

Mr Gary Brassington
Manager Approvals
Illawarra Metallurgical Coal
ILLAWARRA COAL HOLDINGS PTY LTD

25/01/2022

Dear Mr Brassington

**Dendrobium Mine Extension Project (SSI-33143123)
Amendment to Planning Secretary's Environmental Assessment Requirements**

I refer to the Secretary's Environmental Assessment Requirements (SEARs) issued for the Dendrobium Mine Extension Project on 23 December 2021.

As you are aware, the project was determined to be a controlled action under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 13 January 2022.

The project will be assessed under the Bilateral Agreement between New South Wales and the Commonwealth. I have therefore enclosed the Commonwealth's assessment requirements for the Matters of National Environmental Significance relevant to the project.

The Department has modified the SEARs for the project in accordance with section 5.16(4) of the NSW *Environmental Planning and Assessment Act 1979*, by adding the Commonwealth assessment requirements as Attachment 3.

You must ensure that your Environmental Impact Statement adequately addresses the SEARS issued on 23 December 2021, and the supplementary requirements provided as Attachment 3.

Your SEARs will expire two years from the date of issue (or the date they were last modified), unless the Planning Secretary has granted an extension.

If you require further information, please contact Gabrielle Allan on 02 9585 6078 or gabrielle.allan@dpie.nsw.gov.au.

Yours sincerely,



Jessie Evans
Director
Resource Assessments

as delegate for the Planning Secretary

Enclosed: Attachment 3 – Commonwealth Assessment Requirements

ATTACHMENT 3

Commonwealth Department of Agriculture, Water and the Environment assessment requirements

Guidelines for preparing assessment documentation relevant to the *Environment Protection and Biodiversity Conservation Act 1999* for proposals being assessed in accordance with the bilateral assessment agreement between the Australian and NSW governments (*Amending Agreement No.1, 2020*)

Dendrobium Mine Extension Project, Mount Kembla, NSW (EPBC 2021/9115) (SSI-33143123)

Introduction

1. On 13 January 2022, a delegate of the Minister for the Environment, determined that the Dendrobium Mine Extension Project (the proposed action) is a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act controlling provisions for the proposed action are:
 - i. listed threatened species and communities (sections 18 and 18A);
 - ii. a water resource, in relation to coal seam gas development and large coal mining development (section 24D & 24E).
2. The delegate confirmed that the proposed action will be assessed under the accredited bilateral agreement with New South Wales (*Amending Agreement No. 1*), and as such, is required to be assessed in the manner specified in Schedule 1 to that Agreement, including, addressing the matters outlined in Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations).
3. The designated proponent must undertake an assessment of all protected matters that may be impacted by the proposed action under the controlling provisions identified in paragraph 1. The Commonwealth Department of Agriculture, Water and the Environment (DAWE) considers that the proposed action is likely to have a significant impact on the protected matters listed in **Appendix A**.
4. The Applicant must consider each of the protected matters under the triggered controlling provisions that may be impacted by the action. Note that this may not be a complete list and it is the responsibility of the proponent to undertake an analysis of the relevant impacts and ensure all protected matters that are likely to be impacted are assessed for the Commonwealth Minister's consideration.

General Requirements

Relevant Regulations

5. The Environmental Impact Statement (EIS) must address the matters outlined in Schedule 4 of the EPBC Regulations and the matters outlined below in relation to the controlling provisions.

Project Description

6. The title of the action, background to the action and current status.
7. The precise location and description of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on Matters of National Environmental Significance (MNES).

8. How the action relates to any other actions that have been, or are being taken in the region affected by the action.
9. How the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts on MNES.

Impacts

10. The EIS must include an assessment of the relevant impacts of the action on the matters protected by the controlling provisions, including:
 - i. a description and detailed assessment of the nature and extent of the likely direct, indirect and consequential impacts, including short term and long term relevant impacts;
 - ii. a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
 - iii. analysis of the significance of the relevant impacts; and
 - iv. any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

Avoidance, mitigation and offsetting

11. For each of the relevant matters protected that are likely to be significantly impacted by the action, the EIS must provide information on proposed avoidance and mitigation measures to manage the relevant impacts of the action including:
 - i. a description, and an assessment of the expected or predicted effectiveness of the mitigation measures,
 - ii. any statutory policy basis for the mitigation measures;
 - iii. the cost of the mitigation measures;
 - iv. an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing;
 - v. the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program.
12. Where a significant residual adverse impact to a relevant protected matter is considered likely, the EIS must provide information on the proposed offset strategy, including discussion of the conservation benefit associated with the proposed offset strategy.
13. For each of the relevant matters likely to be impacted by the action the EIS must provide reference to, and consideration of, relevant Commonwealth guidelines and policy statements including any:
 - i. conservation advice or recovery plan for the species or community,
 - ii. relevant threat abatement plan for the species;
 - iii. wildlife conservation plan for the species; and
 - iv. any strategic assessment.

