Department of Planning and Environment

Your ref: SSD-10432
Our ref: DOC23/528736-26

James McDonough
Team Leader, Resource Assessments
Energy, Resources and Industry
Department of Planning and Environment

By email: james.mcdonough@dpie.nsw.gov.au

Dear Mr McDonough

Stone Ridge Quarry Project (SSD-10432) (Port Stephens)

I refer to your request for advice on the Major Projects Portal on 16 June 2023, in which Resource Assessment Division of the Department of Planning and Environment (the Department) invited Biodiversity and Conservation Division (BCD) to provide advice in relation to the proposed hard rock quarry, known as Stone Ridge Quarry (the Project), located within Wallaroo State Forest at Balickera, NSW.

BCD has reviewed the Project Environmental Impact Statement (EIS), including relevant appendices in relation to impacts on biodiversity (including Matters of National Environmental Significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)) and flood risk assessment. BCD has also reviewed spatial data for the project that were provided by the proponent. BCD conducted a site inspection on 11 July 2023 to inform this assessment.

BCD notes that the Project site includes areas of high value biodiversity such as:

- threatened species habitat for species such as the Koala, Squirrel Glider, Brush-tailed Phascogale, Rusty Greenhood
- endangered ecological communities (EECs)
- a regional fauna corridor being surrounded by large areas of intact native vegetation within the Wallaroo State Forest, with direct connection to Wallaroo National Park, Karuah National Park and Karuah State Conservation Area.

BCD's recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B.** BCD's MNES assessment is provided in **Attachment C**.

If you have any further questions about this issue, please contact Giorginna Xu, Senior Conservation Planning Officer, on 4927 3185 or at huntercentralcoast@environment.nsw.gov.au

Yours sincerely

Joe Thompson
Director Hunter Central Coast Branch
Biodiversity and Conservation Division

19/7/23

Enclosure: Attachments A, B and C

Attachment A

BCD's recommendations

Stone Ridge Quarry Project (SSD-10432) (Port Stephens)

1. Targeted microbat breeding surveys within Balickera Tunnel should be undertaken. Impacts to roosting microbats within Balickera Tunnel should be assessed in accordance with section 8.3.2 and section 9.1 of the Biodiversity Assessment Method 2020 (BAM). Measures to mitigate and manage impacts should be provided per section 8.4 of the BAM. If impacts cannot be adequately measured, BCD recommends an adaptive management plan is provided.

2. Amend the BAM Calculator (BAM-C) to include PCTs 762, 1618 and 1716 as commensurate with EPBC Act listed Threatened Ecological Community (TEC) Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregion

3. The BDAR should be consistent with the requirements of the BAM. Species polygons should be prepared for eastern cave bat (*Vespadelus troughtoni*) and southern myotis (*Myotis Macropus*). BAM-C should be amended accordingly.

4. The BDAR should include further justification for the selection of PCT 762 in accordance with the NSW Plant Community Type (PCT) classification as described in the BioNet Vegetation Classification.

5. Additional information should be provided to confirm threatened species surveys were conducted in accordance with relevant guidelines and Threatened Biodiversity Database Collection (TBDC). If additional information cannot be provided, additional surveys should be undertaken.

6. The BDAR should include adequate measures to mitigate loss of habitat connectivity and increased vehicle strike for threatened species on site (i.e: koala). Mitigation measures may include, but are not limited to, installing artificial connectivity measures to establish connections between habitat and favoured movement corridors.

7. Additional survey and assessment should be undertaken in accordance with the BAM for land identified within groundwater drawdown zones. The assessment should include comment on the impact of drawdown and increased water flow from sediment basins for areas identified as high probability Ground Dependent Ecosystems (GDEs).

8. The BDAR should be amended to include survey and assessment for hollow-dependent threatened fauna in all PCTs with large hollow hollow-bearing trees.

