

Department of Planning, Housing and Infrastructure

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Northern Coal Logistics Project Modification 4

State Significant Development Modification Assessment Report (SSD- 5145 -Mod-4)

September 2026





Acknowledgement of Country

The Department of Planning, Housing and Infrastructure acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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Modification 4 of Northern Coal Logistics (SSD- 5145-Mod-5) Assessment Report

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Preface

This assessment report provides a record of the Department of Planning, Housing and Infrastructure's (the Department) assessment and evaluation of Modification 4 (MOD 4) of the State significant development (SSD) application for Northern Coal Logistics lodged by Centennial Northern Coal Services Pty Limited (Centennial). The report includes:

- an assessment of the modification against government policy and statutory requirements, including mandatory considerations;
- a demonstration of how matters raised by the community and other stakeholders have been considered;
- an explanation of any changes made to the modification during the assessment process;
- an assessment of the likely environmental, social and economic impacts of the modification;
- an evaluation which weighs up the likely impacts and benefits of the modification, having regard to the proposed mitigations, offsets, community views and expert advice;
- provides a view on whether the impacts are on balance, acceptable; and
- an opinion on whether the modification is approvable or not, along with the reasons, to assist the Independent Planning Commission (the Commission) in making an informed decision about whether the approval for the project can be modified and any conditions that should be imposed.

Executive Summary

This report details the Department of Planning, Housing and Infrastructure's (the Department) assessment of the State significant development (SSD) modification application (SSD-5145-Mod 4) for the Northern Coal Logistics Project. This report will be provided to the Independent Planning Commission of NSW (Commission) as the consent authority for determination of the modification.

Background

Centennial Northern Coal Services Pty Limited (Centennial) owns and operates the Northern Coal Logistics Project (the Project) located on the western side of Lake Macquarie approximately 25 kilometres (kms) south-west of Newcastle, in the Lake Macquarie Local Government Area.

The Project comprises the surface coal handling and preparation facilities at the Newstan Colliery Surface Site (NCSS) and Cooranbong Entry Site (CES), as well as private haul roads connecting Newstan Colliery, Awaba Colliery, CES and Eraring Power Station (EPS).

Modification

Centennial is proposing to modify the Project to:

- extend the coal stockpile at the CES to increase capacity from 100,000 tonnes to 400,000 tonnes;
- construct infrastructure associated with the modified stockpile footprint, including access tracks, lighting towers, water sprays, fencing and water management infrastructure; and
- facilitate an administrative update to the Schedule of Land in the consent.

Statutory context

The modification application was lodged under Section 4.55(2) of the *Environmental Assessment and Planning Act 1979* (EP&A Act). The Department is satisfied that the proposed modification is within the scope of section 4.55(2) of the EP&A Act and can be assessed and determined under this section.

In accordance with Section 4.5(a) of the EP&A Act and clause 2.7(1) of the *State Environmental Planning Policy (Planning Systems) 2021*, the Commission is the consent authority for the modification application as at the time of lodging the application Centennial had reported political donations.

The modification has determined to be a "controlled action" under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) because of potential impacts on listed threatened species and communities.

The Department has undertaken the impact assessment on behalf of the Commonwealth government in accordance with the bilateral agreement between the Commonwealth and NSW governments.

Engagement

The Department publicly exhibited the modification for a period of 29 days from 25 February to 25 March 2025. During the exhibition period, the Department received:

- 78 submissions from the public (of which 77 supported the modification);
- a submission from the local council (Lake Macquarie City Council) commenting on the modification; and
- advice from 10 government agencies.

The key issues raised in the supporting submissions included: support for continued employment and use of existing coal handling infrastructure and economic benefits of the modification. The single submission objecting to the modification raised concerns regarding the purpose and scale of the proposed stockpile extension.

Centennial submitted a Submissions Report on 12 August 2025 to address the issues raised in submissions and agency advice.

On 12 August 2025, Centennial also submitted an Amendment Report for the modification. The Amendment Report described a change to the stockpile design and associated drainage to exclude the stockpile footprint from extending onto Lot 179 DP755218 (specifically to ensure the modification remained within the biodiversity clearing thresholds outlined in the Biodiversity Assessment Method 2020 (BAM 2020) to enable use of the Streamlined Biodiversity Assessment Report (BDAR)).

The Department accepted the Amendment Report and made it publicly available on the NSW Planning Portal. The Department determined that the amended modification would not differ materially from the description contained in the original modification application or include material environmental impacts beyond those predicted in the initially proposed modification.

Centennial also provided additional information in May and June 2026 in response to requests made by the Department during the assessment of the modification. All additional information was made publicly available on the NSW planning portal.

Assessment

The Department considers the key assessment issues relate to impacts on biodiversity and noise. The Department has also considered other potential impacts.

Biodiversity

The modification would disturb 2.93 hectares (ha) of native vegetation. This vegetation was found to include habitat for a number of threatened fauna species listed under the *Biodiversity Conservation Act 2016* and / or EPBC Act.

The modification has the potential to result in significant impacts to the following Matters of National Environmental Significance (as listed under the EPBC Act): Black-eyed Susan (*Tetradlea juncea*) and Small-flower Grevillea (*Grevillea parviflora subsp. Parviflora*).

The Department considers that the modification has been designed to avoid, mitigate and manage biodiversity impacts where practicable. The final disturbance footprint has been refined to avoid direct clearing of 9.5 ha of native vegetation. The Department has carefully considered the impacts on biodiversity values and considers that they would be suitably mitigated and offset through the retirement of ecosystem and species credits in accordance with the NSW Biodiversity Offsets Scheme.

Centennial agreed to implement a range of other minimisation and mitigation measures to further reduce the direct, indirect and prescribed biodiversity impacts of the modification. The Department has recommended that the nature and details of the mitigation and management works be described in a Biodiversity Management Plan prior to the commencement of vegetation clearing associated with the proposed modification.

The Department considers that the impacts of the modification on biodiversity are acceptable, subject to the avoidance, mitigation, offsetting and management measures described in Centennial's environmental assessment documents and the requirements of the Department's recommended conditions of consent.

Noise and vibration

The existing noise limits contained in SSD-5145 were derived in accordance with the now superseded NSW *Industrial Noise Policy* (INP) (EPA, 2000). Noise criteria for industrial operations are now required to be derived in accordance with the NSW *Noise Policy for Industry* (NPfI) (EPA, 2017).

Accordingly, the Noise and Vibration Impact Assessment for the modification proposed new operational noise criteria for all residential receptors are based on the rating background noise levels determined from unattended noise monitoring. The Department considers the approaches used to derive the noise limits are reasonable, and that overall, the limits are conservative.

The Noise and Vibration Impact Assessment predicted that noise from construction of the modification would exceed the relevant noise criteria at three residential receivers. In accordance with the *Interim Construction Noise Guideline* (ICNG), Centennial has proposed a variety of feasible and reasonable mitigation measures to limit noise impacts during construction.

Operational noise levels associated with the modification are compliant with the relevant noise criteria at all sensitive receptors during calm and prevailing wind conditions. Marginal exceedances of the relevant operational noise criteria are predicted at two residential receivers during nighttime temperature inversions conditions. The Department acknowledges that both of these sensitive receptors have a negotiated noise agreement in place with Centennial.

Centennial has committed to continue to implement existing noise controls, as well as implement additional controls to further reduce noise impacts associated with the modification. The Department supports these mitigation, monitoring and management measures and has recommended stringent noise operating conditions. Subject to the recommended conditions, the Department considers the noise impacts of the modification to be acceptable.

Other Issues

The Department has carefully considered the potential impacts of the modification on a range of other issues including air quality, greenhouse gas, water, heritage, social and visual impacts. The Department's assessment has concluded that Centennial's proposed mitigation measures along with the existing and recommended conditions of consent would ensure that these low-risk impacts are appropriately managed and minimised.

Evaluation

The Department has carried out a detailed assessment of the merits of the modification in accordance with the relevant requirements of the EP&A Act. The Department's assessment has concluded that the potential impacts of the modifications are similar in nature and scale to those of the existing operations and can be appropriately managed through existing and proposed conditions of consent.

The Department considers that the proposed stockpile would provide greater operational flexibility in the management of run-of-mine coal received at the CES from Mandalong Mine. This increased flexibility would enhance Centennial's ability to manage coal deliveries efficiently, promote operational continuity, and support the reliable supply of coal to both domestic and export customers, in turn delivering ongoing economic benefits to NSW.

The Department has carefully considered these impacts, as well as a range of other potential impacts in its assessment. That assessment has been guided by NSW Government policy including the NSW Coal Industry 2026-50, which describes that the NSW Government will continue to allow approvals to existing mining operations where it can be demonstrated that the environmental impacts of the

project can be managed, in order to support ongoing job and energy security in the short to medium term.

Overall, the Department considers that the impacts have been minimised where reasonable and practicable, the residual biodiversity impacts can be offset, and the remaining residual impacts can be managed through the existing and proposed conditions of consent. The Department also considers that the modification would result in an orderly and efficient extension of an existing approved coal stockpile and ensure the continuation of the social and economic benefits, including employment, local expenditure and royalties for the State.

Accordingly, on balance the Department considers the modification is in the public interest and concludes that the consent may be modified subject to conditions.

Contents

Preface.....	i
Executive Summary	ii
1 Introduction.....	9
1.1 Background	9
1.2 Approval history	9
2 Proposed modification	12
3 Strategic context	16
3.1 NSW Coal Industry 2026-50	16
3.2 Hunter Regional Plan 2041.....	16
3.3 Greenhouse gas emissions and climate change	17
4 Statutory context	19
4.1 Scope of modification and assessment pathway	19
4.2 Other approvals and authorisations.....	20
4.3 Mandatory matters for consideration	20
4.4 Matters of National Environmental Significance.....	22
5 Engagement	23
5.1 Department's engagement	23
5.2 Response to submissions.....	26
5.3 Notification of the amended modification	26
5.4 Request for further information.....	27
6 Assessment.....	27
6.1 Biodiversity	27
6.2 Noise and vibration	36
6.3 Other issues.....	45
7 Evaluation.....	51
Appendices.....	52

Appendix A – List of referenced documents	52
Appendix B – Statutory considerations.....	53
Appendix C – Assessment of Matters of National Environmental Significance	63
Appendix D – Recommended consolidated development consent	92
Appendix E – Recommended instrument of modification.....	93

1 Introduction

1.1 Background

1. The Northern Coal Logistics Project (the Project) operations are located on the western side of Lake Macquarie approximately 25 kilometres (km) south-west of Newcastle, in the Lake Macquarie Local Government Area (see [Figure 1](#)).
2. The Project is owned and operated by Centennial Northern Coal Services Pty Limited (Centennial) and comprises the surface coal handling and preparation facilities at the Newstan Colliery Surface Site (NCSS) and Cooranbong Entry Site (CES), as well as private haul roads connecting Newstan Colliery, Awaba Colliery, CES and Eraring Power Station (EPS).
3. The Project manages the receipt, handling, processing and transport of run-of-mine (ROM) coal from Centennial's underground coal mining operations at Newstan Colliery, Awaba Colliery and Mandalong Mine, which are subject to separate development consents.

1.2 Approval history

4. Development consent (SSD-5145) for the Project was granted on 29 September 2015 by the then Minister for Planning. The development consent approves the following operations to be undertaken until 31 December 2045:
 - upgrades to coal handling and train loading infrastructure;
 - receiving, handling and processing of up to 8 million tonnes per annum (Mtpa) of ROM coal at NCSS, representing coal supplied from Newstan Colliery (up to 4.5 Mtpa), Mandalong Mine (up to 6 Mtpa), and Awaba Colliery (up to 0.88 Mtpa);
 - transporting up to 6 Mtpa of ROM coal from CES to NCSS via private haul roads;
 - transporting up to 6 Mtpa of ROM coal from CES to EPS via overland conveyor;
 - receiving 4.5 Mtpa of ROM coal from Newstan Colliery at the NCSS;
 - transporting up to 0.88 Mtpa of ROM coal from Awaba Colliery at the NCSS;
 - transporting up to 4.5 Mtpa of product coal from NCSS to EPS via private haul roads;
 - transporting up to 0.5 Mtpa of product coal ('middlings' - a middle quality coal product) from NCSS to CES;
 - transporting up to 8 Mtpa of product coal from NCSS by rail to the Port of Newcastle, Port Kembla and/or Vales Point Power Station; and

- transporting coal rejects from NCSS via private haul roads to Newstan Northern Rejects Emplacement Area (NREA), Southern Rejects Emplacement Area (SREA) and/or the Hawkmount Quarry.
5. As detailed in **Table 1**, five applications have subsequently been lodged to modify the consent within the scope of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Table 1 | Summary of modifications

Modification	Description	Decision-maker	Approval Date
MOD 1	Increase full-time equivalent (FTE) employees and updates to noise criteria and air quality criteria notes	Department	January 2018
MOD 2	Transfer coal between Myuna's pit top and CES and blending this coal at CES	-	Withdrawn
MOD 3	Updates to rehabilitation conditions	Department	November 2022
MOD 4	Expand the stockpile at CES	Commission	This assessment
MOD 5	Beneficial reuse of coal washery rejects	Commission	June 2025



Figure 1 | Regional and Local context map

2 Proposed modification

6. On 6 February 2025, Centennial lodged an application to modify the Northern Coal Logistics Project development consent under Section 4.55(2) of the EP&A Act to:
 - extend the coal stockpile at the CES to increase capacity from 100,000 tonnes to 400,000 tonnes;
 - construct infrastructure associated with the modified stockpile footprint, including access tracks, lighting towers, water sprays, fencing and water management infrastructure; and
 - facilitate an administrative update to the Schedule of Land in the consent.
7. In response to feedback from the Conservation Programs, Heritage & Regulation Group (CPHR) of the NSW Department of Climate Change, Environment, Energy and Water (DCCEEW), Centennial reduced the stockpile design and associated drainage disturbance footprint. Centennial submitted an Amendment Report in August 2025 to reflect the design refinements and project amendments.
8. The proposed modification is described in detail in the Modification Report and Amendment Report (**Appendix A**). The key aspects of the proposed modification compared to the approved Project are summarised in **Table 2**.