Note: the relevant guidelines and policy statements for each species and community are available from the Department of Agriculture, Water and the Environment Species Profile and Threats Database.
<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

Key Issues

14. Key risks associated with the proposed action from the Commonwealth perspective include:

i. Impacts on species and ecological communities:

- Potential impacts arising from clearing approx. 20 hectares (ha) of native vegetation for the construction of infrastructure required for the mining operations. This area comprises of foraging and nesting habitat for threatened species, including the Grey-headed Flying-fox (*Pteropus poliocephalus*) and the Koala (*Phascolarctos cinereus*).
- Potential impacts on threatened species and ecological communities associated with the underground mining component of the project, including subsidence events which may have implications for species and threatened ecological communities within and surrounding the project site, including the Coastal Upland Swamp within the Sydney Basin Bioregion Endangered Ecological Community, the Littlejohn's Tree Frog (*Litoria littlejohni*) and the Giant Burrowing Frog (*Heleioporus australiacus*).
- The referral does not indicate direct and indirect impacts that may occur to species and ecological communities within the proposed action area and adjacent areas, stating these impacts will be determined as part of the EIS.

ii. Impacts on water resources:

- Potential impacts to groundwater and surface water resources within the project area and surrounds, including:
 - impacts related to subsidence events and their associated impact on water resources within the vicinity of the project site
 - changes to surface flow volumes, inflows and flow paths
 - groundwater drawdown and depressurisation of aquifers and shallow and perched groundwater systems within the project area and surrounds
 - changes to water regimes and adverse impacts on water quality of inflows to water supply storages.
- Potential implications to water resources within the region, noting the action area is within the Metropolitan special area which supplies drinking water to the Macarthur and Illawarra regions.

Assessment Requirements

Biodiversity (threatened species and ecological communities)

15. The EIS must identify each EPBC Act listed threatened species and ecological community likely to be impacted by the action. For any species and communities that are likely to be impacted, the proponent must provide a description of the nature, quantum and consequences of the impacts. For species and communities potentially located in the proposed action area or in the vicinity that are not likely to be impacted, provide evidence why they are not likely to be impacted.

16. For each of the EPBC Act listed species and ecological communities likely to be significantly impacted by the proposed action, the EIS/Biodiversity Development Assessment Report (BDAR) must provide a separate:

- i. description of the habitat (including identification and mapping of suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with

consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advice, conservation advice and recovery plans;

- ii. details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Australian Government guidelines and policy statements;
 - iii. description of the relevant impacts of the action having regard to the full national extent of the species or community's range;
 - iv. description of the specific proposed avoidance and mitigation measures to deal with relevant impacts of the action;
 - v. identification of significant residual adverse impacts likely to occur after the proposed activities to avoid and mitigate all impacts are taken into account;
 - vi. description of any offsets proposed to address residual significant impacts and how these offsets will be established.
 - vii. details of how the current published NSW Biodiversity Assessment Methodology has been applied in accordance with the objects of the EPBC Act to offset significant residual adverse impacts; and
 - viii. details of the offset package to compensate for significant residual impacts including details of the credit profiles required to offset the action in accordance with the NSW Biodiversity Assessment Methodology and/or mapping and descriptions of the extent and condition of the relevant habitat and/or threatened communities occurring on proposed offset sites;
17. Any significant residual impacts not addressed by the NSW Biodiversity Assessment Methodology may need to be addressed in accordance with the *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offset Policy.

<http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy>.

Note: For the purposes of approval under the EPBC Act, it is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action and deliver an overall conservation outcome that improves or maintains the viability of the MNES i.e. 'like for like'. Like-for-like includes protection of native vegetation that is the same EEC or habitat being impacted, or funding to provide a direct benefit to the matter being impacted i.e. threat abatement, breeding and propagation programs or other relevant conservation measures.

