



Our ref: DOC20/698560-34

Your ref: SSI-8660

Mr Bruce Zhang

Senior Environmental Assessment Officer
Industry Assessments
Department of Planning, Industry and Environment
bruce.zhang@planning.nsw.gov.au

Dear Mr Zhang

Response to Submissions Report – Kariong Sand and Soil Supplies Facility (SSD-8660)

I refer to your email dated 26 August 2020 in which Industry Assessments invited Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (the Department) to comment on the Response to Submissions Report for the proposed Kariong Sand and Soil Supplies project (SSD-8660), located at 90 Gindurra Road, Somersby (Lot 4 DP 227279); within the Central Coast local government area.

BCD has reviewed the '*Response to Submissions Report Kariong Sand and Soil Supplies Sand, Soil and Building Materials Recycling Facility - SSD8660*' (prepared by Jackson Environment and Planning, dated 30 July 2020), including relevant appendices, annexures and attachments in relation to impacts on biodiversity and flooding.

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 Steven Cox, Senior Team Leader Planning, on 4927 3140 or via email at rog.hcc@environment.nsw.gov.au

Yours sincerely

JOE THOMPSON
Director Hunter Central Coast Branch
Biodiversity and Conservation Division

Date: 24 September 2020

Enclosure: Attachments A and B

BCD's recommendations

Kariong Sand and Soil Supplies Facility (SSD-8660)

Biodiversity

1. BCD is satisfied that the Response to Submissions report has satisfactorily addressed our previous comments and no further biodiversity assessment is required.
2. BCD recommends that a vegetation monitoring program be implemented to monitor the long-term survival of *Melaleuca biconvexa* on the site, to ensure the proposed mitigation measures are successful.

Water Floodplains and Coasts

3. BCDs request that the proponent provide the MUSIC-link modelling results report and the MUSIC file (*.sqz) for review. The proponent should also review the post-development evaporation losses and harvested water values used in the water balance.
4. BCD recommends that the proponent develops a maintenance manual that instructs plant operators how to maintain the bioswale, water quality pond and floating wetland and keep them functioning through the life of the facility.

BCD's detailed comments

Kariong Sand and Soil Supplies Facility (SSD-8660)

Biodiversity

1. Biodiversity and Conservation Division is satisfied with the biodiversity assessment

Biodiversity and Conservation Division's (BCD) review of the Environmental Impact Statement (EIS) for the project contained the following recommendations (correspondence dated 5 April 2019, reference DOC19/76562-11):

- PCT1783 be changed to PCT1643.
- The Biodiversity Assessment Report should adequately assess and justify that the areas of non-native vegetation do not require further assessment under the Framework for Biodiversity Assessment.
- Targeted surveys should be undertaken for *Caladenia tessellata*, *Diuris bracteata*, *Hibbertia procumbens* and *Prostanthera junonis* in accordance with OEH 'NSW Guide to Surveying Threatened Plants' (OEH 2016) and at their appropriate flowering times. If surveys are not undertaken, an expert report must be prepared in accordance with Section 6.6.2 of the FBA guidelines (OEH 2018).
- All targeted flora surveys should be conducted in accordance with OEH 'NSW Guide to Surveying Threatened Plants' (OEH 2016).
- The impact of changes to hydrology resulting from the proposal should be assessed for the *Melaleuca biconvexa* community adjacent to the site and appropriate mitigation measures should be provided where required.

BCD has reviewed the Response to Submissions report and verifies that all our recommendations have been addressed and a revised Biodiversity Assessment Report (BAR) has been supplied.

As a result of BCD's previous comments on the vegetation communities, Narla Environmental has revised the plant community types (PCT) and their associated vegetation zones for the subject site. This has resulted in a slight reduction in the ecosystem credit obligations in comparison to the previous assessment report. BCD has reviewed the justifications for the change in the PCTs and their condition status and considers them to be consistent with the FBA methodology.

Recommendation 1

BCD is satisfied that the Response to Submissions report has satisfactorily addressed our previous comments and no further biodiversity assessment is required.

