



Our ref: DOC19/994556-9

Your ref: SSI 9837

Mandana Mazaheri

Senior Environmental Assessment Officer
Energy and Resources – Planning and Assessment
Department of Planning, Industry and Environment

Mandana.Mazaheri@planning.nsw.gov.au

Dear Ms Mazaheri

Newcastle Power Station – Environmental Impact Statement

I refer to your email dated 15 November 2019 seeking Biodiversity and Conservation Division (BCD) comment on the Newcastle Power Station proposal located at 1940 Pacific Highway, Tomago within the Port Stephens Council area.

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 Brendan Mee, Senior Conservation Planning Officer on 4927 2730 or via email at rog.hcc@environment.nsw.gov.au

Yours sincerely

A handwritten signature in black ink that reads 'N91 Davis'.

NICOLE DAVIS
A/Senior Team Leader – Planning
Hunter Central Coast Branch
Biodiversity and Conservation Division
9 December 2019

Enclosure: Attachments A and B

BCD's recommendations

Newcastle Power Station – Environmental Impact Statement

Biodiversity

1. BCD recommends that vegetation zones 1 and 3 within PCT 1590 are mapped as Lower Hunter Spotted Gum – Ironbark Forest EEC consistent with mapping of vegetation zone 2 and that this is reflected in the BAM calculator.
2. BCD recommends that the BDAR is amended to include regent honeyeater and swift parrot as ecosystem credit species.
3. BCD recommends that the BDAR and BAM calculator inputs are amended to include those ecosystem credit species that have been excluded from vegetation zones 3 and 5 based on woodland habitat features not being present.
4. BCD recommends that the BDAR provide further justification for removal of the pale-headed snake as a candidate species credit species or further evidence that targeted surveys have been undertaken for the species.
5. BCD recommends that Table 9 of the BDAR includes all confirmed candidate species credit species and that further evidence is provided that targeted surveys have been undertaken for all of these species.
6. BCD recommends that the BDAR is amended to include details of the weather conditions when targeted surveys were undertaken and provide further justification for the adequacy of targeted surveys that require specific weather conditions.
7. BCD recommends that the BDAR is amended to include further details on the avoidance and minimisation requirements of the BAM, with reference to the requirements outlined in the BAM Operational Manual – Stage 2 and consideration of the moderate-good quality EEC vegetation in the north and east of the site.

Aboriginal cultural heritage

8. BCD recommends that the ACHAR be revised to clearly identify the nature and extent of the proposed activity and its potential to impact upon Aboriginal cultural heritage values associated with AHIMS site #38-4-2020 (NPS01).
9. The ACHAR should be revised to demonstrate that harm avoidance or conservation outcomes have been considered for the proposed activity, in accordance with Section 2.6 of the Guide to Investigating, Assessing and Reporting on Aboriginal cultural heritage in NSW (OEH 2011).
10. BCD recommends that a strategy for mitigating impacts to Aboriginal cultural heritage be developed and be integrated into the Aboriginal Cultural Heritage Management Plan (ACHMP), to be developed for the project.
11. BCD recommends that the AHIMS status of Aboriginal sites located within the project area are updated to reflect the current status of the sites.

12. A copy of the draft ACHAR must be made available to each of the RAPs for review and comment prior to finalisation of the ACHAR.
13. BCD recommends that a consent condition is created that requires an ACHMP be prepared in consultation with the RAPs and BCD prior to ground disturbing works being undertaken for the project.
14. BCD recommends that a care agreement be prepared for the project and integrated into the ACHMP.
15. BCD recommends that a long term management procedure for Aboriginal objects be prepared for the project and integrated into the ACHMP.

Flooding and flood risk

16. The proponent should provide a volumetric water balance that includes details of discharge volumes and frequencies at specific discharge sites and review the need for management of discharge sites to ensure impacts such as scour are mitigated.
17. The proponent should provide details of how operational water management ponds will be managed and consider risks of evaporation ponds discharging potentially contaminated water to off-site areas during storm events, or through leachate to groundwater.

Ramsar wetland

18. BCD requests further information on discharge volumes/frequencies and management of operational water storages, as discussed in more detail under recommendations 16 and 17.

BCD's detailed comments

Newcastle Power Station – Environmental Impact Statement

Biodiversity

1. Further justification is required on vegetation zones 1 and 3 being excluded as EEC

The Biodiversity Development Assessment Report (BDAR) identifies three vegetation zones within Plant Community Type (PCT) 1590: Spotted Gum – Broad-leaved Mahogany – Red Ironbark shrubby open forest – Red Ironbark. Despite these vegetation zones being mapped as the same PCT, the BDAR only classifies vegetation zone 2 as part of the Lower Hunter Spotted Gum – Ironbark Forest (LHSGIB) Endangered Ecological Community (EEC), based on vegetation zone 1 and 3 lacking the signature dominant canopy and mid-storey species to meet the criteria.