A water resource, in relation to coal seam gas development and large coal mining development (section 24D & 24E)

18. The EIS must include a detailed water assessment. The water assessment must be undertaken in accordance with the IESC Information Guidelines (<https://iesc.environment.gov.au/information-guidelines>) and provide the information outlined in these guidelines including:

A description of current regional and proposed impacts to water resources and water-dependent assets.

- i. The water assessment should provide a regional overview of the action area including a description of the geological setting, coal resource, surface water catchments, groundwater systems, water-dependent assets, and current and reasonably foreseeable coal mining development and other water-intensive activities.
- ii. Provide descriptions of existing conditions, values and sensitivity to potential impacts.
- iii. Provide numerical modelling of potential impacts.

- iv. Propose mitigation and management measures

Groundwater modelling

- v. Include a groundwater model that uses a wide variety of parameters and predictions to identify potential changes to:
 - the hydrological regime of the water resource, for example changes to the volume, timing, duration or frequency of ground and surface water flows; or
 - the water quality and quantity of the water resource, for example changes in the level of salinity, pollutants, or nutrients; or water temperature that may adversely impact biodiversity, ecological integrity, social amenity or human health.
- vi. Include a groundwater model that has been integrated with the subsidence model to provide an improved understanding of impacts on surface water and alluvium.

Analysing potential impacts to groundwater dependant ecosystems (GDEs)

- vii. Confirm the distribution of GDEs in the region and the depth to groundwater in areas of potential GDE's.
- viii. Conduct a detailed cumulative impact assessment of potential risks to groundwater and surface water ecosystems that may be impacted by the project.
- ix. Include an assessment of GDEs.

Surface water modelling

- x. The EIS should provide surface water modelling which considers water loss from surface waters due to groundwater drawdown, cracking and ponding. The modelling should show the range and likelihood of possible outcomes, based on sensitivity and uncertainty analysis.
- xi. Include a surface water assessment.

Cumulative impact assessment

- xii. The EIS should include a cumulative impact assessment and consider all relevant past, present and reasonably foreseeable actions, and programs and policies that are likely to impact water resources. Where impacts from a new project are considered small, these need to be considered with the impacts from existing development and the cumulative impact must be assessed to determine if a threshold of acceptable total impact may be crossed.

Comprehensive and detailed monitoring

- xiii. The EIS should derive site-specific water quality guidelines and provide more information on how the proponent plans to monitor impacts. For example, the parameters and frequency of monitoring should be detailed.

Other approvals and conditions

19. Information in relation to any other approvals or conditions required must include the information prescribed in Schedule 4 Clause 5 (a) (b) (c) and (d) of the EPBC Regulations.

Environmental Record of person proposing to take the action

20. Information in relation to the environmental record of a person proposing to take the action must include details as prescribed in Schedule 4 Clause 6 of the EPBC Regulations.

Information Sources

21. For information given in an EIS, the EIS must state the source of the information, how recent the information is, how the reliability of the information was tested; and what uncertainties (if any) are in the information.

Anticipated Engagement

22. The Applicant should consult with DAWE again after detailed survey work is undertaken and before the EIS is finalised to ensure that all relevant species have been considered and the above assessment requirements have been met.

REFERENCES

- [Amending Agreement No. 1](#) (2020) - Item 18.1, Item 18.5, Schedule 1
- *Environment Protection and Biodiversity Conservation Act 1999* - section 51-55, section 101A, section 136, section 527E
- [Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy](#) (Department of Sustainability, Environment, Water, Population and Communities, 2012)
- *Environment Protection and Biodiversity Conservation Regulations 2000 Schedule 4*
- [Information Guidelines for Independent Expert Scientific Committee advice on coal seam gas and large coal mining development proposals](#) (IESC, 2014)
- [Significant impact guidelines 1.1: Matters of National Environmental Significance](#) (Department of the Environment, 2013)
- [Significant Impact Guidelines 1.3: Coal Seam Gas and Large Coal Mining Developments – impacts on water resources](#) (Department of the Environment, 2013)

Appendix A

Matters of National Environmental Significance

There are likely to be significant impacts on the following controlling provisions:

- Listed threatened species and communities (sections 18 and 18A)
- A water resource, in relation to coal seam gas development and large coal mining development (section 24D and 24E).