2. BCD recommends monitoring of the *Melaleuca biconvexa* population

BCD previously recommended that potential changes to hydrology resulting from the proposal should be re-assessed for the *Melaleuca biconvexa* as there were concerns that some proposed infrastructure was going to divert water away from where this species occurs. Narla Environmental has proposed several mitigation measures to ensure the species' long-term survival:

- treated water from the proposed operations on the subject site will be used to irrigate land draining to where *Melaleuca biconvexa* occurs, aiming to supply the consistent average annual volume of water that would have flowed to this community under predevelopment conditions
- once water is discharged from the site onto adjoining bushland, a 50-metre wide level spreader will spread the water out onto adjoining bushland. The soils on this site are sandy soils with the likelihood that most flows would be absorbed and flow below the surface to form an important subsurface flow to sustain the downhill remnant vegetation (as per the Sustainability Workshop in 2019).

BCD recommends annual monitoring of the population is undertaken to ensure that the proposed mitigation measures are effective. This program should set up permanent plots that measure the number of plants (including cover and abundance), their density and age structure (i.e. seedlings, juveniles and adults), area extant (i.e. area population covers), and their overall condition / health. The monitoring should occur for at least ten (10) years and an annual report be provided to the consent authority outlining the results. The monitoring program should also identify an appropriate trigger for offsetting impacts to *Melaleuca biconvexa* if the mitigation measures are not effective.

Recommendation 2

BCD recommends that a vegetation monitoring program be implemented to monitor the long-term survivorship of *Melaleuca biconvexa* on the site, to ensure the proposed mitigation measures are successful.

Flooding and flood risk

The former Office of Environment and Heritage (OEH) comments on water, soils and flooding and flood risk, dated April 2019 are no longer relevant.

The proposal seeks to construct a sand, soil and building materials recycling facility. The site's receiving catchment lies in the Brisbane Water National Park and has a significant ecological and recreational value. The increases in stormwater runoff and pollutant loads will need to be mitigated as they have a high potential to damage the surrounding lands.

In April 2019, OEH and the EPA raised numerous concerns about the proponent's Water Cycle Management Plans. In the response to submissions, the proponent undertook a new water cycle assessment that supersedes all previous ones.

3. Insufficient information has been provided to assess the site water balance

The proponent has used the MUSIC water quality modelling software to assess the quality of water discharged from the site. The MUSIC-link modelling results report and the MUSIC file (*.sqz) are required to assess the adequacy of the modelling parameters and the validity of the site water balance.

Evapotranspiration losses appear to have been underestimated. The evaporation loss calculations in Section 6.1.3 of the Water Cycle Impact Assessment and Soil and Water Management Plan (Appendix I) suggests annual losses of around 46 megalitres (ML), based on a 905mm/annual evaporation depth over an area of 5.1 hectares. However, Table 15 states that the post-development losses are 34ML.

The site water balance may not have correctly modelled water harvested from the detention pond for dust suppression. The assessment states that stockpiles will be irrigated to suppress dust. Excess water will drain through the stockpiles to the impermeable geomembrane liner underlying the site and return to the pond. The circulation of irrigation water is not shown in the post development MUSIC model configuration diagram (Figure 7).

Recommendation 3

BCD requests that the proponent provide the MUSIC-link modelling results report and the MUSIC file (*.sqz) for review. The proponent should also review the post-development evaporation losses and harvested water values used in the water balance.

4. A maintenance manual is required for the bioswales, floating wetlands and the water quality pond

Grassed bioretention swales, a floating wetland and a water quality pond have been included in the surface water treatment system for the proposal. The swales and the pond are designed to be a depositional tool and over time, their depth will reduce due to sedimentation and maintenance will be required to reinstate their design depths. The floating wetland will require ongoing removal of weeds and rubbish and inspection of the anchoring system.

Maintenance staff will be required to conduct on-going monitoring, maintenance and management of the proposed system.

Recommendation 4

BCD recommends that the proponent develops a maintenance manual that instructs plant operators how to maintain the bioswale, water quality pond and floating wetland and keep them functioning through the life of the facility.