The NSW Scientific Committee Final Determination for LHSGIB EEC (31/05/2019) does not require all of the characteristic species to qualify as EEC. It states that “at any one time, above ground individuals of some species may be absent but the species may be represented below ground in the soil seed bank or as dormant structures such as bulbs, corms, rhizomes, rootstocks or lignotubers.” The BDAR does not provide sufficient justification for exclusion of vegetation zones 1 and 3 as EEC.

Recommendation 1

BCD recommends that vegetation zones 1 and 3 within PCT 1590 are mapped as Lower Hunter Spotted Gum – Ironbark Forest EEC consistent with mapping of vegetation zone 2 and that this is reflected in the BAM calculator.

2. The BDAR should be amended to include regent honeyeater and swift parrot as ecosystem credit species

The regent honeyeater and swift parrot have been excluded as ecosystem credit species based on the development site not being within a mapped important habitat area. These species are dual ecosystem/species credit species and the mapped important habitat areas for these species refers to only species credit habitat. These species should therefore be included as ecosystem credit species.

Recommendation 2

BCD recommends that the BDAR is amended to include regent honeyeater and swift parrot as ecosystem credit species.

3. Potential ecosystem credit species have been excluded within the BDAR

A number of potential ecosystem credit species have been excluded from vegetation zones 3 and 5 based on woodland habitat features not being present. These include speckled warbler, brown treecreeper, varied sittella, spotted-tailed quoll, hooded robin, black-chinned honeyeater, turquoise parrot, scarlet robin, grey-crowned babbler and diamond firetail. Section 6.4.1.10 of the Biodiversity Assessment Method (BAM) outlines that the assessor must use the habitat constraints identified in the Threatened Biodiversity Data Collection (TBDC) to assess the habitat on the subject land and that this step is not applicable to a species where no habitat constraints are listed for that species in the TBDC. There are no habitat constraints listed within the TBDC for these species and for many of these species, paddock trees are important as they link

remnant foraging habitat. These species should therefore be included as ecosystem credit species within vegetation zones 3 and 5.

Recommendation 3

BCD recommends that the BDAR and BAM calculator inputs are amended to include those ecosystem credit species that have been excluded from vegetation zones 3 and 5 based on woodland habitat features not being present.

4. The pale-headed snake has been excluded as a species credit species within the BDAR

The BDAR states that the pale-headed snake has been removed as a candidate species credit species based on “degraded habitat due to fragmentation and lack of hollows within the development site”. There are no habitat constraints listed within the TBDC for pale-headed snake. The BDAR also outlines that there are hollows on site. The BAM calculator files suggest that this species was considered a species credit species and surveys were undertaken, but this is not reflected in the BDAR. Further justification is required for removal of pale-headed snake as a candidate species credit species within the BDAR or demonstration that targeted surveys have been undertaken.

Recommendation 4

BCD recommends that the BDAR provide further justification for removal of the pale-headed snake as a candidate species credit species or further evidence that targeted surveys have been undertaken for the species.

5. Confirmed species credit species have been omitted from Table 9

A number of confirmed candidate species credit species have been omitted from Table 9 - ‘Survey of threatened fauna species within the BDAR, including bush stone-curlew, gang-gang cockatoo, glossy black-cockatoo, barking owl, powerful owl, red-backed button-quail, masked owl, eastern pygmy-possum, common planigale, giant dragonfly. The BAM calculator files suggest that these species were considered as species credit species and surveys undertaken, however it is unclear within the BDAR whether targeted surveys have been undertaken for all of these species.

Recommendation 5

BCD recommends that Table 9 of the BDAR includes all confirmed candidate species credit species and that further evidence is provided that targeted surveys have been undertaken for all of these species.

6. Weather conditions during targeted surveys have not been outlined

Weather conditions for targeted surveys have not been outlined in the BDAR, as required by the BAM. This is important to inform the adequacy of targeted surveys for a number of species. For example, the probability of detecting frogs is closely linked to recent rain, including wallum froglet, green and golden bell frog and green-thighed frog.

Recommendation 6

BCD recommends that the BDAR is amended to include details of the weather conditions when targeted surveys were undertaken and provide further justification for the adequacy of targeted surveys that require specific weather conditions.