All matters of national environmental significance (MNES) protected under the triggered controlling provisions are potentially relevant, and it is the responsibility of the proponent to ensure any protected matters under these controlling provisions are assessed for the Commonwealth decision-maker's consideration.

The Department of Agriculture, Water and the Environment considers that there is a likely or potential significant impact on the following protected matters:

Listed threatened species and communities (s18 & s18A)

- Coastal Upland Swamps in the Sydney Basin Bioregion – endangered ecological community: subsidence events associated with the proposed action may reduce the extent of the ecological community and adversely affect critical habitat.
- Shale Sandstone Transition Forest of the Sydney Basin Bioregion – critically endangered: longwall mining is listed as a threatening process, disrupting natural groundwater regimes and discharge patterns associated with mining.
- Grey-headed Flying-fox (*Pteropus poliocephalus*) – vulnerable: there is a nationally important grey headed-flying fox camp located within 20km of the proposed action site.
- Littlejohn's Tree Frog (*Litoria littlejohni*) – vulnerable: the proposed action may lead to a long-term decrease in the size of the population and reduce the area of occupancy of an important population.
- Koala (*Phascolarctos cinereus*) (Combined Population of QLD, NSW and the ACT) – vulnerable: the proposed action could impact important habitat for the species.
- Greater Glider (*Petauroides volans*) – vulnerable: the proposed action could impact important habitat for the species.
- Giant Burrowing Frog (*Heleioporus australiacus*) – vulnerable: the proposed action and associated subsidence could significantly impact breeding habitat.
- Broad-headed Snake (*Hoplocephalus bungaroides*) – vulnerable: the proposed action could impact availability and quality of habitat leading to species decline.
- Large-eared Pied Bat, Large Pied Bat (*Chalinolobus dwyeri*) – vulnerable: the proposed action could impact current and future habitat for the species, which is considered habitat critical to the survival of the species.
- Swift Parrot (*Lathamus discolor*) – critically endangered: the proposed action could clear foraging habitat for the species.

- Silver Perch (*Bidyanus bidyanus*) – critically endangered: subsidence events associated with the proposed action may impact the Cataract Dam, where an important population of the species exists.
- Rufous Pomaderris, Brown Pomaderris (*Pomaderris brunnea*) – vulnerable: the proposed action may impact the small number of NSW subpopulations that exist, leading to long-term decrease in the species.
- Woronora Beard-heath (*Leucopogon exolasius*) – vulnerable: approx. 46% of the species distribution occurs within 10km of the proposed action area, therefore potential negative impacts from clearing or subsidence could negatively impact habitat important to the species.
- Bargo Geebung (*Persoonia bargoensis*) – vulnerable: the proposed action may cause impacts to the species habitat and lead to a long-term decrease in the population size.
- Small-flower Grevillea (*Grevillea parviflora subsp. parviflora*) – vulnerable: the proposed action may impact an important population of the species leading to a long-term decline.
- Kangaloon Sun Orchid (*Thelymitra kangaloonica*) – critically endangered: the species is likely to occur within the project site and impacts to the species could lead to a population decline.
- Prickly Bush-pea (*Pultenaea aristata*) – vulnerable: part of this species' range lies within 10 km of the proposed action area, and is associated with the Upland Swamp vegetation complex, and altered hydrology could negatively impact this species habitat.
- Deane's Melaleuca (*Melaleuca deanei*) – vulnerable: the species is highly fragmented, and all habitat is considered critical habitat, therefore the project could significantly impact this species.
- Hairy Geebung, Hairy Persoonia (*Persoonia hirsuta*) – endangered: the proposed action could fragment an already scattered species leading to a reduction in the area of occupancy.
- Scrub Turpentine, Brown Malletwood (*Rhodamnia rubescens*) – critically endangered: the species has experienced significant decline, and there is the potential for the proposed action to reduce the area of occupancy of this species.

A water resource, in relation to coal seam gas development and large coal mining development (s24D and s24E)

- The proposed action is likely to have significant impacts on groundwater and surface water resources and quality and may result in a change to:
 - the hydrology of a water resource
 - water quality of a water resource.

The above may not be a complete list and it is the responsibility of the proponent to ensure any protected matters under these controlling provisions are assessed for the Commonwealth decision-maker's consideration.