Table 2 | Comparison of approved project and proposed modification

Project element	Approved Project (as modified)	Proposed Modification
Project life	31 December 2045	No change
Schedule of land	Appendix A of SSD-5145	Administrative update to Appendix A of SSD-5145
Project disturbance	Total disturbance footprint of approximately 21.4 ha	Increase in the total CES vegetation disturbance footprint of approximately 2.93 ha (see Figure 2)
Operational hours	24 hours a day, seven days per week	No change
Handling and processing	Receive and process up to 6 Mtpa ROM coal from Mandalong Mine through the CES Coal Handling Plant (CHP)	No change

Project element	Approved Project (as modified)	Proposed Modification
Workforce	46 additional FTE personnel, creating a total of 60 based at CES	Four additional FTE personnel, creating a total of 64 based at CES
Infrastructure	• CHP • Coal stockpile (100,000 t) • Workshop building • Administration building • Car park • Water management • Coal handling infrastructure including a drift conveyor belt from Mandalong Mine	• Increase the coal stockpile capacity to 400,000 tonnes • Extend the coal stockpile footprint by approximately 2.93 ha • Extend the coal stockpile maximum height up to 50 m RL • Use of one additional dozer on the modified coal stockpile (two in total) • Construct infrastructure associated with the modified stockpile footprint, including access tracks, lighting towers, water sprays, fencing and water management infrastructure (all within the expanded Project disturbance footprint) • Construction of the modified stockpile would occur over approximately 12 months
Water management	• Water transfers at CES will be transfers from the CHP Settlement Tank, 5 ML Dam, Sediment Dam 1 and Sediment Dam 2 to the Cooranbong Underground Storage • Discharge of water from CES via the two existing Licenced Discharge Points (LDP) 001 and 002)	No change

Project element	Approved Project (as modified)	Proposed Modification
	Receive up to 3 cubic metres of waste material / week collected from the sumps and dirty water dams at the Mandalong Mine Access Site and store in a 1,500 tonne emergency stockpile area at CES	
CES Site Access and Roads	- Site access via Gradwells Road - Newstan to Eraring private haul road connection	No change
Materials Transport	- Transport up to 6 Mtpa of coal to Newstan Colliery via private haul roads; and - Transport up to 6 Mtpa of coal to Eraring Power Station via a dedicated overland conveyor - Transport of coarse rejects within NCS for emplacement within the Newstan Southern Reject Emplacement Area (REA), Northern REA and/or Hawkmount Quarry via private haul roads - Tailings transferred from the Newstan Colliery surface site to the Southern REA	Transport of materials from excavation and construction of the modified coal stockpile within NCS for use in site rehabilitation or emplacement areas
Rehabilitation and Final Landform	Progressive rehabilitation in accordance with approved Rehabilitation Management Strategy	No change

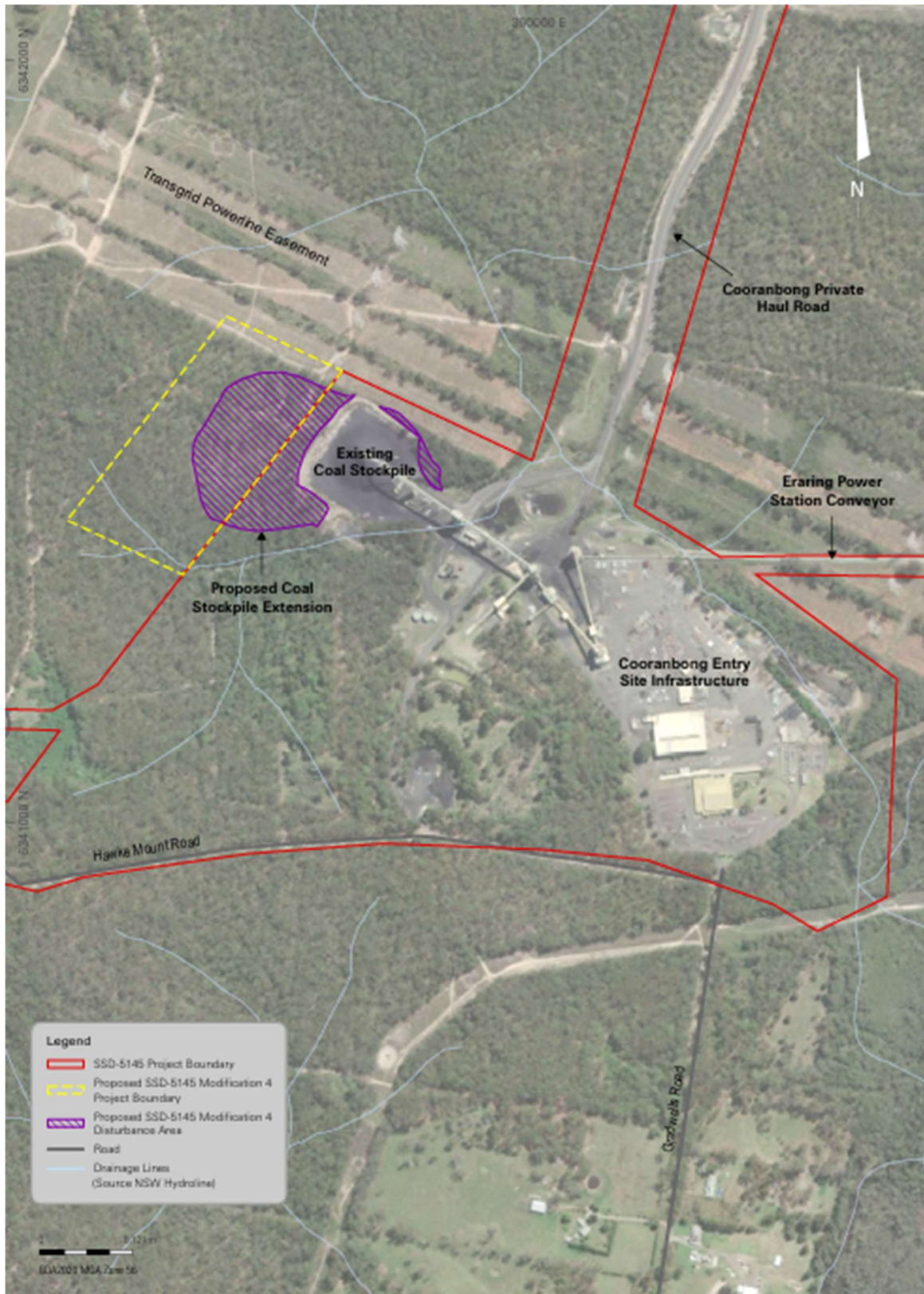


Figure 2 | Conceptual Modification design

3 Strategic context

3.1 NSW Coal Industry 2026-50

9. The *NSW Coal Industry 2026-50* (March 2026) is an update to the former Strategic Statement on Coal Exploration and Mining in NSW (June 2020) and provides the NSW Government policy position on the intended future of the coal mining sector in New South Wales. The policy establishes that the NSW Government intends that coal mining will continue to play an important part in supporting regional jobs, investment and communities in the short to medium term, within NSW legislated emissions reduction targets.
10. The policy outlines the economic benefits of the coal mining sector to NSW and coal producing regions including the Hunter where the coal sector contributes 58% of economic output from the region and directly employs around 14,400 workers.
11. The policy identifies that there is likely to be ongoing demand for export coal in the short to medium term. NSW will continue to be a reliable trading partner, supplying high-quality coal where there is demand and where this is consistent with emissions reductions targets. Thermal coal exports are expected to decline over time with more significant shifts anticipated closer to 2040 and 2050. The policy notes this position complements other regulatory mechanisms to reduce emissions including NSW's net zero targets and the Paris Agreement.
12. The policy indicates that the NSW Government intends to prohibit greenfield coal development, however applications for extensions to existing mining operations will continue to be allowed to support ongoing job and energy security. The policy notes that proposals to extend existing coal mining operations can support continuation of economic benefits and industry job security in the short to medium term and the impact of mine closures on the NSW economy should be considered when assessing proposed extensions.
13. The policy identifies that coal mining expansions can be permitted where they are consistent with regulation of emissions, and where the other environmental impacts of expansions can be managed in accordance with the approvals framework under the EP&A Act.

3.2 Hunter Regional Plan 2041

14. The Department's *Hunter Regional Plan 2041* (December 2022) sets out the strategic vision for the Hunter Region based on nine key objectives aimed at establishing the Hunter region as the leading regional economy in Australia. These objectives are to be achieved by delivering on a range of directions and actions set out in the plan.

15. The plan recognises the strategic importance of the established coal mining industry and its infrastructure links to the export market via the Port of Newcastle, as well as recognising the important role that industries including renewable energy, agriculture, viticulture and equine operations play in delivering a diversified regional economy.
16. The plan emphasises the need to manage these different land uses in pursuit of complementary outcomes and attainment of the overriding goals of the plan. It also recognises the need to conserve important biodiversity values through strategic planning to provide certainty for both development and conservation outcomes.
17. The plan acknowledges that the Hunter is likely to see continued demand for coal over the short to medium term and recognises the potential for coal mines to grow, subject to rigorous assessment and community consultation. The Department's consideration of impacts of the modification on biodiversity and surrounding uses is provided in **Section 6**.

3.3 Greenhouse gas emissions and climate change

3.3.1 UNFCCC Paris Agreement 2015

18. Under the *United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement 2015* (Paris Agreement), Australia adopted a target of net zero emissions by 2050 by committing to seven low emissions technology stretch goals. These include clean hydrogen production, ultra-low-cost solar, energy storage, low emissions steel production, low emissions aluminium production, carbon capture and storage and soil carbon measurements.

3.3.2 Commonwealth Government

19. The Commonwealth *Climate Change Act 2022* legislates Australia's commitment to achieving emissions reductions targets under the Paris Agreement which include reducing Australia's net greenhouse gas (GHG) emissions to 43% below 2005 levels by 2030 and reducing Australia's net GHG emissions to zero by 2050. In September 2025 the Commonwealth Government also committed to a 2035 target to reduce emissions by 62–70% below 2005 levels by 2035.
20. Emissions are regulated by the Commonwealth Government under the 'Safeguard Mechanism', which sets a declining baseline emissions trajectory for designated large facilities aligned with achieving Australia's emissions reduction targets. The modification would not be subject to the Safeguard Mechanism as the facility would emit less than 100,000 tonnes of Scope 1 carbon dioxide equivalent (CO₂-e) per year.

21. GHG emissions are reported under the *Commonwealth National Greenhouse and Energy Reporting Act 2007* (NGER Act) and National Greenhouse and Energy Reporting Scheme (NGERS). As an existing participant of the NGERS, Centennial is required to undertake regular reviews of the technology being used and abatement measures being implemented to continue to reduce emissions.

3.3.3 NSW State Government

22. The *Climate Change (Net Zero Future) Act 2023* (Net Zero Future Act) legislates the NSW approach to addressing climate change and delivering net zero GHG emissions by 2050. The objects of the Net Zero Future Act include principles to address climate change and sets targets to reduce greenhouse gas emissions in NSW of at least 50% by 2030, 70% by 2035 and net zero emissions by 2050.
23. The Net Zero Commission was established under the Net Zero Future Act to monitor and advise on the state's progress towards these targets. Recent correspondence (September 2025) from the Net Zero Commission encouraged the Department to consider Scope 1 emissions of any proposal compared to NSW legislated targets as well as a number of other recommendations regarding the assessment of proposals which have greenhouse gas emissions.
24. The Department has considered the principles and targets of the Net Zero Future Act in its assessment of the modification (see **Appendix B**).
25. In 2023, the EPA released the *NSW Climate Change Policy and Climate Change Action Plan 2023-26* which adopts, supports and builds on the NSW Government's overarching climate change objectives and provides a framework to support industry to decarbonise and build greater preparedness and resilience to climate change risks.
26. The key NSW EPA policy and guidance for development applications and coal mining operations includes:
 - *NSW Guide for Large Emitters*: The guide requires proponents of proposals with large projected GHG emissions to assess their development's emissions and mitigation opportunities.
 - Climate Change requirements for licensees: This document outlines the NSW EPA's approach to introducing climate change-related requirements for EPLs. Climate Change Mitigation and Adaptation Plans (CCMAPs) will be progressively required under existing and new EPLs and will require licensees to demonstrate how they can minimise their GHG emissions and exposure to climate risk.

- Greenhouse Gas Mitigation Guide for NSW Coal Mines: The guide notes that the EPA expects all coal mine proposals seeking extensions or modifications through the planning system to commit to reducing emissions in line with NSW legislated targets. The EPA will be supportive of longer consent durations for proposals that include material onsite abatement.

4 Statutory context

4.1 Scope of modification and assessment pathway

27. Details of the legal pathway under which the modification is sought are provided in **Table 3** below.

Table 3 | Permissibility and assessment pathway

Consideration	Description
Scope of modification	The modification application was lodged under Section 4.55(2) of the EP&A Act. The consent authority may modify a consent if it is satisfied that the project, as modified, would remain substantially the same development as approved. The Department has reviewed the scope of the modification and considers that it meets this requirement as the: • land use, being a coal mine, would remain the same; • mining methods and extraction rate, would remain the same; • coal handling, processing and transportation methods and annual tonnage limits would remain the same; • development footprint would only increase marginally (i.e. 2.93 ha); • mine life and operation hours would remain the same; and • environmental impacts would be similar to the impacts of the approved project. The Department considers that the modification is within the scope of section 4.55(2) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined

Consideration	Description
	under section 4.55(2) of the EP&A Act rather than requiring a new development application to be lodged.
Consent authority	In accordance with Section 4.5(a) of the EP&A Act and clause 2.7(1) of the <i>State Environmental Planning Policy (Planning Systems) 2021</i> , the NSW Independent Planning Commission (the Commission) is the consent authority for the modification application as Centennial had reported political donations at the time the application was made.

4.2 Other approvals and authorisations

28. The modified project would require an amendment to the existing Environment Protection Licence (EPL) 365 issued to Centennial by the NSW Environment Protection Authority (EPA) under section 42 of the *Protection of the Environment Operations Act 1997*.
29. Under section 4.41 of the EP&A Act, a number of other authorisations required under other Acts are not required for SSD. This is because all relevant issues are considered during the assessment of the original project and subsequent modification requests.
30. Under section 4.42 of the EP&A Act, certain approvals cannot be refused if they are necessary to carry out the SSD. These authorisations must be substantially consistent with any SSD consent for the modified project.
31. The Department has consulted with and considered the advice of the relevant government agencies responsible for these other authorisations in its assessment of the modification (see **Sections 6 and 7**). Suitable conditions have been included in the recommended conditions of consent (see **Appendix D**).