7. Further information should be provided on avoidance and minimisation measures

Sections 1.1 and 1.2 of the BAM Operational Manual – Stage 2 outline the requirements for how avoidance and minimisation of biodiversity impacts should be demonstrated within a BDAR. This includes:

- alternatives for the location and design of the development have been reasonably considered, where evidence to justify the final setting is provided in the form of estimated increases in cost (as dollar values) or resources (e.g. additional 10 km of pipeline was required for option X, re-routing roads/powerlines would add an additional X% to the project budget) for alternatives
- details of constraints that have influenced the selection of the development's location
- constraints for matters other than biodiversity that might restrict the availability of alternative sites or footprints (e.g. areas of flooding, proximity to neighbours with odour or noise concerns, zonings)
- consideration of whether the areas of impact are focused away from threatened species habitat (e.g. karst systems, waterbodies, corridors) or vegetation in good condition (i.e. has a high VI score)
- whether the proposed development makes the best use of space (e.g. overlapping infrastructure to minimise impact area).

The BDAR does not include these details and further information is required on measures taken to avoid and minimise impacts on biodiversity values. For example, there is a proposed evaporation pond and other ancillary infrastructure in the north and east of the site over an area of PCT 1590 in moderate-good condition that are part of the Lower Hunter Spotted Gum – Ironbark Forest EEC. The BDAR does not include information on possible avoidance of these areas with reference to the requirements outlined in the BAM Operational Manual – Stage 2.

Recommendation 7

BCD recommends that the BDAR is amended to include further details on the avoidance and minimisation requirements of the BAM, with reference to the requirements outlined in the BAM Operational Manual – Stage 2 and consideration of the moderate-good quality EEC vegetation in the north and east of the site.

Aboriginal cultural heritage

8. The impacts on Aboriginal cultural heritage values in the project area are not adequately assessed

BCD reviewed the *Environmental Impact Statement, Newcastle Power Station Project* (EIS) prepared by Aurecon in November 2019 and the *Aboriginal Cultural Heritage Assessment Report, Newcastle Power Station* (ACHAR) prepared by ERM (30 October 2019).

The ACHAR identifies that there are three Aboriginal Heritage Information Management System (AHIMS) registered sites located within the proposed project area. One of these sites, artefact scatter AHIMS site #38-4-2020 (NPS01) was not assessed in the ACHAR, as the site lies outside the area under development by the current proponent (AGL). Section 9.2 of the ACHAR states “Impact to the artefact scatter NPS01 is not discussed in the ACHAR, as it is outside the area being developed by AGL” and in “an area subject to development by RMS” (ERM 2019:64-65).

It is BCD's understanding that the proposed development at the location of NPS01 is to be assessed and managed independently from the current proposal, by a separate proponent (RMS). Notwithstanding this, BCD notes inconsistencies in the disturbance footprint proposed by AGL and assessed across various disciplines for the project EIS. Disturbance footprint plans for the current proposal suggest that AHIMS site #38-4-2020 (NPS01) may be subject to direct impacts from development associated with the current AGL proposal.

The nature and extent of the proposed activity in the vicinity of AHIMS site #38-4-2020 (NPS01) should be clarified. If the proposed activity does extend into the area where AHIMS site #38-4-2020 (NPS01) is recorded, then an impact assessment addressing the nature and extent of the proposed impact on the Aboriginal cultural heritage values of AHIMS site #38-4-2020 (NPS01) must be undertaken in consultation with the Representative Aboriginal Parties (RAPs), in accordance with Sections 2.5 of the *Guide to Investigating, Assessing and Reporting on Aboriginal cultural heritage in NSW* (OEH 2011).

Recommendation 8

BCD recommends that the ACHAR be revised to clearly identify the nature and extent of the proposed activity and its potential to impact upon Aboriginal cultural heritage values associated with AHIMS site #38-4-2020 (NPS01).

9. The Aboriginal cultural heritage assessment must address avoiding impact or identifying conservation outcomes of Aboriginal cultural heritage values

The ACHAR does not demonstrate any attempt to avoid harm to Aboriginal cultural heritage values or consider sustainable conservation outcomes. Consideration of harm avoidance or conservation outcomes within the ACHAR must be done in consultation with Aboriginal people and be informed by a clear understanding of the Aboriginal cultural heritage values for the project area. BCD is not satisfied that the ACHAR adequately considers harm avoidance or considers whether conservation outcomes could be achieved for the project.

Recommendation 9

The ACHAR should be revised to demonstrate that harm avoidance or conservation outcomes have been considered for the proposed activity, in accordance with Section 2.6 of the *Guide to Investigating, Assessing and Reporting on Aboriginal cultural heritage in NSW* (OEH 2011).

10. Mitigation measures for impacts to Aboriginal cultural heritage must be considered

The ACHAR identifies that there are two AHIMS Registered Aboriginal sites #38-4-2021 (NPS02) and #38-4-2022 (NPS03) located within the proposed project area that will be subject to impacts by the proposed development.

The ACHAR does not adequately detail the proposed methodology to mitigate the impacts to Aboriginal cultural heritage within the project area. Specifically, the ACHAR must address whether the Aboriginal objects can remain *insitu* or whether they will need to be salvaged.

