cut and fill works on development sites may not be able to be managed by modest erosion and sediment controls typical for single site development. The impact of ongoing sediment load needs to be considered in bioretention design and may require pre-treatment of stormwater via settling ponds.

## BCD's detailed comments

### Tuggerah Gateway Planning Proposal

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#### Biodiversity

1. The Biodiversity Certification Application (BCA) is yet to be formally lodged

BCD has conducted a preliminary review of a BCA and Biodiversity Certification Assessment Report (BCAR) (dated 27 June 2022) for the Tuggerah Gateway Site; however the BCA is yet to be formally submitted to BCD. In addition, the BCAR provided with the scoping proposal pre-dates the version provided to BCD for review previously (8 March 2022).

BCD notes that a full review of the BCA and accompanying BCAR will only occur once these have been formally submitted.

#### Recommendation 1

The BCA should be formally submitted for review to ensure that the BCA and planning proposal assessment processes align. The alignment of these processes is shown in *Biodiversity Certification Fact Sheet #4* which can be found at:

<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme/biodiversity-certification/biodiversity-certification-support>

2. Consideration of the avoid, minimise and offset hierarchy for biodiversity values has not been adequately demonstrated.

The Biodiversity Report and BCAR submitted with the scoping proposal do not adequately consider the principles of the avoid, minimise and offset hierarchy of the *Biodiversity Offset Scheme* and are inconsistent with strategy 6.1-6.5 of the Central Coast Regional Plan 2041. The proposed structure plan (Figure 2, Biodiversity Report) and site map (Figure 1, BCAR) demonstrates minimal avoidance, with a minor expansion of an existing C2 Environmental Zone in the south east of the site and the addition of a C2 zone in the north west of the site which is not considered developable and is an impractical shape for future management due to the intrusion of the proposed certification area for the construction of utilities.

High biodiversity values, including creek lines and approximately 2.15 hectares (ha) of Threatened Ecological Communities assessed as present onsite have not been avoided or considered for protection or for biodiversity corridor creation.

#### Recommendation 2

The proposal should be amended to show further avoidance of impacts to high biodiversity values.

The scoping proposal should utilise the data obtained in the biodiversity assessments to consider how the proposed structure plan could become consistent with strategy 6.1-6.5 of the *Central Coast Regional Plan 2041*.

## Flooding and flood risk

### 3. Parameters used in the flood assessment have not been disclosed

BCD has reviewed the Flood Assessment report prepared by Cardno (dated March 2022). The report appears to indicate that filling can be placed to expand the developable area. The report also seems to indicate that adjustments to the creekline through the site to create detention can mitigate the impact of fill and sites can be created that are above the flood planning level. The report has also demonstrated beneficial off site impact for the 1% AEP event.

The report does not disclose any of the modelling parameters and only provides mapping of results. It is unclear if the adopted topography is consistent with that used in other reports and whether the change in impervious area as a result of changed land use has been accounted for in the modelling. BCD is not able to determine if the flood model adequately depicts the flood risk or flood impact of the development.

#### Recommendation 3

Further information is required regarding parameters used in the flood assessment including whether changed land use has been accounted for and whether the topography adopted post development matches that used in other reports.

### 4. Climate Change has not been included in the flood assessment

The proposal will open up a new development area which will be in place for a time frame which may be impacted by climate change. Central Coast Council is still developing their climate change policy however it is recommended that a climate change assessment be incorporated in the modelling. The impact of climate change on suitability of the land and on offsite impacts should be considered.

#### Recommendation 4

Climate change assessment should be included in flood modelling and may be used to set available development areas.

### 5. Stormwater management plans and flood assessment are inconsistent

The stormwater management plan by Infrastructure and Development Consulting shows marginally different layout of the subdivision when compared to the flood assessment. In particular the plan includes stormwater treatment and stormwater detention facilities in areas which are shown as flood impacted and may clash with commitments made in the flood report. It appears that the highly modified waterway is being used in the flood model to mitigate the impacts of filling on the site however other stormwater features are using the same space. In addition, the stormwater modelling assumes the onsite detention will be able to drain freely. This is not supported by the associated flood modelling.

It is unclear if the concept grading plan and cut and fill plans have been used to inform the post development topography in the flood model. Where different consultants prepare management plans it is important that consultants work together and that consistent values are used. The on site detention report indicates that pre and post development flows are matched by the proposed mitigation works but makes no comment on capacity of the downstream infrastructure to accommodate these flows.

#### Recommendation 5

The stormwater plan, civil works plan and flood report should be checked to ensure that consistent data is used for land use, topography and critical infrastructure such as channel profiles, culverts and site outlet works.

## 6. Concept plans do not reflect the works required on site

Figure 4.2 of the flood assessment indicates a green corridor through the main drainage channels on site. This is misleading. In order to achieve the required storage volumes and to manage the high depths and erosive velocities which will occur on the site the channel will be an engineered channel with steep gabion banks and rock channel floor. It is not likely to have any riparian or open space values and will be a hazardous waterway which is likely to require exclusion fencing. The waterway should be considered to be infrastructure and not included in any open space calculations. The profiles shown on the concept grading plan by IDC Drawing number 21-008-DA-C2000 are a better representation of the likely outcome in the waterway.

### Recommendation 6

The proposed waterway should not be considered in any open space calculation and may need protective fencing due to the steep banks and high hazard flows predicted in this area.

## 7. On site detention and pollution control are in combined structures

The onsite detention (OSD) ponds are located over the top of proposed raingarden infrastructure ponds. This is not considered best practice because all stormwater flows need to be routed through the raingarden. Raingardens are best placed in offline locations so that they are not subject to high flows which may cause scour or damage and so that ponding times over a facility are minimised. Consideration should be given to providing separate facilities.

It may also not be viable for a raingarden to be constructed to adequate standards to act as a significant storage facility. Raingardens are required to have permeable base layers which may impact the stability of OSD embankments.

The locations of the raingarden/OSD on the side of the major water course on site may also subject the facility to flood flows in larger events or in the event of blockage of downstream culverts. No maintenance areas have been allowed for in the design and maintenance of the structure would require closure of the public road.

### Recommendation 7

The proponent needs to demonstrate that the proposed water treatment facilities and OSD basins are feasible for engineering design and that they can be protected from damage in use and maintained.

## 8. Some areas on site have not been provided with water quality treatment

The stormwater report has deferred water treatment in some areas of the site to be provided on individual sites by future developers. The subdivision should provide sufficient infrastructure to meet the required water quality without deferring works to later developers.

### Recommendation 8

The proposal should demonstrate that water quality requirements can be met for all parts of the development.

## 9. Bioretention basins are likely to be ineffective due to ongoing sediment loads

The concept grading plan shown on drawing number 21-008-DA-C200 E shows that development sites produced within the subdivision will remain steep. Development preferences in new housing estates are frequently project homes which require flat sites. This will require cut, fill and retaining works on most sites within the subdivision. Earthworks of this scale is likely to lead to ongoing site disturbance of a significant scale for the full duration of development of the subdivision for housing. If bioretention basins are constructed at

subdivision stage, it is considered likely that they will be rendered ineffective due to ongoing sediment load.

### Recommendation 9

The impact of future cut and fill works on development sites may not be able to be managed by modest erosion and sediment controls typical for single site development. The impact of ongoing sediment load needs to be considered in bioretention design and may require pre-treatment of stormwater via settling ponds.