4.3 Mandatory matters for consideration

4.3.1 Matters of consideration by the EP&A Act

32. In determining the modification application, the consent authority must take into consideration the matters referred to in section 4.15(1) of the EP&A Act as are of relevance to the development the subject of the application. The consent authority must also take into consideration the reasons given by the consent authority for the grant of the original consent, but only to the extent that those reasons are relevant to the modification application. The Department's consideration of these matters is shown in **Table 4** below.

Table 4 | Matters for consideration

Matter for consideration	Department's assessment
Environmental planning instruments, proposed instruments, development control plans & planning agreements	Appendix B – Statutory considerations
EP&A Regulation	Appendix B – Statutory considerations
Significant likely impacts	Section 6 – Assessment
Suitability of the site	Section 9 – Introduction, 6 – Assessment and Section 7 – Evaluation
Public submissions	Section 5 - Engagement & Section 6- Assessment
Public interest	Section 5 - Engagement, Section 6 - Assessment and Section 7 – Evaluation

4.3.2 Objects of the EP&A Act

33. In determining whether or not to modify the consent, the consent authority should take a proportionate and risk-based approach and consider whether the modified project is consistent with the relevant objects of the EP&A Act (section 1.3) including the principles of ecologically sustainable development. Consideration of those factors is described in **Appendix B**.
34. The Department is satisfied that the development is consistent with the objectives of the EP&A Act.

4.3.3 Biodiversity development assessment report

35. Section 7.17(2) of the *Biodiversity Conservation Act 2016* (BC Act) requires all SSD modifications to be accompanied by a Biodiversity Development Assessment Report (BDAR) unless the authority or person determining the application is satisfied that the modification would not increase the impact on biodiversity values (as identified in the BC Act and in the *Biodiversity Conservation Regulation 2017*).
36. A BDAR was submitted to the Department with the modification application.

37. On 12 August 2025, Centennial submitted an Amendment Report for the modification. The Amendment Report described a change to the stockpile design and associated drainage to exclude the stockpile footprint from extending onto Lot 179 DP755218 (specifically to ensure the modification remained within the biodiversity clearing thresholds outlined in the Biodiversity Assessment Method 2020 (BAM 2020) to enable use of the Streamlined Biodiversity Assessment Report (BDAR)). A revised BDAR was then submitted as part of the Amendment Report (August 2025) and again in response to a request for further information (June 2026). The Department has taken the BDAR into account as part of its assessment (see **Section 6**).

4.4 Matters of National Environmental Significance

38. Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), assessment and approval are required from the Australian Government if a project is likely to impact on a Matter of National Environmental Significance (MNES), as it is considered to be a ‘controlled action’.
39. On 11 September 2024, a delegate of the Commonwealth Minister for the Environment (Commonwealth Minister) determined that the proposed modification was a controlled action under section 75 of the EPBC Act and identified that the proposed modification is likely to have a significant impact on MNES. Consequently, the proposed modification requires the approval of the Commonwealth Minister for the Environment in addition to any State approvals before it may proceed.
40. Under section 45 of the EPBC Act, the assessment process under the EP&A Act has been accredited under a Bilateral Agreement with the Australian Government. Accordingly, the NSW Government has undertaken the assessment of MNES on behalf of the Australian Government.
41. The assessment of the proposed modification’s impacts on MNES under the EPBC Act are considered in **Section 6** and **Appendix C** of this report.
42. In accordance with the Bilateral Agreement the Department has provided the Australian Government with the draft copy of this assessment report and the recommended conditions of consent.

5 Engagement

5.1 Department's engagement

5.1.1 Public exhibition of the modification application

43. After accepting the modification application and Modification Report, the Department publicly exhibited the proposed modification for a period of 29 days from 25 February to 25 March 2025 on the NSW planning portal. The exhibition was advertised in the *Newcastle Herald* and the Department notified previous submitters about the public exhibition.
44. The Department notified and invited comment on the Modification Report from relevant government agencies and Lake Macquarie City Council (Council).
45. As the proposed modification is a 'controlled action' under the EPBC Act, a newspaper advertisement was also placed in *The Australian* newspaper in accordance with the NSW Assessment Bilateral Agreement.
46. A summary of the submissions and advice received is provided in **Sections 5.1.2** and **Table 5** below. A link to all submissions and advice is provided in **Appendix A**.

5.1.2 Summary of advice received from government agencies and Council

47. The Department received advice from ten Government agencies and a submission from Council. A summary of the advice and the Department's consideration of this advice is provided in **Table 5**. A link to the full copy of the advice is provided in **Appendix A**.

Table 5 | Summary of agency and Council advice

Agency / Council	Advice summary
Department of Climate Change, Energy, the Environment and Water (DCCEE Water Group)	- Recommended that Centennial: - quantify the maximum volume of surface water take captured in on-site dams; - demonstrate the ability to obtain entitlement (unless an exemption applies); and - consider alternate water management layouts where entitlement is unable to be obtained. Advised that the additional water-related information included in the Submissions Report was adequate.
DCCEEW Conservation Programs, Heritage and	<u>Biodiversity</u>

Agency / Council	Advice summary
Regulation Group (CPHR) and Development Coordination Authority (DCA)	- Initially advised that the BDAR did not meet the requirements of a Streamlined BDAR and that supporting documentation was not provided, thereby constituting an invalid submission (April 2025). - Following the Amendment Report and revised BDAR (v1) (Nov 2025): advised the following i: - that the BDAR did not satisfy the requirements of the Biodiversity Assessment Method 2020 (BAM) particularly in relation to the flora and fauna survey effort; - identified a number of issues associated with the BDAR in relation to spatial data files, targeted flora and fauna searches, and inconsistencies between the BDAR and the BAM calculator; and - that the BDAR did not adequately demonstrate avoidance and minimisation of impacts to biodiversity values. - Advised the following in relation to the second revised BDAR (v2) (June 2026): - inadequate demonstration of efforts to avoid and minimise impacts on biodiversity issues; - BDAR certification was not valid and required data was not supplied for review; - some targeted flora surveys may not accord with BAM requirements; and - the commitment to some mitigation measures was unclear. - The DCA advised that all outstanding issues for biodiversity had been resolved (July 2026). <u>Stormwater and Flooding</u> - Recommended that the Surface Water Impact Assessment be revised to include: - a quantitative assessment of the impact of increased spills from the ROM Stockpile Dam on water level management, to determine if there would be a change in the frequency of overflows to licenced discharge location LDP001; - a review of the required settlement times to effectively treat dirty water; and - the 1% AEP design flood event, for existing and proposed development conditions to understand potential flood impacts both on and off-site for a range of design flood events, including a summary of modelling assumptions.

Agency / Council	Advice summary
NSW Resource Regulator	• Raised no specific comments in relation to the <i>Mining Act 1992</i> considerations and raised no issues regarding the modification.
Transport for NSW (TfNSW)	• Noted there are no impacts proposed to the State road network.
Subsidence Advisory NSW	• Provided conditional support, along with relevant conditions to be imposed.
DCCEEW Heritage Council	• Noted the modification would not impact on any items listed on the State Heritage Register.
DCCEEW Heritage NSW	• Noted that the modification would not impact on Aboriginal sites or areas of potential. • Broadly agreed with the recommendations of the assessment, however required evidence of all consultation undertaken.
Crown Lands	• Noted the requirement for compliance with the requirements of the <i>Mining Act 1992</i> in relation to works on Crown land or Crown roads.
Transgrid	• Provided conditional support, along with recommendations for mitigating impacts to adjacent Transgrid infrastructure.
Environment Protection Authority (EPA)	• Noted that Centennial would be required to ensure consistency with the principles in the then Draft NSW EPA Guide for Large Emitters in relation to GHG emissions. • Acknowledged that the proposed activities are not predicted to result in any significant increase to environmental quality impacts (i.e. air, noise and water). • Indicated that Centennial may need to apply and be granted a variation to its existing Environment Protection Licence 395 (EPL) to facilitate the modification.
Council	• Raised concerns about the loss of native vegetation and hollow bearing trees and recommended that alternative areas are considered to minimise impacts to biodiversity. • Requested further detail on the biodiversity mitigation measures to be implemented. • Noted the additional biodiversity-related information included in the Submissions Report assisted to address their concerns. Maintained that a more detailed analysis of project alternatives would be desirable.

Note: From July 2026, the Development Coordination Authority incorporated the agencies of DECCW Water, CPHR, DECCW Heritage Council and DCCEEW Heritage NSW.

5.1.3 Summary of public submissions

48. During the exhibition period, the Department received a total of 78 public submissions. Seventy-seven (77) of the individual submissions supported the modification, while the remaining one individual submission objected the proposal. A link to all the submissions in full is provided in **Appendix A**.
49. Key issues raised in the supporting submissions included:
 - support for the continuation of local employment, particularly the retention of over 400 jobs at Mandalong Mine;
 - recognition of the Project's contribution to energy security and reliability for NSW;
 - support for economic benefits to the Hunter Region, including flow-on impacts to local businesses;
 - endorsement of the use of existing infrastructure to improve operational efficiency and minimise land disturbance; and
 - support for environmental controls, including proposed dust suppression and traffic management measures.
50. The single submission objecting to the modification raised concerns regarding the purpose and scale of the proposed stockpile extension, suggesting that the increased capacity is excessive, and intended solely for export, with no benefit to the domestic market.

5.2 Response to submissions

51. Following the public exhibition period, the Department asked Centennial to respond to the issues raised in submissions and the advice received from Government agencies. Centennial provided a Submissions Report to the Department on 12 August 2025 (see **Appendix A**).
52. The Department published the Submissions Report on the NSW Planning Portal and forwarded it to relevant government agencies and Council for comment on 27 October 2025.

5.3 Notification of the amended modification

5.3.1 Notification of the amended modification

53. On 12 August 2025, Centennial submitted an Amendment Report for the modification. The Amendment Report described a change to the stockpile design and associated drainage to exclude the stockpile footprint from extending onto Lot 179 DP755218 (specifically to ensure

the modification remained within the biodiversity clearing thresholds outlined in the Biodiversity Assessment Method 2020 (BAM 2020) to enable use of the Streamlined Report BDAR.

54. The Department accepted the Amendment Report and made the Amendment Report publicly available on the NSW Planning Portal. The Department determined that the amended modification would not differ materially from the description contained in the original modification application or include material environmental impacts beyond those predicted in the initially proposed modification.
55. The Department re-notified and invited comment from relevant government agencies and Council.

5.4 Request for further information

56. Centennial also provided additional information in May and June 2026 in response to requests made by the Department during the assessment of the modification. All additional information was made publicly available on the NSW planning portal.

6 Assessment

6.1 Biodiversity

6.1.1 Introduction

57. The modification would involve clearing of up to 2.93 ha of native vegetation associated with the extension of the stockpile.
58. The Modification Report included a BDAR prepared by EcoResolve Pty Ltd (EcoResolve) in accordance with the BAM under the BC Act. The BDAR described and assessed potential impacts to biodiversity from the modification, including threatened biodiversity listed under the BC Act and MNES under the EPBC Act.
59. CPHR raised several issues regarding the adequacy of the BDAR, primarily in relation to the flora and fauna survey effort and searches, avoidance and minimisation measures and technical issues associated with meeting the requirements of the BAM. Council and CPHR also raised concerns that the proposed disturbance footprint would adversely impact on important wildlife habitat. Further, CPHR advised that the BDAR did not meet the requirements of a Streamlined BDAR.
60. A Streamlined BDAR can be prepared using the small areas streamlined assessment module in Appendix C of the BAM when clearing of less than 3 ha of native vegetation is proposed on land with a minimum lot size of 40 ha.

61. In response, Centennial reduced the modification impact footprint from 2.97 ha to 2.93 ha and submitted an Amendment Report. The Amendment Report described a change to the stockpile design and associated drainage to exclude the stockpile footprint from extending onto Lot 179 DP755218 (specifically to ensure the modification remained within the biodiversity clearing thresholds outlined in the BAM (2020) to enable use of the Streamlined BDAR process. Centennial also provided an amended BDAR (dated July 2025) as part of the Submissions Report which clarified survey efforts and addressed several technical issues.
62. However, both CPHR and Council remained critical of key aspects of the amended BDAR, particularly in relation to demonstrating reasonable avoidance and minimisation measures. CPHR also raised several additional technical inadequacies and inconsistencies in both the amended BDAR and BAM calculations.
63. Centennial subsequently provided further responses and additional information, including two updated versions of the amended BDAR to clarify and address residual issues (May 2026 and June 2026). On 10 July 2026, the newly formed DCA (encompassing CPHR technical advisory), advised that all biodiversity issues had been resolved.
64. DCA also provided guidance to the Department on the assessment of EPBC Act-listed threatened species and communities in July 2026.
65. The Department is satisfied that the final version of the amended BDAR and additional information have been prepared in accordance with relevant guidelines and policies and are adequate for assessing the biodiversity impacts and offsetting requirements for the modification.

6.1.2 Direct impacts

66. The modification would directly impact biodiversity by clearing 2.93 ha of native vegetation which is identified as plant community type (PCT) 3583 – *Hunter Coast Lowland Scribbly Gum Forest*. This PCT is not considered to form part of any Endangered Ecological Communities (EEC) listed under the BC Act or EPBC Act. The entirety of this PCT to be impacted by the modification (i.e. 2.93 ha) was assessed as being in a high condition vegetation dominated by native species with intact canopy and community structure.
67. The modification area is bounded on two sides by highly disturbed land, a high-voltage electricity easement to the north and the existing CES facility in the east (shown above in **Figure 2**). There are unsealed access tracks bordering the CES facility extending to the south, north and west. Some areas show signs of historic disturbance and clearing. Beyond these areas, the vegetation community is in good condition with many mature trees, hollow bearing trees, intact fallen timber and hollow logs. The modification area borders a dam at the southern

side of the CES facility; however, it is likely to contain disturbed runoff from the CES facility and thus provides poor aquatic habitat.