9. The following actions should be added to the clearing protocols outlined in section 8.4.3 of the BDAR:

    - scheduling the clearing works for a time of year to avoid the breeding seasons of identified potential threatened species and other fauna that may breed on site

    - comparative habitat assessments should be conducted on clearing sites and proposed release sites to ensure that habitat features are available in the released sites

- release sites should be identified and mapped prior to clearing and all appropriate approvals granted by the landholders

- tree clearing should not be conducted above 35°C in the interests of animal welfare communication should occur with rescue agencies and local veterinarians prior to the commencement of clearing to confirm the availability of resources for any captured/injured fauna that is unable to be released

- clearing should be conducted sequentially and directionally towards areas of refuge to prevent the creation of vegetation islands

- position felled trees so that hollows are facing upwards and out to allow fauna to escape overnight

10. The BDAR should provide a detailed appraisal of how injured and uninjured animals will be treated, particularly with respect to relocation to nearby habitat. The BDAR should discuss what the potential impacts of any relocations / translocations of displaced fauna (particularly threatened species) may be on adjoining habitat and what measures (e.g: monitoring) will be employed to minimise any detrimental effects on existing faunal populations that utilise such areas.

11. The sediment basin SW1 should not be located within a waterway.

Attachment B

BCD's detailed comments

Stone Ridge Quarry Project (SSD-10432) (Port Stephens)

Biodiversity

1. Potential impacts to roosting microbats have not been adequately assessed

Eco Logical Australia (2021) has identified that the Balickera Tunnel provides important habitat for threatened microbat species. Table 6.1 of the BDAR notes there is a potential that vibration from blasting and heavy vehicle traffic may disrupt microbat roosting behaviour. The Blasting Impact Assessment in Appendix 6 of the EIS identifies likelihood of falling of accumulated dust and potential for displacement of small loose pieces of rock. Table 8.3 of the BDAR concludes a low likelihood of the Project depleting the quality of roosting within Balickera Tunnel with minimal justification (i.e: no damage to the tunnel structure).

Targeted breeding surveys should be undertaken as outlined for 'Species credit' threatened bats and their habitats in the NSW survey guide for the Biodiversity Assessment Method Consideration should also be given to potential serious and irreversible impacts (SAII). Previous surveys conducted for works on the Balickera Tunnel itself are not considered applicable for this project as those impacts have already occurred and the dynamics of how microbats use the area will have changed.

Impacts to roosting microbats within Balickera Tunnel should be assessed in accordance with section 8.3.2 of the BAM. Measures to mitigate and manage impacts should be provided per section 8.4 of the BAM. If impacts cannot be adequately measured, BCD recommends an adaptive management plan is provided.

Recommendation 1

Targeted microbat breeding surveys within Balickera Tunnel should be undertaken. Impacts to roosting microbats within Balickera Tunnel should be assessed in accordance with section 8.3.2 and section 9.1 of the BAM. Measures to mitigate and manage impacts should be provided per section 8.4 of the BAM. If impacts cannot be adequately measured, BCD recommends that an adaptive management plan is provided.

2. Threatened Ecological Community Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions EEC

Table C2.3 in Appendix C of the BDAR states plant community types (PCTs) 762, 1618 and 1716 all correspond to the Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions EEC listed under the EPBC Act. However, this is not recorded within the Biodiversity Assessment Method (BAM) Calculator (BAM-C).

Recommendation 2

Amend the BAM-C to include PCTs 762, 1618 and 1716 as commensurate with EPBC Act listed TEC Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregion.

3. Species polygon and offset required for species detected on site

In accordance with section 4.4.1 of the BAM Ops Manual – Stage 1, if any past surveys of the subject land have recorded the presence of a threatened species or it has been incidentally observed on site, the species must be assessed in accordance with Steps 2–6 in BAM Subsections 5.2.2 to 5.2.6, irrespective of the criteria in Table 11. Eastern cave bat and southern myotis were recorded during past surveys, as such, a species polygon should be prepared for these species. The BAM-C should be amended accordingly.

Recommendation 3

The BDAR should be consistent with the requirements of the BAM. Species polygons should be prepared for eastern cave bat and southern myotis. BAM-C should be amended accordingly.