Recommendation 10

BCD recommends that a strategy for mitigating impacts to Aboriginal cultural heritage be developed and be integrated into the Aboriginal Cultural Heritage Management Plan (ACHMP), to be developed for the project.

11. AHIMS site cards for Aboriginal sites #38-4-2021 and #38-4-2022 must be updated

BCD understands the two AHIMS Registered sites #38-4-2021 (Isolated find and PAD) and #38-4-2022 (Isolated find and PAD) have been subject to a test excavation program under the

Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010). The AHIMS database must be updated to reflect the current site status of Aboriginal sites located within the project area, to show which sites have been subject to impacts from test excavation.

For any impacted sites, ASIRs must be submitted for inclusion on the AHIMS database. The ASIRs must be completed by a suitably qualified archaeologist and show the total count of the artefacts identified at each site.

Recommendation 11

BCD recommends that the AHIMS status of Aboriginal sites located within the project area are updated to reflect the current status of the sites.

12. Aboriginal community consultation requirements for the project area must be fulfilled

Aboriginal community consultation requirements have not yet been met. BCD understands that the proponent has completed Stages 1 - 3 Aboriginal community consultation and that further community consultation with the RAPs is ongoing to fulfil the requirements of Stage 4, as per the *Aboriginal Cultural Consultation Requirements for Proponents* (DECCW 2010).

BCD recommends that full community consultation process requirements be completed by the provision of the final ACHAR to the RAPs and their input documented in accordance with the *Aboriginal Cultural Consultation Requirements for Proponents* (DECCW, 2010).

Recommendation 12

A copy of the draft ACHAR must be made available to each of the RAPs for review and comment prior to finalisation of the ACHAR.

13. An Aboriginal cultural heritage management plan must be prepared and implemented for the project

An ACHMP must be developed for the project in consultation with the RAPs and to the satisfaction of BCD, to manage and mitigate extant Aboriginal sites and objects located within the project area.

BCD recommends that an ACHMP be developed in consultation with the RAPs and to the satisfaction of BCD, prior to any ground disturbance works being undertaken.

Recommendation 13

BCD recommends that a consent condition is created that requires an ACHMP be prepared in consultation with the RAPs and BCD prior to ground disturbing works being undertaken for the project.

14. A care agreement for all salvaged Aboriginal objects must be prepared and implemented for the project

A temporary storage location must be determined in consultation with the RAPs in order that a temporary keeping place can be used to analyse and catalogue Aboriginal objects recovered during the salvage program, pending any agreement reached about their long-term management.

Recommendation 14

BCD recommends that a care agreement be prepared for the project and integrated into the ACHMP.

15. Long term management of Aboriginal objects in the project area

Consultation with the RAPs is required to determine long term care and control of any Aboriginal objects from the project area including any extant sites. The long-term care and control procedure must be integrated into the ACHMP, to be prepared for the project.

Recommendation 15

BCD recommends that a long-term management procedure for Aboriginal objects be prepared for the project and integrated into the ACHMP.

Flooding and flood risk

16. Further details of discharge volumes and frequencies are required

It is not clear how the site's drainage and water treatment system have been designed and if predicted impacts associated with the development are accurate. A volumetric water balance has not been provided (including details of volumes and frequencies of discharge to receiving environments), as is required under the Secretary's Environmental Assessment Requirements.

Recommendation 16

The proponent should provide a volumetric water balance that includes details of discharge volumes and frequencies at specific discharge sites and review the need for management of discharge sites to ensure impacts such as scour are mitigated.

17. Details on management of evaporation ponds is required

The proposed operational drainage system will use evaporation ponds to manage process water, although it is not clear how these ponds will be managed and if they will be susceptible to overflow into receiving environments during storm events, or if they pose a risk to groundwater through infiltration of contaminants.

Recommendation 17

The proponent should provide details of how operational water management ponds will be managed and consider risks of evaporation ponds discharging potentially contaminated water to off-site areas during storm events, or through leachate to groundwater.

Ramsar wetland

18. Further details on potential for impacts to downstream wetland areas is required

BCD has reviewed the proposed water management system for the Newcastle Power Station and is generally satisfied that flooding and surface water impacts to adjoining and downstream wetland areas, including the Hunter Estuary Wetlands Ramsar site will be minimal. Recommendations 16 and 17, however request more detail around discharge volumes/frequencies and management of operational water storages, as the information provided in the EIS on these matters does not sufficiently demonstrate that impact predictions are accurate and that proposed management measures are appropriate.

Recommendation 18

BCD requests further information on discharge volumes/frequencies and management of operational water storages, as discussed in more detail under recommendations 16 and 17.