68. The amended BDAR reported that two threatened flora and eight threatened fauna species listed as endangered or vulnerable under the BC Act were identified to occur within the modification area. Of these, four are also listed as vulnerable or critically endangered under the EPBC Act [namely the Black-eyed Susan (*Tetratheca juncea*), Small flowered Grevillea (*Grevillea parviflora* subsp. *Parviflora*), South-eastern Glossy Black Cockatoo (*Calyptorhynchus lathami lathami*) and Swift Parrot (*Lathamus discolor*)].
69. The amended BDAR indicated that a total of 29 hollow bearing trees, with some containing multiple hollows, would be impacted by the clearing proposed under the modification. These were deemed to be potential nesting hollows for Masked Owls (*Tyto novaehollandiae*), Squirrel Glider (*Petaurus norfolcensis*) and the South-eastern Glossy Black-Cockatoo.
70. EcoResolve found that no threatened ecological communities or other MNES listed under the EPBC Act occur on the site or would be significantly impacted by the modification.
71. A summary of the direct impacts of the modification on vegetation communities and fauna species, which would require offsets, is provided in **Table 6**.

Table 6 | Direct biodiversity impacts that require offsetting

Ecological Feature	Listing Status		Impact (ha)
	BC Act	EPBC Act	
PCT 3583 - Hunter Coast Lowland Scribbly Gum Forest	-	-	2.93
Black-eyed Susan (<i>Tetratheca juncea</i>)	V	V	2.93
Small-flower Grevillea (<i>Grevillea parviflora</i> subsp. <i>Parviflora</i>)	V	V	2.93
Eastern Coastal Free-tail Bat (<i>Micronomus norfolkensis</i>)	V	-	2.93
South-eastern Glossy Black Cockatoo (<i>Calyptorhynchus lathami lathami</i>)	V	V	2.93
Large Bent winged Bat (<i>Miniopterus orianae oceanensis</i>)	V	-	2.93
Little Bentwing bat (<i>Miniopterus australis</i>)	V	-	2.93
Masked Owl (<i>Tyto novaehollandiae</i>)	V	-	2.93
Yellow bellied Sheathtail bat (<i>Saccolaimus flaviventris</i>)	V	-	2.93
Squirrel Glider (<i>Petaurus norfolcensis</i>)	V	-	2.93

Ecological Feature	Listing Status		Impact (ha)
	BC Act	EPBC Act	
Swift Parrot (<i>Lathamus discolor</i>)	E	CE	1.14

V – Vulnerable, E – Endangered, CE – Critically Endangered

Serious and Irreversible Impacts (SAIL)

72. The amended BDAR included an assessment of potential serious and irreversible impacts (SAIL) associated with the modification. An impact is to be regarded as serious and irreversible if it is likely to contribute significantly to the risk of a threatened species or ecological community becoming extinct based on four principles set out in clause 6.7 of the *Biodiversity Conservation Regulation 2017*. EcoResolve conducted full SAIL assessments for three species, including the Swift Parrot, Little Bent-winged Bat (*Miniopterus australis*) and Large Bent-winged Bat (*Miniopterus orianae oceanensis*).
73. The SAIL assessment outcomes for the Large Bent-winged Bat and the Little Bent-winged Bat were based on the knowledge that no caves or mine shafts were present in the disturbance area and the species detected are considered most likely to have been recorded in foraging habitat, not breeding or roosting habitat.
74. The SAIL assessment outcome for the Swift Parrot concluded that the small area of proposed foraging habitat loss on the peripheries of the mapped important habitat (only ~1.14 ha is mapped within the ~2.93 ha site) is unlikely to cause a decline of the species in the locality.
75. The Department and CPHR accept this assessment outcome and consider that the modification is unlikely to contribute significantly to the risk of these species becoming extinct.

6.1.3 Indirect and Prescribed impacts

76. The amended BDAR indicated that the modification also has the potential to cause indirect or prescribed impacts on land adjacent to the disturbance footprint. Indirect impacts include increased levels of dust, noise and light spill, erosion of soils and sedimentation, downstream hydrological changes, and the transfer of waste, weeds and pathogens. Key prescribed impacts considered for the proposed modification included habitat fragmentation and loss of connectivity and vehicle strike.
77. As discussed below, the amended BDAR describes a range of mitigation and management measures that would be implemented to minimise indirect and prescribed impacts on biodiversity.

6.1.4 Avoidance, minimisation and mitigation

78. Advice received throughout the assessment process from both CPHR and Council was critical of the lack of a genuine and reasonable demonstration of biodiversity impact avoidance measures.
79. In response, Centennial indicated that avoidance was embedded in the project design process through iterative refinement of the development footprint, informed by both engineering constraints and environmental considerations.
80. The company outlined how the project disturbance footprint had been reduced from an initial design impact area of 12.2 ha to 2.93 ha, representing an overall reduction of approximately 69%. As a result, impact to approximately 9.5 ha of native vegetation was avoided. Direct impacts to aquatic habitat were also eliminated through the project refinement process. This is shown on **Figure 3**.



Figure 3 | Project disturbance boundary refinement

81. The reduction reflects multiple design revisions specifically undertaken to avoid and minimise impacts to native vegetation, threatened flora habitat, threatened fauna habitat and hollow-bearing trees.
82. Centennial considered that the final development footprint demonstrates a clear avoidance effort, striking a balance between constraints associated with the location of the existing coal handling infrastructure and retention of native vegetation and threatened species habitat.
83. Further, Centennial agreed to implement a range of other minimisation and mitigation measures to further reduce the direct, indirect and prescribed biodiversity impacts of the modification, including:
- conducting pre-clearing surveys by a qualified ecologist to detect and relocate displaced fauna species;
 - developing and implementing a procedure to respond to the unexpected detection of threatened species;
 - limiting vegetation clearing and topsoil removal to daylight hours where feasible;
 - clearly delineating approved clearing and work areas using bunting, signage or fencing to prevent incidental impacts outside disturbance areas;
 - ensuring all vegetation clearing is supervised by an ecologist or team trained to detect and remove and relocate fauna from clearing sites;
 - scheduling vegetation clearing to take into consideration periods when most fauna species are not breeding;
 - ensuring native vegetation clearing occurs via a two-stage clearing process, e.g. under scrubbing would be completed 24-48 hours before clearing of hollow-bearing trees and other habitat features to allow fauna to relocate;
 - assessing hollows in habitat-bearing trees within clearing areas for relocation, salvaging suitable hollows and mounting in mature trees beyond disturbance areas;
 - developing and implementing a hollow replacement strategy to offset the loss of habitat features;
 - maintaining vehicle speed limits and restricting movements (avoiding dawn and dusk where possible) to minimise the likelihood of vehicle strikes;
 - covering trenches, boreholes and other cavities that could act as pit traps for fauna when not actively in use;
 - implementing weed surveillance and treatment and pathogen risk management procedures;

- implementing erosion and sediment control measures; and
 - training site personnel on biodiversity management measures.
84. The Department supports these minimisation and mitigation measures. In accordance with CPHR's recommendations, the Department has recommended that the nature and details of the mitigation and management works be described in the Project's Biodiversity Management Plan, which would need to be revised to the satisfaction of the Planning Secretary, prior to the commencement of vegetation clearing associated with the proposed modification.
85. Overall, the Department considers that Centennial has appropriately applied the principle of avoidance within the constraints of the location of the existing stockpile and coal handling infrastructure, and that the proposed mitigation measures are appropriate to further minimise impacts on biodiversity values.

6.1.5 Biodiversity offsets

86. In accordance with the BAM, the amended BDAR includes the calculated offset liability for the proposed surface disturbance areas. The modification would require a total offset of 83 ecosystem credits and 530 species credits.
87. **Table 7** provides a summary of the offset credit liabilities for ecosystem and species credits applicable to each stage.

Table 7 | Biodiversity Offset Liabilities

Ecological feature	Impact area (ha)	Total credits required
Ecosystem credits		
PCT 3583 - Hunter Coast Lowland Scribbly Gum Forest	2.93	83
Species credits		
Black-eyed Susan (<i>Tetratheca juncea</i>)	2.93	95
Masked Owl (<i>Tyto novaehollandiae</i>)	2.93	95
Small-flower (<i>Grevillea Grevillea parviflora</i> subsp. <i>Parviflora</i>)	2.93	95
Squirrel glider (<i>Petaurus norfolcensis</i>)	2.93	95
Dual credit species		
South-eastern Glossy Black Cockatoo (<i>Calyptorhynchus lathami lathami</i>)	2.93	95
Swift Parrot (<i>Lathamus discolor</i>)	1.14	55

88. Centennial indicated that, due to time constraints, they intend to satisfy the offset liability by making payment into the Biodiversity Conservation Fund. The Department acknowledges that the mechanisms proposed to satisfy the credits liabilities are in line with the requirements and options of the BC Act.
89. The Department accepts the proposed offset approach, so long as all credits associated with vegetation removal are retired prior to disturbance and 'like- for-like' direct offsets are delivered for impacts to MNES (see below). Accordingly, the Department has recommended conditions requiring Centennial to:
- offset MNES in accordance with Commonwealth offset requirements; and
 - retire the corresponding credit liabilities prior to vegetation clearing.

6.1.6 Matters of National Environmental Significance

90. As indicated in **Section 4.4**, the modification has been declared a controlled action under the EPBC Act due to potentially significant impacts on MNES, including potential impacts on several EPBC-listed fauna species.
91. The amended BDAR included assessments of significance for all potentially impacted EPBC-listed species and concluded that the modification has the potential to have residual significant adverse impacts on two flora species: the Black-eyed Susan and Small flowered Grevillea. Offset liabilities have therefore been calculated for these species.
92. The Department considered Commonwealth matters in consultation with CPHR, as well as relevant approved conservation advice, recovery plans and threat abatement plans. CPHR provided guidance to the Department on the assessment of EPBC Act-listed threatened species and communities. Additionally, a copy of the Department's assessment and recommended conditions were provided to the National Environmental Protection Agency (NEPA) for review. The Department responded to the issues raised and no further matters were raised by NEPA thereafter. The Department's assessment of Commonwealth matters is provided in **Appendix C**.
93. The Department considers the impacts of the controlled action (EPBC 2024/09938) would be acceptable, subject to the avoidance, mitigation and offsetting measures described in the BDAR and the recommended conditions of consent.

6.1.7 Conclusion

94. The Department has carefully considered the potential impacts from the modification on biodiversity values, as well as advice from CPHR and Council.

95. The Department considers that the modification has been designed to avoid, mitigate and manage biodiversity impacts where practicable. The final disturbance footprint has been refined to avoid direct clearing of 9.5 ha of native vegetation.
96. However, the modification would result in a range of residual impacts on biodiversity through the disturbance of 2.93 ha of native vegetation and impacts to threatened fauna and flora species listed under either or both the BC Act and EPBC Act.
97. The Department has carefully considered these impacts on biodiversity values and considers that they would be suitably mitigated, managed and/or offset through retirements of ecosystem credits and species credits in accordance with the BC Act and the EPBC Act.
98. Additionally, the recommended conditions of consent would provide for sound management of retained biodiversity values adjacent to the site and assurance to the community and regulatory agencies over the management of residual biodiversity impacts. Overall, the Department considers the impacts of the modification on biodiversity are acceptable, subject to the recommended conditions.

6.2 Noise and vibration

6.2.1 Introduction

99. A Noise and Vibration Impact Assessment was completed by GHD to evaluate the acoustic impacts of the construction and operation of the modification.
100. The Department and EPA are satisfied that the Noise Impact Assessment is suitable for assessing the noise impacts of the modification.

6.2.2 Existing noise environment

101. The existing noise environment in the vicinity of the site is dominated by the existing coal processing, handling and transport (road, rail and conveyors) operations associated with the Project, as well as operations at the surrounding industrial and mining premises (including the EPS, and Newstan and Awaba Collieries).
102. The locations of sensitive residential receivers are shown in **Figure 4**. The land immediately surrounding the CES is predominately undeveloped bushland containing numerous rural residences located approximately 1 km to the south of the proposed stockpile extension area. The residential areas of Dora Creek and Cooranbong are located further to the south and south-west, respectively. The EPS is located approximately 1 km to the east.
103. Residential receivers R1, R2 and R5 have negotiated noise agreements in place with Centennial.

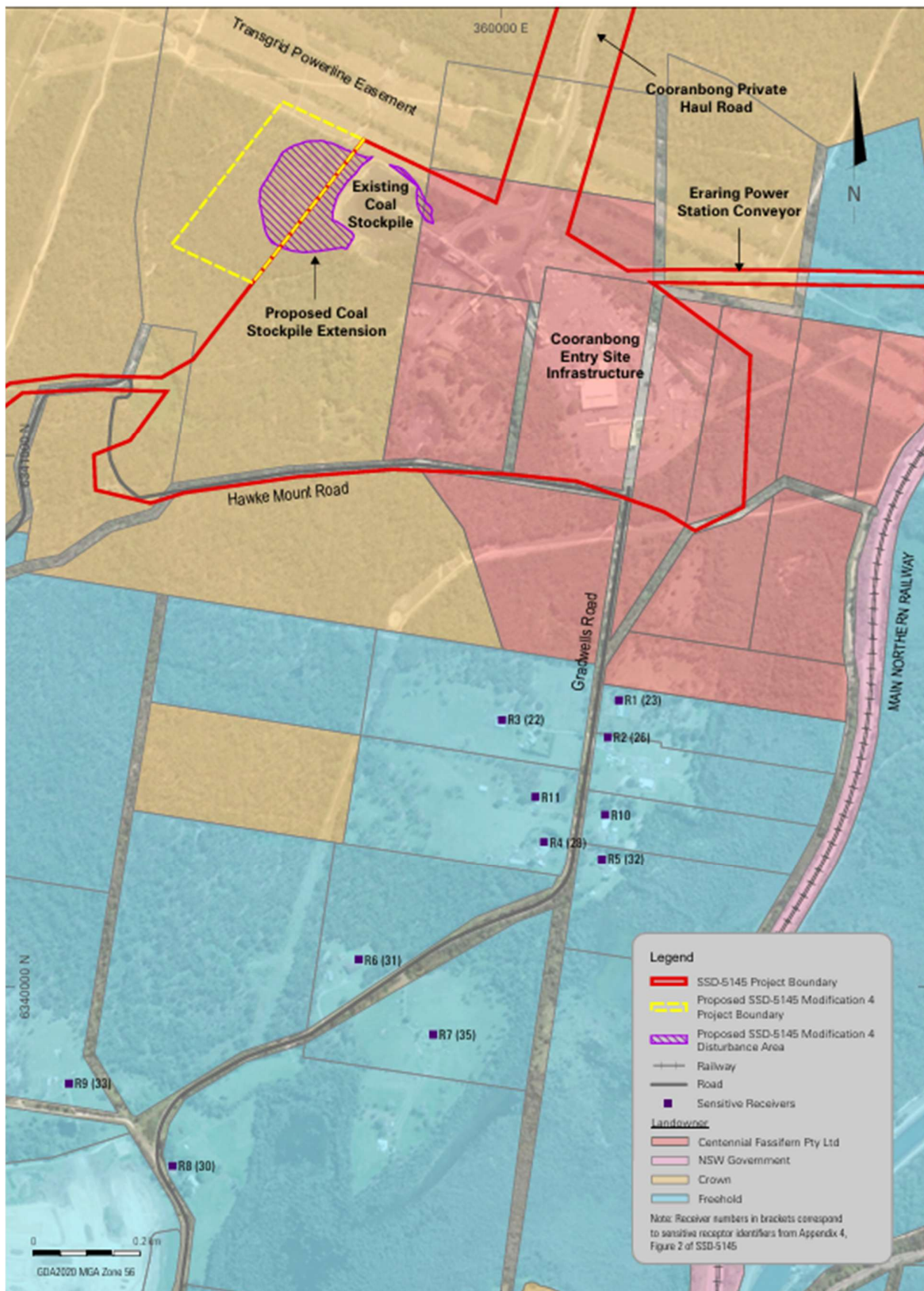


Figure 4 | Sensitive residential receivers

104. GHD conducted unattended noise monitoring at representative locations surrounding the site to determine existing background noise levels for the noise impact assessment. These are shown in **Table 8**.