4. Further justification for PCT 762 selection required

Section 4.2 of the BAM outlines that the assessor must identify and map the distribution of PCTs, or the most likely PCTs, and all threatened ecological communities (TECs) on the subject land. The identification must be in accordance with the NSW PCT classification as described in the BioNet Vegetation Classification. The vegetated area identified as PCT 762 in the BDAR does not include any cabbage gum (*Eucalyptus amplifolia*) recorded on site. The vegetated area does include a high prevalence of forest red gum (*Eucalyptus tereticornis*). Section 4.2 should be amended to include justification to exclude PCT 1594 or PCT 1749 selection for this vegetation.

Recommendation 4

The BDAR should include further justification for the selection of PCT 762 in accordance with the NSW PCT classification as described in the BioNet Vegetation Classification.

5. Additional information is required to demonstrate compliance with threatened species target survey requirements

Threatened species surveys must be conducted as per section 5.3 of the BAM, which requires surveys to comply with the Department's threatened species survey guides and the Threatened Biodiversity Data Collection (TBDC). Sufficient evidence should be provided within the BDAR to demonstrate compliance with the relevant guideline and the TBDC, including geospatial coordinates and tracks, dates, timing, person hours, weather conditions and photographs. It is recommended additional information is provided or additional surveys are conducted for the following groups:

- microbats
- raptors
- forest owls
- glossy black-cockatoo (*Calyptorhynchus lathami*)
- amphibians
- red helmet orchid (*Corybas dowlingii*)

Recommendation 5

Additional information should be provided to confirm threatened species surveys were conducted in accordance with relevant guidelines and TBDC. If additional information cannot be provided, additional surveys should be undertaken.

6. Further measures should be included to mitigate prescribed impacts

The Project is located within a regional fauna corridor identified in *Fauna Corridors for North East NSW* dataset (DPE 2010). The Project will contribute to cumulative impact on habitat patch size and crossing width within Italia Road and the Boral Seaham Quarry. The Project will also increase risk of vehicle strike along Pacific Highway and Italia Road. Loss, modification and fragmentation of habitat, and vehicle strike are identified as a key threatening process for the koala.

The BDAR should include adequate measures to mitigate loss of habitat connectivity and increased vehicle strike for threatened species on site (i.e: koala). Mitigation measures may include, but not be limited to, installing artificial connectivity measures to establish connections between habitat and favoured movement corridors.

Recommendation 6

The BDAR should include adequate measures to mitigate loss of habitat connectivity and increased vehicle strike for threatened species on site (i.e. koala). Mitigation measures may include, but are not limited to, installing artificial connectivity measures to establish connections between habitat and favoured movement corridors.

7. Further consideration should be given to drawdown impacts on Groundwater Dependant Ecosystems and species

Figure 4.4 of the BDAR identifies the modelled extent of groundwater drawdown in Stage 7 and 8 occurring outside of the Project Area, with drawdown predicted in an area predicted as having a high probability of groundwater dependent ecosystem (GDE) occurrence. Section 8.3.7 of the BDAR states potential impacts to GDEs include alterations in species composition and richness to both increased depth and reduced quality of available groundwater.

Given the above, it is likely that biodiversity impacts associated with groundwater drawdown extend beyond the “Disturbance Area” identified within the BDAR. Furthermore, groundwater obligate threatened species and communities are recorded or assumed likely to occur within the modelled stage 7 and 8 drawdown areas. As such, additional survey and assessment should be undertaken over land within the modelled extent of drawdown in Stage 7 and 8 in accordance with the BAM. The BDAR should include comment on the impact of drawdown and discharge of water for areas identified as high probability GDEs.

Recommendation 7

Additional survey and assessment should be undertaken in accordance with the BAM for land identified within groundwater drawdown zones. The assessment should include comment on the impact of drawdown and changes to surface hydrology that may affect GDEs.