Table 8 | Background noise levels

Sensitive receptors	Period	Rating background noise level (RBL) (LA90)
All residential	Day	35
	Evening	40
	Night	39

105. A review of the 2024 and 2025 Mandalong Annual Reviews confirmed, via quarterly attended noise monitoring, that the CES complied with existing noise criteria at all monitoring locations.
106. Similarly, a review of the 2024 and 2025 Mandalong Annual Reviews identified that two community complaints were received during 2025 and one community complaint was received in 2024, regarding noise from the CES.
107. GHD also completed a review of historical meteorological data relevant to the local area. The analysis found that prevailing winds are considered a feature of the area during daytime, and that temperature inversions frequently occur at night during winter. Both meteorological characteristics were therefore included in the noise assessment and modelling.

6.2.3 Noise mitigation and management

108. GHD confirmed that a range of existing and proposed noise controls and management strategies have been included in the noise modelling, and that Centennial has committed to implement these measures for the modified operations.
109. Existing and proposed noise controls and strategies to be applied for the construction phase of the modification include:
- selection of equipment with lower noise and vibration levels during the construction planning phase;
 - siting of plant and equipment to minimise noise at sensitive receiver locations;
 - minimising drop heights during loading and unloading of construction material;
 - regular maintenance of construction plant and equipment; and
 - application of the existing Noise Management Plan.

110. Existing and proposed noise controls and strategies for the operational phase of the modification include:
- negotiated noise agreements with receptors R1, R2, R5 and R10;
 - acoustic cladding on the Rotary Breaker and Coal Handling Plant buildings;
 - acoustic barrier installed on the eastern side (side of sensitive receivers) of the CES truck loading bin;
 - maximising the use of the CES truck loading bin;
 - operating a continuous meteorological station to predict weather conditions and modify operations accordingly during noise-enhancing conditions;
 - using an onsite real-time noise monitor and Trigger Action Response Plan to adjust operations in response to real-time noise monitoring data;
 - ongoing quarterly attended compliance noise monitoring;
 - updating and implementing the Project's Noise Management Plan;
 - lining of haul road truck trays with sound dampening material; and
 - installing a sound attenuation kit on the new stockpile dozer.
111. The Department supports these mitigation measures and has recommended that they be implemented as part of the modification.

6.2.4 Existing and proposed noise criteria

Construction noise criteria

112. Construction for the modification would take approximately 12 months and would occur predominately during standard construction hours, as defined in the *Interim Construction Noise Guideline* (ICNG) (DECC, 2009). Some construction activities may be undertaken from time to time outside standard construction hours, which may include:
- work determined to comply with the relevant noise management level at the nearest sensitive receiver;
 - delivery of materials or plant and machinery as required by the NSW Police or other authorities for safety reasons;
 - emergency situations where it is required to avoid the loss of lives and properties and/or to prevent environmental harm;
 - situations where agreement is reached with affected noise sensitive receivers; or

- work where Centennial demonstrates and justifies a need to operate outside the recommended standard construction hours, to the satisfaction of the Planning Secretary.
113. The existing construction limits contained in SSD-5145 (Schedule 3, Condition 1) were derived in accordance with the ICNG and would continue to apply to the modification, as shown in **Table 9**.

Table 9 | Construction noise criteria (ICNG)

Standard construction hours		
Sensitive receptors	Noise affected (L_{Aeq} (15 min))	Highly affected (L_{Aeq} (15 min))
All residential	45	75

114. The ICNG provides a guide of 10 dB above the RBL using the $L_{Aeq,15min}$ descriptor, stating that noise above this level indicates the potential for community reaction to noise.

Operational noise criteria

115. The existing noise limits contained in SSD-5145 were derived in accordance with the now superseded *NSW Industrial Noise Policy* (INP) (EPA, 2000).
116. Noise criteria for industrial operations are now required to be derived in accordance with the *NSW Noise Policy for Industry* (NPfI) (EPA, 2017). The NPfI provides a methodology for setting noise limits for existing industrial sites which involves:
- establishing relevant Project Noise Trigger Levels (PNTLs) to establish a benchmark level to assess the need to consider noise mitigation;
 - measuring/predicting the noise levels generated by the operations;
 - comparing the measured/predicted noise level with the PNTLs;
 - where the PNTLs are exceeded, assessing feasible and reasonable noise mitigation strategies; and
 - developing and refining achievable noise limits that will become long-term noise goals for the site through negotiation and discussion with regulatory authorities.
117. The Department and EPA are satisfied that Centennial has adequately followed this process in deriving noise limits for the modification.
118. The proposed operational noise criteria for all residential receptors are based on the rating background noise levels determined from unattended noise monitoring. The intrusive noise goals are determined by a 5 dB addition to the measured (or adopted) background level.

The NPI recommends that the intrusive noise goals for the evening period should not exceed the daytime period and the night-time period should not exceed the evening period.

119. The proposed operational noise criteria for all residential receptors are presented in **Table 10**. The EPA has reviewed and accepted these proposed noise criteria.

Table 10 | Operational noise criteria

Sensitive receptors	Period	Project specific noise goals ($LA_{eq}(15\text{minute})$)
All residential	Day / Evening/ Night	40

120. The proposed sleep disturbance criteria for all residential receptors are presented in **Table 11**.

Table 11 | Sleep disturbance noise criteria

Sensitive receptors	Period	$LA_{eq}(15\text{minute})$	LAF_{max}
All residential	Night	40	52

Notes: $LA_{eq}(15\text{minute}) = RBL + 5$ or 40 dBA whichever is greater as per NPI (Section 2.5).

$LAF_{max} = RBL + 15$ or 52 dBA whichever is greater as per NPI (Section 2.5).

6.2.5 Predicted noise impacts

Construction noise

121. Noise from construction of the modification is predicted to exceed the noise affected noise management level (45 ($LA_{eq}(15\text{min})$)) (**Table 9**) during the civil works at a number of nearby sensitive receivers (R4, R5 and R6).
122. However, all predicted construction noise impacts are below the highly noise affected management level (75 ($LA_{eq}(15\text{min})$)) (**Table 9**) during all construction scenarios at all assessment receiver locations.
123. The ICNG specifies that where construction noise is predicted to be greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to minimise noise and meet the noise affected level. The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
124. Mitigation strategies that would be implemented to minimise construction noise impacts are listed in **Section 6.2.3**. In accordance with the ICNG, Centennial has proposed mitigation measures to limit noise impacts during construction, including:
- selection of low noise emitting construction methods, plant and equipment;

- locating plant and activities away from receivers where possible;
- undertaking regular equipment maintenance; and
- installing acoustic shielding where practicable.

125. The Department has recommended conditions requiring Centennial to take all reasonable and feasible steps to manage construction noise generated by the modification in accordance with the requirements of the ICNG and documenting those measures in a revised Noise Management Plan for the Project.

Construction traffic noise

126. Significant road traffic and construction vibration impacts to sensitive receivers are not predicted.
127. The relative increases in road traffic associated with the construction of the modification were predicted to not increase noise levels by more than 2 dBA along Gradwells Road, which is compliant with the guidance contained in the *Road Noise Policy* (RNP) (DECCW 2011).

Construction vibration

128. No existing sensitive receivers were identified within the structural damage safe working distances for any criteria or activity.
129. No sensitive receivers were identified to potentially experience vibration levels above the *British Standard and Assessing Vibration: a technical guideline* (AVTG) (2006) and AVTG daytime human comfort criteria during the access road construction activities.

Operational noise

130. Predicted operational noise levels at sensitive receiver locations are presented in **Table 12**.

Table 12 | Operational noise results

Receiver ID	Prediction results LAeq(15minute) dBA								Criteria LAeq (15minute) dBA
	Day (Calm)	Evening (Calm)	Night (Calm)	Prevailing winds – Day				Night (temperature inversion)	
				ESE	SE	SSE	S		
R1*	40	40	40	35	34	34	34	42	40
R2*	39	39	39	34	33	32	32	41	40
R3	29	27	28	26	24	24	23	23	40
R4	36	35	35	31	29	29	29	38	40

Prediction results LAeq(15minute) dBA									
Receiver ID	Day (Calm)	Evening (Calm)	Night (Calm)	Prevailing winds – Day				Night (temperature inversion)	Criteria LAeq (15minute) dBA
				ESE	SE	SSE	S		
R5*	37	36	35	31	30	29	29	39	40
R6	31	28	28	27	25	24	24	30	40
R7	30	28	28	26	24	23	23	31	40
R8	36	35	35	31	29	29	29	38	40
R9	28	25	25	27	23	22	21	28	40
R10*	38	37	37	32	31	30	30	40	40
R11	31	31	31	28	25	24	24	34	40

Notes:

* Centennial has negotiated noise agreements in place at these locations.

Bold text notes an exceedance of the criteria.

131. As shown in **Table 12**, predicted noise levels are compliant with the noise criteria at all sensitive receptors during calm and prevailing wind conditions.
132. Two sensitive receivers (R1 and R2) are predicted to experience a negligible 1 dB to 2 dB exceedance of the noise criteria during nighttime temperature inversions conditions. The Department acknowledges that both of these receivers have a negotiated noise agreement in place with Centennial.

Sleep disturbance

133. Predicted sleep disturbance noise levels at sensitive receiver locations are presented in **Table 13**.

Table 13 | Sleep disturbance noise results

Receiver ID	Prediction results (L _{Amax} DBA)	Criteria (L _{Amax} DBA)
R1*	47	52
R2*	42	52
R3	33	52
R4	38	52
R5*	40	52
R6	31	52

Receiver ID	Prediction results (L _{Amax} DBA)	Criteria (L _{Amax} DBA)
R7	33	52
R8	38	52
R9	32	52
R10*	41	52
R11	30	52

* Centennial has negotiated noise agreements in place at these locations

134. GHD confirmed that the predicted maximum night-time noise levels would be below the NPfL L_{Amax} trigger level of 52 dB(A) at all assessment locations. As such, the proposed modification is unlikely to cause sleep disturbance.

Operational traffic noise

135. There would be no change to the existing approved operational offsite traffic volumes as a result of the modification.

Operational vibration

136. The main vibration generating equipment to be used at the site would include trucks, frontend loaders and dozers during operation of the modification.
137. Given the separation distance between the modification and the nearest potentially affected residential receiver locations (greater than 940 m between the proposed infrastructure and the nearest residence), vibration levels are predicted to be negligible and below levels of human perception at the nearest residences.
138. Consequently, vibration generated at the modification site will be significantly below the criteria for “minimal risk of cosmetic damage” at the nearest residences.

6.2.6 Noise monitoring and management

139. As noted above, Centennial has committed to continue to implement existing and additional proposed noise mitigation and management strategies as part of the modification (see **Section 6.2.3**).
140. The Department has recommended conditions requiring Centennial to take all reasonable and feasible steps to manage construction and operational generated by the modification.

141. In addition, the Department has recommended that Centennial be required to update its existing Noise Management Plan for the Project to include the mitigation and management measures to be implemented during construction and operation of the proposed modification.
142. The Department considers that with implementation of the existing and proposed mitigation, monitoring and management measures, the noise impacts of the modification on sensitive receivers can be appropriately managed.

6.2.7 Conclusion

143. The Department considers that the NVIA has been prepared in accordance with the relevant government guidelines and policy, including the NPfI, VLAMP and RNP.
144. The Department considers the approaches used to derive the noise limits are reasonable, and that overall, the limits are conservative. Proactive, best practice noise management and contingency mitigation measures are proposed which the Department considers would ensure an acceptable outcome for the community.
145. The Department accepts that the modification is unlikely to adversely impact surrounding sensitive receivers beyond approved noise limits during construction and operation of the modification.
146. Centennial has committed to continue to implement existing noise controls, as well as implement additional proactive controls during adverse weather conditions to further reduce noise impacts associated with the modification.
147. The Department supports the mitigation measures proposed by Centennial to reduce noise levels and has recommended that the company update its existing approved NMP to include specific noise monitoring, mitigation and management measures associated with the modification.
148. Overall, the Department considers the noise impacts of the modification are acceptable and appropriately managed, subject to the recommended conditions.

6.3 Other issues

149. The Department's consideration of other issues is summarised in **Table 14** below.

Table 14 | Assessment of other issues

Issue	Findings and conclusions
Air Quality	• An Air Quality and Greenhouse Gas Impact Assessment (AQGHGA) prepared by SLR Consulting assessed the incremental and cumulative air quality impacts of the modification. The AQGHGA was completed in accordance EPA's <i>Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales</i> (2016). • Neither Council nor the EPA raised any concerns in relation to air quality. • Key emission sources from the modification would include dust generation from construction activities and coal handling activities, in addition to wind erosion from the coal stockpile. • No adverse construction air quality impacts were identified. • Two operational scenarios were modelled to assess potential worst-case impacts for the modification and compliance with SSD-5145 criteria at the sensitive receivers closest to CES. These included: • Scenario 1 – Export option, including the receipt and handling of 6 Mtpa of ROM coal from Mandalong Mine at CES and transport to Newstan Colliery surface site by truck; and • Scenario 2 – Eraring Power Station option, representing receipt and handling of 6 Mtpa of ROM from the Mandalong Mine at CES and transport to Eraring Power Station by conveyor. • No exceedances of the cumulative annual average PM_{2.5}, PM₁₀ and TSP or deposited dust criteria were predicted at the identified receivers for both modelled scenarios. • One day of exceedance of the cumulative 24-hour average PM_{2.5} and PM₁₀ criteria was predicted for Scenario 1 (export option) at receptors R1 and R2. An exceedance of the 24-hour average PM₁₀ criteria was also predicted at R5 and R10 on the same day. • Further analysis showed that on the day of the modelled exceedances, the ambient monitoring data recorded at the NSW Government Morisset Air Quality Monitoring System (as used in the modelling) was significantly impacted by local events (i.e. significant bushfire), with recorded 24-hour average PM₁₀ concentration data at the CES monitoring location on this day being much lower.

Issue	Findings and conclusions
	- Based on this analysis and the modelling of approved CES operations (i.e. double counting of the impact associated with CES material handling for cumulative impacts), it is considered highly unlikely that operation of the modification would lead to exceedances of SSD-5145 air quality impact criteria at the nearest sensitive receivers. - No exceedances of the cumulative 24-hour average PM_{2.5} and PM₁₀ criteria were predicted for Scenario 2 (Eraring Power Station option). - The Department has recommended that the existing Air Quality Management Plan is updated to include the modification, including any mitigation measures required during construction.
Greenhouse Gas	- An AQGHGA prepared by SLR Consulting assessed the incremental and cumulative greenhouse gas emissions from the modification. - The assessment considered potential emissions associated with construction and operation of the modification, including: vegetation disturbance; fuel combustion required during the construction of the modified stockpile; and additional fuel combustion required during operation of the modified stockpile. - The additional greenhouse gas emissions for the modification were estimated as: 1,569 t CO₂-e during modification construction; and 2,196 t CO₂-e / annum during modification operations. - When compared to the total annual Scope 1 emissions estimated for NCS of 141,306 t CO₂-e, the Scope 1 annual greenhouse gas emissions predicted for the modification are approximately 1.2% of total NCS emissions. - The modification emissions estimates are also significantly below the 25,000 tonne CO₂-e / annum threshold under the GHG Guide. - The Department has recommended that the existing Greenhouse Gas Management Plan is updated to include the modification, including any mitigation measures required during construction.
Surface water	A Surface Water Impact Assessment (SWIA) was undertaken by Alluvium Consulting Australia Pty Ltd (Alluvium) to determine the likely surface water impacts from the modification.

Issue	Findings and conclusions
	• DCCEE Water initially raised a series of concerns regarding the frequency of water flows, dirty water treatment time and the flood impact modelling. • As part of the Submissions Report, Centennial revised the SWIA to undertake revised modelling to address these concerns. • The revised SWIA found the modification may lead to an increase dirty water runoff volumes and sedimentation within the CES water management system. However, it is anticipated that the existing water management system would effectively mitigate and manage these potential impacts. This conclusion is supported by the updated water balance assessment. • The flood modelling also suggests that the development of the modified stockpile and associated clean water diversion drains would result in minimal change to local flood behaviour. • DCCEE Water accepted the revised SWIA and modelling and raised no further concerns. • The Department has recommended that the existing Water Management Plan is updated to include the modification, including any mitigation measures required during construction.
Aboriginal and historic heritage	• An Aboriginal Cultural Heritage & Historic Heritage Assessment Report for the modification was undertaken by Ozark Environment & Heritage (OzArk). • A field survey of the modification disturbance area completed by OzArk and representatives from three NCS RAPs in July 2023 did not record any Aboriginal heritage sites. • OzArk concluded that there is low likelihood the modification would adversely impact on Aboriginal cultural heritage objects or sites. • No historic heritage items were recorded during the survey. OzArk concluded that impacts to historic heritage would not occur due to the modification. No areas with potential subsurface historic heritage deposits were identified. • The Department has recommended that the existing Heritage Management Plan is updated to include the modification, including any mitigation measures required during construction, including an unexpected finds protocol.

Issue	Findings and conclusions
Visual	- Land between existing CES facilities and the residential receivers generally consists of a series of vegetated ridgelines. Other land use in the area also includes EPS and transport corridors associated with the M1 Pacific Motorway and the Main Northern Rail Line. - The visual impact of the modified stockpile would not be significant. The modification Report included a cross-section representative of the nearest sensitive receiver location to the south of CES and worst-case visual impacts of the modified stockpile (i.e. stockpile at full operating height of approximately 50 mRL). This demonstrated that views of the modified stockpile would generally be screened from receiver locations by the intervening topography and vegetation. - Lighting impacts for the modified stockpile would also be low. While additional fixed lighting would be required around the perimeter of the modified stockpile to support nighttime operations, this is not expected to significantly contribute to the existing lighting effects of CES.
Bushfire	- Land adjacent to the western and southern boundary of the modification disturbance area is mapped as Category 1 Bushfire Prone Land. Land to the north and east is of lower risk, as it is occupied by a powerline easement and the existing CES, respectively. - The Department has recommended that the existing Bushfire Management Plan is updated to include the modification, including any mitigation measures required during construction.
Social	- A Social Impact Assessment (SIA) was undertaken for the modification. - The modification was predicted to have low to moderate social impacts, due to: - not significantly changing the social and economic profile of the community, except in the potential for continued employment; and - low to moderate cumulative impact on local amenity, infrastructure (including housing), or the economic profile of the Social Locality.
Economic	- An Economic Assessment of the modification was completed by Gillespie Economics. - The main economic costs relate to the additional social environmental impacts to biodiversity, local amenity (noise and air quality) and greenhouse gas emissions that would result from the modification.

Issue	Findings and conclusions
	• The main economic benefit would occur due to the additional storage capacity and operational flexibility provided by the modified stockpile, which would increase ability to efficiently transfer coal from Mandalong Mine through NCS to Centennial customers. • Overall, the CBA found that the modified stockpile would realise a minimum benefit of: • royalties of approximately \$13M; and • total net production benefit to Australian and NSW (net present value at 7% discount rate) in the order of \$23M and \$18M, respectively. • combining the estimate of net production benefits with the consideration of residual environmental, social and cultural impacts, the CBA estimated the modification would have net social benefits to both Australia and NSW relative to the base case (i.e. no modification) and is therefore desirable and justified from an economic efficiency perspective.

7 Evaluation

150. The Department has assessed the potential environmental, social and economic impacts of the proposed modification in accordance with the requirements of the EP&A Act, in consultation with relevant Government agencies, Council and with consideration of public submissions.
151. The Department considers that the proposed stockpile would provide greater operational flexibility in the management of ROM coal received at the CES. This increased flexibility would enhance Centennial's ability to manage coal deliveries efficiently, promote operational continuity, and support the reliable supply of coal to both domestic and export customers, in turn delivering ongoing economic benefits to NSW.
152. The Department considers that the modification has been designed to avoid, mitigate and manage biodiversity impacts where practicable. The final disturbance footprint has been refined to avoid direct clearing of 9.5 ha of native vegetation. However, the modification would result in a range of residual impacts on biodiversity through the disturbance of 2.93 ha of native vegetation and impacts to threatened fauna and flora species listed under either or both the BC Act and EPBC Act.
153. The Department has carefully considered these impacts on biodiversity values and considers that they would be suitably mitigated, managed and/or offset through retirements of ecosystem credits and species credits in accordance with the BC Act and the EPBC Act.
154. The Department considers the approaches used to derive the noise limits are reasonable, and that overall, the limits are conservative. Proactive, best practice noise management and contingency mitigation measures are proposed which the Department considers would ensure an acceptable outcome for the community.
155. The Department's assessment has concluded that the potential impacts of the modifications are similar in nature and scale to those of the existing operations and can be appropriately managed through existing and proposed conditions of consent.
156. Consequently, the Department considers that the proposed modification is in the public interest and is approvable, subject to the recommended conditions set out in the notice of modification (see **Appendix E**). A consolidated development consent incorporating the recommended changes is provided in **Appendix D**.
157. This Modification Assessment Report is hereby presented to the Commission to determine the application.

Appendices

Appendix A – List of referenced documents

A1 – Modification Report: Refer to the ‘Modification Application’ folder under the ‘Assessment’ tab on the Department’s website at: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-4-cooranbong-coal-stockpile-extension>

A2 – Submissions: Refer to the ‘Submissions’ tab on the Department’s website at: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-4-cooranbong-coal-stockpile-extension>

A3 – Submissions Report: Refer to the ‘Response to Submissions’ folder under the ‘Assessment’ tab on the Department’s website at: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-4-cooranbong-coal-stockpile-extension>

A4 – Agency Advice: Refer to the ‘Agency Advice’ folder under the ‘Assessment’ tab on the Department’s website at: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-4-cooranbong-coal-stockpile-extension>

A5 – Amendment Report: Refer to the ‘Amendments’ folder under the ‘Assessment’ tab on the Department’s website at: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-4-cooranbong-coal-stockpile-extension>

A5 – Additional Information: Refer to the ‘Additional Information’ folder under the ‘Assessment’ tab on the Department’s website at: <https://www.planningportal.nsw.gov.au/major-projects/projects/northern-coal-services-modification-5>

Appendix B – Statutory considerations

Objects of the EP&A Act

158. A summary of the Department’s consideration of the relevant objects of the EP&A Act is provided in **Table B1** below.

Table B1 | Consideration of the modification against relevant objects of the EP&A Act

Object	Consideration
<i>(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State’s natural and other resources,</i>	• The modification is consistent with this object because it is an extension to an existing coal stockpile, within the existing coal handling infrastructure area and would continue to encourage the proper management of resources.
<i>(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,</i>	• The Department considers that the modification can be carried out in a manner that is consistent with the principles of ecologically sustainable development as detailed below. Precautionary principle • The Department has assessed the modification’s threat of serious or irreversible environmental damage and considers that there is sufficient scientific certainty regarding environmental impacts and residual risks to enable determination of the application. • The Department considers that the recommended conditions can provide an appropriate level of protection to environmental values in the region. Inter-generational equity • The Department considers that the modification maximises efficiency and coal resource recovery. • The Department considers that the emissions resulting from the modification would comprise a small contribution towards climate change at both the national and global scale. Conservation of biological diversity and ecological integrity • The Department considers that, as impacts associated with the native vegetation clearing would be offset in accordance with the NSW Biodiversity Offset Scheme and Commonwealth requirements, the modification’s impacts to biological diversity and ecological integrity are acceptable. Improved valuation, pricing and incentive • The Department considers the modification to be an efficient use of existing coal stockpile and coal handling infrastructure that maximises

Object	Consideration
	economic benefits whilst minimising environmental and social impacts subject to conditioning.
<i>(c) to promote the orderly and economic use and development of land,</i>	- The modification involves a permissible land use on the subject land on land immediately adjacent to the approved project boundary. - The modification can be carried out using coal handling infrastructure. - The Department considers this represents an orderly and economic use of the land.
<i>(d) to promote the delivery and maintenance of affordable housing,</i>	Not applicable.
<i>(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,</i>	- The Department considers that the modification minimises environmental impacts as much as practicable given the utilisation of existing site and coal handling infrastructure. - The modification would result in the clearing of 2.93 ha of native vegetation. Centennial would be required to offset biodiversity impacts in accordance with the NSW Biodiversity Offset Scheme and Commonwealth requirements. The Department considers that would result in a like-for-like biodiversity outcome.
<i>(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),</i>	- The Aboriginal cultural heritage assessment was prepared in consultation with Registered Aboriginal Parties and in accordance with the NSW Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (2011). - The modification is unlikely to result in impacts to Aboriginal heritage sites. - Mitigation and management of Aboriginal heritage sites would continue under the site's heritage management plan, in consultation with Heritage NSW and RAPs. - The Department considers that impacts can be appropriately managed under existing conditions.
<i>(g) to promote good design and amenity of the built environment,</i>	Not applicable.
<i>(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,</i>	Not applicable.
<i>(i) to promote the sharing of the responsibility for environmental planning</i>	The Department has assessed the modification application in consultation with Lake Macquarie City Council and other relevant NSW government

Object	Consideration
<i>and assessment between the different levels of government in the state,</i>	authorities and given consideration to the issues raised by these agencies in its assessment.
<i>(j) to provide increased opportunity for community participation in environmental planning and assessment.</i>	The Department publicly exhibited the Modification Report, Submissions Report, Amendment Report and application and considered all submissions in its assessment.

Matters for Consideration under 4.15 of the EP&A Act

159. The Department's consideration of the matters for consideration under section 4.15 of the EP&A Act is provided in Table B2 below.