8. Amend the assessment for hollow-dependent threatened fauna to include all PCTs with large hollows

The BDAR states that 130.75 hours were dedicated to diurnal threatened fauna surveys, including stick nest and breeding hollow search. From this effort, the BDAR identifies six (6) large hollow hollow-bearing trees within the Project Area. Table 5.3 of the BDAR outlines that PCT 1590 and PCT1619 were excluded for assessment for hollow-dependent threatened

fauna due to no suitable hollow-bearing trees present. However, during a site inspection, BCD identified multiple large hollow hollow-bearing trees not included within the BDAR.

The BDAR should therefore be amended to include the following:

- a figure displaying all hollow-bearing trees
- hollow-bearing tree data (size of hollow, number of hollows, species of tree)
- an assessment for hollow-dependent threatened fauna in all PCTs with large hollow hollow-bearing trees, including targeted surveys for hollow-dependent threatened fauna

Recommendation 8

The BDAR should be amended to include survey and assessment for hollow-dependent threatened fauna in all PCTs with large hollow hollow-bearing trees.

9. Additional fauna management measures should be considered for the vegetation clearing protocols

Section 8.4.3 of the BDAR provides information on the management measures to implemented to minimise the impacts of the vegetation clearing on fauna.

BCD considers that a number of additional measures should be included to minimise risk of impacts to threatened fauna. These protocols are described below.

Recommendation 9

The following actions should be added to the clearing protocols outlined in section 8.4.3 of the BDAR:

- scheduling the clearing works for a time of year to avoid the breeding seasons of identified potential threatened species and other fauna that may breed on site
- comparative habitat assessments should be conducted on clearing sites and proposed release sites to ensure that habitat features are available in the released sites
- release sites should be identified and mapped prior to clearing and all appropriate approvals granted by the landholders
- tree clearing should not be conducted above 35°C in the interests of animal welfare
- communication should occur with rescue agencies and local veterinarians prior to the commencement of clearing to confirm the availability of resources for any captured/injured fauna that is unable to be released
- clearing should be conducted sequentially and directionally towards areas of refuge to prevent the creation of vegetation islands
- felled trees should be positioned so that hollows are facing upwards and out to allow fauna to escape overnight.

10. How will captured fauna be relocated?

The BDAR does not address the displacement of wildlife that will occur during the tree-felling process. As such BCD considers that further details are required regarding the handing of fauna caught during this process. The BDAR should consider what happens to (i) uninjured animals on the day of capture (e.g. uninjured animals should be released on the day of capture

into nearby suitable secure habitat and should not be held for extended periods of time), and (ii) injured animals, (e.g. they will be taken to the nearest veterinary clinic for assessment and treatment).

BCD notes that relocation / translocation of captured threatened and non-threatened fauna may have impacts on feed resources, potential disease implications, and social disruption of other animals already using release areas, however, this approach is typically supported. The proponent should specify in detail what will happen to displaced threatened fauna, and if it proposes relocation / translocation, then the BDAR should provide an appraisal of what the potential impacts of such relocations / translocations may be and what measures (e.g. monitoring) will be employed to minimise any detrimental effects on existing faunal populations and adjacent habitat.

Any relocation / translocation of wildlife should be done in accordance with Translocation operational policy (DPIE 2019), and translocation of threatened species will likely require a licence under section 132 of the National Parks and Wildlife Act 1974 or a threatened species licence, under Part 2 of the BC Act if species are being relocated to areas outside the approved development consent area. The BDAR needs to include these details.

Recommendation 10

The BDAR should provide a detailed appraisal of how injured and uninjured animals will be treated, particularly with respect to relocation to nearby habitat. The BDAR should discuss what the potential impacts of any relocations / translocations of displaced fauna (particularly threatened species) may be on adjoining habitat and what measures (e.g. monitoring) will be employed to minimise any detrimental effects on existing faunal populations that utilise such areas.

Flooding and flood risk

11. The proposed sedimentation basins appear to be located within a waterway

The proposed plans suggest that sedimentation basin SW1 is to be constructed in a 2nd order stream. This is not in line with best practice, which is to locate pollution controls offline, away from waterways. This is to prevent pollutants from being remobilized by high flows and to protect property, people, and the environment in the event of a failure.

Recommendation 11

The sediment basin SW1 should not be located within a waterway.

A ttachment C