Table B2 – Matters for consideration under section 4.15 of the EP&A Act

Item	Consideration
Environmental Planning Instruments	
Lake Macquarie Local Environmental Plan 2014	The modification is located on land zoned as C2 Environmental Conservation under the <i>Lake Macquarie Local Environmental Plan 2014</i> (LM LEP). Such development would be prohibited under the LM LEP, except for the provisions of Part 2.2, Section 2.9(1)(ii) of the Resources and Energy SEPP. This provision allows for mining development to be carried out with development consent on land that was subject to a mining lease under the Mining Act immediately prior to the commencement of Resources and Energy SEPP. Mining lease CCL 746 was granted on 16 May 1990, predating the commencement of Section 2.9(1)(ii) of the Resources and Energy SEPP. The modification is therefore permissible with development consent. The Department also consulted with Lake Macquarie City Council during the assessment of the modification.
State Environmental Planning Policy (Planning Systems) 2021	The proposed modification is for the purposes of coal mining which is identified as State Significant Development by Clause 5 of Schedule 1 of the Planning Systems SEPP. In accordance with section 2.7(2) of this State Environmental Planning Policy (SEPP), the Independent Planning Commission of NSW is the consent authority for a modification application where an applicant has disclosed a reportable political donation. Centennial had disclosed a reportable political donation at the time of the application and consequently the NSW Independent Planning Commission is the consent authority for the modification.
State Environmental Planning Policy (Resources and Energy) 2021	Part 2.3 of the Resources and Energy SEPP lists matters that must be considered by a consent authority before determining an application for the purposes of mining. The Department has considered these matters in its assessment of the modification

Item	Consideration
(Resources and Energy SEPP)	(throughout Section 6, as applicable) and has included a brief outline of key considerations below. <u>Non-discretionary development standards (section 2.16)</u> The modification would not result in cumulative amenity noise levels, cumulative air quality levels, air blast overpressure or ground vibration levels greater than the relevant criteria at any private dwelling in the vicinity of the modification. <u>Compatibility with Other Land Uses (section 2.17)</u> The Department considers that the modification would not materially change the compatibility of the Project with other land uses in the area, beyond what was considered in the original assessment. As such, the Department considers that the modification can be carried out in a manner that is compatible with surrounding land uses. <u>Voluntary land acquisition and mitigation policy (section 2.18)</u> The Department's assessment has considered the NSW Government's Voluntary Land Acquisition and Mitigation Policy (VLAMP). The modification does not trigger the land acquisition provisions of the VLAMP. <u>Compatibility of proposed development with mining (section 2.19)</u> Not applicable. <u>Natural Resource Management and Environmental Management (section 2.20)</u> Section 2.20 requires that the consent authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure that impacts on significant surface water and groundwater resources, threatened species and biodiversity are avoided or minimised to the greatest extent practicable and that GHG emissions are minimised to the greatest extent practicable. Impacts to groundwater and surface water due to the modification are generally consistent with those of the existing approved development (refer to Section 6). The Department considers the existing and recommended conditions of consent are appropriate to manage these impacts associated with the modification. Clearing associated with the coal stockpile extension is predicted to result in additional impacts to threatened species and biodiversity. The Department has proposed conditions of consent requiring these impacts to be offset in accordance with the NSW Biodiversity Offset Scheme and Commonwealth requirements. The Department considers that would result in a like-for-like biodiversity outcome. The existing consent includes a condition requiring Centennial to prepare and implement an Air Quality and Greenhouse Gas Management Plan to minimise energy use and greenhouse gases associated with the project. The existing consent also notes that the in accordance with the EPA's <i>Guide for Large Emitters</i> (2024), Centennial is also required to

Item	Consideration
	prepare and implement a Greenhouse Gas Mitigation Plan in accordance with the requirements provided by EPA. Section 2.20 (2) requires the consent authority to consider an assessment of the GHG emissions (including downstream emissions) of the development and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions. The Department has considered the greenhouse gas assessment prepared in support of the modification, in consultation with the EPA and having regard to applicable State and national policies and guidelines, including the guiding principles of the <i>Climate Change (Net Zero Future) Act 2023</i> (refer to Table B3). The Department considers the existing conditions of consent establish an appropriate framework for minimising GHG emissions associated with the modification, including a condition requiring an update of the Air Quality and Greenhouse Gas Management Plan. <u>Resource Recovery (section 2.21)</u> The Department has considered the recovery of coal resources in its assessment of the modification. It considers that the modified project can be carried out in an efficient manner that optimises coal handling while giving appropriate recognition and protection for environmental values. The Department has recommended conditions giving appropriate recognition and protection for the environmental values that may be affected. <u>Transport (section 2.22)</u> Section 2.22 aims to limit the transport of coal, other minerals and their ores, and extractive materials on public roads. The modification does not seek to alter the existing approved coal transport arrangements for the project. <u>Rehabilitation (section 2.23)</u> Section 2.23 outlines particular requirements relating to consideration of whether any consent granted should be subject to conditions aimed at ensuring rehabilitation of land disturbed by mining and, in particular, whether conditions should require preparation of a rehabilitation management plan, appropriate treatment of waste, remediation of soil contamination and the avoidance of public safety risks. The Department considers the existing conditions are adequate to manage rehabilitation, waste and contamination.
State Environmental Planning Policy (Biodiversity and Conservation) 2021	The Department has comprehensively assessed the modification's potential impacts on biodiversity in Section 6 of the report. Clearing associated with the expansion of open cut mining is predicted to result in additional impacts to biodiversity beyond what is currently approved. The Department has proposed conditions of consent requiring these impacts to be offset in accordance with the NSW Biodiversity Offset Scheme and Commonwealth requirements. The Department considers that would result in a like-for-like and therefore appropriate biodiversity and conservation outcome.

Item	Consideration
State Environmental Planning Policy (Resilience and Hazards) 2021	The Department is satisfied that the modification area does not have a significant risk of existing contamination given its historical and current land uses, and that the modification is generally consistent with the aims, objectives and provisions of the SEPP.

The likely impacts of the development

The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality.	Refer to Section 6.
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The suitability of the site for the development

The suitability of the site for the development	The modification would not alter the conclusions of the original assessment of the project in relation to the suitability of the site for the development.
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Submissions

Any submissions made in accordance with this Act or the regulations	Refer to Section 5.
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Public interest

Ecologically sustainable development (ESD)	The Department assessed the original project against the principles of ESD and concluded it can be carried out in a manner that is consistent with the principles of ESD. The modification would not alter the conclusions of this original assessment in relation to ESD.
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Reasons for granting consent of the original application

160. In determining the original project application, the Minister concluded that the project's benefits sufficiently outweighed its residual costs. The Department has considered the modification against the reasons the Minister provided for determining the project and considers that none of these reasons would preclude the approval of the application.

Climate Change (Net Zero Future) Act 2023

161. In assessing the impact of GHG emissions of the proposed modification, the Department has considered applicable policies, programs and guidelines. Specifically, the Department has carefully considered the proposed modification against the Guiding Principles in the *Climate Change (Net Zero Future) Act 2023*. The principles relate to how action to address climate change should be undertaken and what should be taken into account.
162. A summary of how the Department has considered these Guiding Principles is provided in Table B3.

Table B3 | Summary of consideration of modification against Guiding Principles in the *Climate Change (Net Zero Future) Act 2023*

Guideline Principle	Consideration
(1) <i>For this Act, the guiding principles are the principles set out in this section.</i>	Noted
(2) <i>There is a critical need to act to address climate change, which is a serious threat to the social, economic and environmental wellbeing of New South Wales.</i>	Noted
(3) <i>Action to address climate change should be taken as early as possible to minimise the cost and adverse impacts of climate change.</i>	The modification would not significantly compromise the NSW emissions reduction trajectory to achieve interim target reductions and net zero by 2050. This trajectory aligns with the timing of national commitments under the Paris Agreement 2015.
(4) <i>Action to address climate change should be taken in a way that –</i> <i>a) is fiscally responsible, and</i> <i>b) promotes sustainable economic growth, and</i> <i>c) considers the economic risks of delaying action to address climate change, and</i> <i>d) considers the impact on rural, regional, and remote communities in New South Wales.</i>	The modification is an extension to an existing coal stockpile, which would have lesser environmental impacts than development of a new coal stockpile. The modification would provide ongoing employment of the existing workforce and provide significant economic benefit to NSW. GHG emissions associated with the modification would not significantly compromise the NSW emissions reduction trajectory to achieve target reductions and net zero by 2050. The modification would provide continued economic and employment benefits to the local region and NSW.
(5) <i>Action to address climate change should be consistent with the right to a clean, healthy and sustainable environment.</i>	The Department has concluded that the impacts associated with the modification are acceptable subject to the recommended conditions.

Guideline Principle	Consideration
(6) <i>Action to address climate change should be consistent with the principles of ecologically sustainable development described in the Protection of the Environment Administration Act 1991, section 6(2).</i>	The Department's assessment has concluded that the modified project would remain consistent with the principles of ESD (refer to Table B1).
(7) <i>Action to address climate change should involve appropriate consultation with affected persons, communities and stakeholders.</i>	The modification was publicly exhibited, and the Department received 78 public submissions, one of which objected to the modification. The Department carefully considered the submissions and representations made on the modification, including those that raised concerns about climate change. The Department also consulted with relevant government agencies on the modification (refer to Section 4).
(8) <i>Action to address climate change should take into account the following –</i>	The modification application included consultation with RAPs in accordance with the NSW government's Aboriginal heritage consultation guidelines. The views of RAPs were considered in the Department's assessment of the application.
(a) <i>the knowledge and perspectives of Aboriginal communities,</i>	
(b) <i>the best available science,</i>	The estimation of GHG emissions for the modification were undertaken in accordance with the <i>National Greenhouse Accounts Factors Workbook</i> (DCCEW 2024). Emissions estimates were reviewed by the EPA. Emissions were considered in the context of the NSW emissions reduction trajectory developed by the NSW Government's Net Zero Emissions Modelling Program. Emissions from the modification would maintain a similar emissions reduction trajectory as for NSW with the modification and would not significantly compromise NSW target reductions and net zero by 2050.
(c) <i>the knowledge of rural, regional and remote communities in New South Wales,</i>	The modification application included consultation with the community consultative committee (CCC) and exhibition of the modification report that informed the Department's assessment.

Guideline Principle	Consideration
(d) <i>the need to support local communities, including Aboriginal communities, who may be affected by the action, including by—</i> (i) <i>considering the impact on local employment and industries, and</i> (ii) <i>diversifying local economies, and</i> (iii) <i>encouraging local procurement, and</i> (iv) <i>optimising job creation and employment transition opportunities, and</i> (v) <i>considering the impact on the amenity of local communities,</i>	The modification would facilitate the efficient ongoing use of existing coal handling infrastructure, provide continued support for local suppliers and associated flow on benefits to the state, regional and local economies, without significant adverse impacts on the amenity of the local community.
(e) <i>the need for education and skills diversification,</i>	Not applicable. The modification would provide ongoing employment of the existing workforce. The requisite education and skills have been obtained.
(f) <i>the need to ensure essential utilities and infrastructure are provided, including energy, water, telecommunications and transport,</i>	All public infrastructure and utilities would remain safe and serviceable at all times if the modification was to proceed.
(g) <i>the impact of the action on consumer costs in New South Wales, including energy costs,</i>	The Department considers the existing conditions of consent establish an appropriate framework for minimising greenhouse gas emissions associated with the modification, including a condition requiring an update of the Air Quality and Greenhouse Gas Management Plan. The Department considers this would ensure energy usage is minimised and that the modification is unlikely to impact energy costs beyond what is already approved.
(h) <i>the need to reduce the risk climate change poses to human health,</i>	Emissions from the modification would maintain a similar emissions reduction trajectory as for NSW with the modification and would not significantly compromise NSW target reductions and net zero by 2050.

Guideline Principle	Consideration
(i) <i>equity and social justice impacts on socially disadvantaged groups and economically vulnerable regions,</i>	The modification would provide ongoing, efficient use of existing coal handling infrastructure and associated workforce, providing flow on benefits to the state, regional and local economies. Emissions from the modification would maintain a similar emissions reduction trajectory as for NSW with the modification and would not significantly compromise NSW target reductions and net zero by 2050. The modification is therefore unlikely to significantly impact equity, social justice, socially disadvantaged groups or economically vulnerable regions.
(j) <i>the need to reduce the risk climate change poses to the survival of all species.</i>	Emissions from the modification would maintain a similar emissions reduction trajectory as for NSW with the modification and would not significantly compromise NSW target reductions and net zero by 2050.
(9) <i>Action to address climate change should take into account the impact on animals.</i>	The modification application included a biodiversity impact assessment undertaken in accordance with the Biodiversity Assessment Method, and included avoidance, minimisation and offsetting measures such that the Department considers that impacts would be acceptable.
(10) <i>The Government of New South Wales is responsible for –</i> (a) <i>urgently developing and implementing strategies, policies and programs to address climate change, and</i> (b) <i>ensuring the Government of New South Wales pursues best practice in addressing climate change</i>	The EPA is developing these policies and plans under its <i>Climate Change Policy and Climate Change Action Plan</i> which have been considered in the assessment of this modification.

Appendix C – Assessment of Matters of National Environmental Significance

Introduction

163. On 11 September 2024, the modification was determined to be a controlled action by the then Commonwealth Department of Climate Change, Energy, Environment and Water (Commonwealth DCCEEW), now the National Environmental Protection Authority (NEPA). The controlling provisions are listed threatened species and communities (sections 18 and 18A).
164. Based on the information available at the time, NEPA considered that the proposed action (the modification) would likely have a significant impact on the following species:
- Black-eyed Susan (*Tetradlea juncea*) – Vulnerable
 - Small-flower Grevillea (*Grevillea parviflora* subsp. *parviflora*) – Vulnerable
 - Wyong Midge Orchid 1 (*Corunastylis insignis*) – Critically Endangered
 - *Genoplesium branwhiteorum* – Critically Endangered
 - Wyong Sun Orchid (*Thelymitra adorata*) – Critically Endangered
 - Eastern Underground Orchid (*Rhizanthella slateri*) – Endangered
 - Swift Parrot (*Lathamus discolor*) – Critically Endangered
 - Koala (*Phascolarctos cinereus*) (combined populations of Queensland, New South Wales and the Australian Capital Territory) – Endangered
 - South-eastern Glossy Black-Cockatoo (*Calyptorhynchus lathami lathami*) – Vulnerable
 - Yellow-bellied Glider (south-eastern) (*Petaurus australis australis*) – Vulnerable
 - Grey-headed Flying-fox (*Pteropus poliocephalus*) – Vulnerable.
165. In accordance with the bilateral agreement between the Australian Government and NSW Government, the Department provides the following information to inform the Commonwealth Minister's decision about whether to approve the proposed action (the modification) under the EPBC Act.
166. The Department's assessment has been prepared based on the assessment contained in the Amended BDAR, amendment report, submissions report and additional information provided during the assessment process. The Department's assessment has also considered public submissions and advice provided by CPHR, other NSW government agencies, and the NEPA.

167. This appendix is supplementary to, and should be read in conjunction with, the assessment included in **Section 6.1** of this assessment report. It includes consideration of impacts to listed threatened species and communities, and mitigation and offsetting measures for MNES. Advice from CPHR on MNES is provided in **Appendix A** and includes a detailed review of whether the assessment documentation includes all required information.

Impacts on EPBC Listed Species and Communities

168. The amended BDAR presented significant impact assessments in accordance with the *Significant Impact Guidelines 1.1 – Matters of National Environmental Significance* for the species identified in the controlled action advice, in addition to the following species later identified by EcoResolve as potentially experiencing a significant impact:

- Leafless Tongue-orchid (*Cryptostylis hunteriana*);
- Heath Wrinklewort (*Rutidosus heterogama*); and
- Golden Bell Frog (*Litoria aurea*).

169. The amended BDAR determined that the modification is likely to have a significant impact upon two EPBC listed flora species (Black-eyed Susan (*Tetradlea juncea*) and Small Flowered Grevillea (*Grevillea parviflora* subsp. *Parviflora*). This is detailed further below.

Black-eyed Susan (*Tetradlea juncea*)

170. A population of Black-eyed Susan was detected during surveys within the proposed modification area. This population exists as a part of a collective of other known local populations within a 10 km radius.
171. Habitat for the species consists of open Forest/woodland with a mixed shrub understorey and grassy groundcover. Black-eyed Susan generally, prefers well-drained sites below 200m elevation and annual rainfall between 1000 - 1200mm. The preferred substrates are sandy skeletal soil on sandstone, sandy-loam soils, low nutrients; and clayey soil from conglomerates, pH neutral.
172. The population present within the modification area is considered to be an important population under the *Significant Impact Guidelines and Conservation Advice* (DCCEEW).
173. Furthermore, the habitat present within the modification area is suitable habitat for the species and is therefore considered critical habitat under the *Significant Impact Guidelines and Conservation Advice* (DCCEEW). The specific criteria include coastal districts from Lake Macquarie to Bulahdelah and open forest with associated species throughout the proposed site (*Angophora costata*, *Corymbia gummifera*, and *Eucalyptus haemastoma*).
174. The modification would remove 2.93 ha of habitat for the Black-eyed Susan.

175. As per the *Significant Impact Guidelines and Conservation Advice* (DCCEEW), the modification will reduce the size of an important population and will reduce the area of occupancy of an important population.
176. Further, it is possible that the modification will fragment an important population into two or more populations and may disrupt the breeding cycle of an important population. The modification may interfere substantially with the recovery of this species because of its potentially significant effects on the local population.
177. The modification is unlikely to result in invasive species or plant diseases becoming established that are harmful to the Black-eyed Susan if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to.
178. Collectively based on above, the amended BDAR determined that the modification is likely to have a significant impact on the Black-eyed Susan in accordance with the criteria provided in the EPBC Act Significant Impact Guidelines. The Department agrees with this conclusion.
179. Centennial has committed to offset the impacts to the Black-eyed Susan through the retirement of 95 species credits, following like-for-like offsetting rules and in accordance with the BAM.
180. Further, Centennial agreed to implement a range of other minimisation and mitigation measures to further, as discussed in **Section 6.2.3**, to reduce the direct, indirect and biodiversity impacts of the modification. The Department supports these minimisation and mitigation measures. The Department has recommended that the nature and details of the mitigation and management works be described in a Biodiversity Management Plan prior to the commencement of vegetation clearing associated with the proposed modification.
181. The Department has carefully considered the impacts of the modification on the Black-eyed Susan and considers that they would be suitably mitigated, managed and/or offset through retirements of ecosystem credits and species credits in accordance with the BC Act and the EPBC Act. Additionally, the recommended conditions of consent (specifically, Schedule 3, condition 18 and 20A) would provide for sound management of retained biodiversity values adjacent to the site and mitigation of key threats to the Black-eyed Susan.
182. Overall, the Department considers the impacts of the modification on the Black-eyed Susan are acceptable, subject to the recommended conditions (specifically, Schedule 3, condition 18 and 20A).

Small-flower Grevillea (*Grevillea parviflora* subsp. *parviflora*)

183. A population of Small-flower Grevillea was detected during surveys within the proposed modification area. This population exists as a part of a collective of other known local populations within a 10 km radius.
184. Habitat for the species consists of a range of vegetation types from heath and shrubby woodland to open forest. The Small-flower Grevillea is found over a range of altitudes from flat, low-lying areas to upper slopes and ridge crests and often occurs in open, slightly disturbed sites such as along tracks
185. The population present within the modification area is considered to be an important population under the *Significant Impact Guidelines and Conservation Advice* (DCCEEW).
186. Furthermore, the habitat present within the modification area is suitable habitat for the species and is therefore considered critical habitat under the *Significant Impact Guidelines and Conservation Advice* (DCCEEW). The specific criteria include shrubby woodland to open forest with a range of topography (e.g. sandy to gravelly clay, upper slopes or flat plains).
187. The modification would remove 2.93 ha of habitat for the Small-flower Grevillea.
188. As per the *Significant Impact Guidelines and Conservation Advice* (DCCEEW), the modification will reduce the size of an important population and will reduce the area of occupancy of an important population.
189. Further, it is possible that the modification will fragment an important population into two or more populations and may disrupt the breeding cycle of an important population. The modification may interfere substantially with the recovery of this species because of its potentially significant effects on the local population.
190. The modification is unlikely to result in invasive species or plant diseases becoming established that are harmful to the Small-flower Grevillea if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to.
191. Collectively based on above, the amended BDAR determined that the modification is likely to have a significant impact on the Small-flower Grevillea in accordance with the criteria provided in the EPBC Act Significant Impact Guidelines. The Department agrees with this conclusion.
192. Centennial has committed to offset the impacts to the Small-flower Grevillea through the retirement of 95 species credits, following like-for-like offsetting rules and in accordance with the BAM.
193. Further, Centennial agreed to implement a range of other minimisation and mitigation measures to further, as discussed in **Section 6.2.3**, to reduce the direct, indirect and biodiversity impacts of the modification.

194. The Department supports these minimisation and mitigation measures. The Department has recommended that the nature and details of the mitigation and management works be described in a Biodiversity Management Plan prior to the commencement of vegetation clearing associated with the proposed modification.
195. The Department has carefully considered the impacts of the modification on the Small-flower Grevillea and considers that they would be suitably mitigated, managed and/or offset through retirements of ecosystem credits and species credits in accordance with the BC Act and the EPBC Act. Additionally, the recommended conditions of consent (specifically, Schedule 3, condition 18 and 20A) would provide for sound management of retained biodiversity values adjacent to the site and mitigation of key threats to the Small-flower Grevillea.
196. Overall, the Department considers the impacts of the modification on the Small-flower Grevillea are acceptable, subject to the recommended conditions (specifically, Schedule 3, condition 18 and 20A).
197. Other Potentially Impacted Species
198. The amended BDAR further determined that the modification may potentially impact a further 12 EPBC listed species, including six flora species and six fauna species.
199. The Department and CPHR agree with the outcome of Centennial's assessment and note that the potential impacts on these species would be offset via ecosystem credits in accordance with the BAM.
200. A summary of impacts on each of these species is provided in **Table C1** below.

Table C1 | Summary of impacts on EPBC Act flora listed species

Species	Summary of Impact	Offsets
Heath Wrinklewort <i>(Rutidosus heterogama)</i>	• This species was not identified to occur within the modification area during targeted surveys. • No important populations of the species are known to occur in the modification area. • Considering the above, the modification is unlikely to reduce the size of an important population. • The habitat present within the modification area is marginally suitable for this species. • It is therefore considered to be critical habitat under the <i>Significant Impact Guidelines and Conservation Advice</i> (DCCEEW). • Critical habitat relevant to the site of the	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Species	Summary of Impact	Offsets
	modification includes (but is not limited to) low lying coastal area and suitable soils. • As noted above, the presence of an existing population is unlikely. Therefore, the modification is unlikely to adversely affect habitat critical to the survival of a species. • Targeted surveys did not identify this species or an important population of this species within the modification area and therefore it is unlikely the modification would fragment an existing important population into two or more populations. • Direct impacts on potential habitat – 2.93 ha. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • Significant impacts on species unlikely.	
Wybong Midge Orchid (<i>Corunastylis insignis</i> (syn. <i>Genoplesium insigne</i>))	• No record of species during targeted surveys of the modification area. • However, the presence of an existing population cannot be ruled out. The species is cryptic-flowering time is dependent on rainfall and limited to two weeks. • There are known populations of the species within a 5km radius of the modification. • The species requires flowering material to identify. Therefore, the survey effort cannot rule out the presence of an important population. • Modification area may therefore support an important population. • A major threat for the species is removal of potential habitat. The modification would reduce by a small amount the area of available habitat and the viability of rehabilitated habitat for the species is uncertain. The modification may lead to a long-term decrease in the size of an	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Species	Summary of Impact	Offsets
	important population, and reduce the area of occupancy, if one is present. - The habitat is suitable for the species and is therefore considered critical habitat under the <i>Significant Impact Guidelines and Conservation Advice (DCCEEW)</i>. - The specific criteria include patches of <i>Themeda australis</i> and dry sclerophyll forest dominated by <i>Eucalyptus haemastoma</i>, <i>Corymbia gummifera</i>, <i>Angophora costata</i>, and <i>Allocasuarina littoralis</i>. The presence of an existing population cannot be ruled out. Therefore, the modification may adversely affect habitat critical to the survival of the species. - Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. - Direct impacts on potential habitat – 2.93 ha. - In the absence of positive survey effort, a precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species	
Corunastylis sp. Charmhaven (syn. Genoplesium branwhiteorum)	- No record of species during targeted surveys of the modification area. - No populations of the species are known to occur in the area likely to be affected by the modification. - Due to the cryptic nature of the species, which are similar to those of <i>C. insignis</i>, the survey effort cannot rule out the presence of an important population. - Modification area may therefore support an important population. - A major threat for the species is removal of potential habitat. The modification would reduce by a small amount the area of available habitat	- Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A). - Vegetation clearing protocols (as part of the Biodiversity Management Plan). - Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Species	Summary of Impact	Offsets
	and the viability of rehabilitated habitat for the species is uncertain. The modification may lead to a long-term decrease in the size of an important population, and reduce the area of occupancy, if one is present. • The habitat is suitable for the species and is therefore considered critical habitat under the <i>Significant Impact Guidelines and Conservation Advice (DCCEEW)</i>. • The specific criteria include low woodland with a shrubby understorey and ground layer with the presence of <i>Allocasuarina littoralis</i> and <i>Melaleuca nodosa</i>. The presence of an existing population cannot be ruled out. Therefore, the modification may adversely affect habitat critical to the survival of the species. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • Direct impacts on potential habitat – 2.93 ha. • In the absence of positive survey effort, a precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species.	
Eastern Underground Orchid (<i>Rhizanthella slateri</i>)	• No record of species during targeted surveys of the modification area. • There is one known occurrence of this species around 10 km north west of the modification area. However, the targeted 5m transect BAM compliant surveys did not identify the species within the area to be affected. Consequently, the species is considered unlikely to occur and the modification is unlikely to lead to a long-term decrease in the size of a population. • Although the habitat requirements are poorly understood for this species, the habitat within the modification area is likely suitable habitat	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Species	Summary of Impact	Offsets
	for the species and is therefore considered critical habitat under the <i>Significant Impact Guidelines and Conservation Advice</i> (DCCEEW). • However, the targeted 5m transect BAM compliant surveys did not identify the species within the area to be affected. Consequently, the species is considered unlikely to occur and the modification is unlikely to adversely affect habitat critical to the survival of a species. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • Significant impacts on species unlikely.	•
Leafless Tongue-orchid (<i>Cryptostylis hunteriana</i>)	• This species was not identified to occur within the modification area during targeted surveys. • No important populations of the species are known to occur in the modification area. • Due to the cryptic nature of the species, which are similar to those of <i>C. insignis</i>, the survey effort cannot rule out the presence of an important population. • Modification area may therefore support an important population. • A major threat for the species is removal of potential habitat. The modification would reduce by a small amount the area of available habitat and the viability of rehabilitated habitat for the species is uncertain. The modification may lead to a long-term decrease in the size of an important population, fragment the population and reduce the area of occupancy, if one is present. • The habitat is suitable for the species and is therefore considered critical habitat under the <i>Significant Impact Guidelines and Conservation Advice</i> (DCCEEW).	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Species	Summary of Impact	Offsets
	• Critical habitat relevant to the modification area includes (but is not limited to) coastal forest and dry woodland with open areas of understorey, accumulated Eucalyptus leaf litter and suitable soils. • The presence of an existing population cannot not be ruled out. Therefore, the modification may adversely affect habitat critical to the survival of a species and may disrupt the breeding cycle of an important population. • Direct impacts on potential habitat – 2.93 ha. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • Significant impacts on species unlikely.	
Wyong Sun Orchid <i>(Thelymitra adorate)</i>	• No record of species during targeted surveys of the modification area. • Targeted surveys did not identify the species. However, it is cryptic, has highly variable rates of emergence and does not flower every year. Its flowers may only open for a few hours a day during a two-week period. The species requires flowering material to identify. Therefore, the survey effort cannot rule out the presence of an important population. • There are known populations of the species within 10km of the modification area. • Modification area may therefore support an important population. • A major threat for the species is removal of potential habitat. The modification would reduce by a small amount the area of available habitat and the viability of rehabilitated habitat for the species is uncertain. The effects on dispersal and genetic interchange between plants separated by the modification is also unknown. The modification may lead to a long-term	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Species	Summary of Impact	Offsets
	decrease in the size of a population if one is present. • Due to the cryptic natures of the species the presence of an important population cannot be ruled out. The modification could potentially reduce the area of occupancy, and fragment an important population of the species by up to 2.93 ha. • The habitat within the area to be affected is suitable habitat for the species, and includes woodland with a grassy understorey and well-drained soils. The typical associated habitat composition is partly present or absent from the proposed site, and it may not be considered critical habitat under the <i>Significant Impact Guidelines and Conservation Advice</i> (DCCEEW). The presence of an existing population cannot be ruled out. Therefore, the modification may adversely affect habitat critical to the survival of a species. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • Direct impacts on potential habitat – 2.93 ha. • In the absence of positive survey effort, a precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species.	

Table C2 | Summary of impacts on EPBC Act fauna listed species

Species	Summary of Impact	Offsets
South-eastern Glossy Black-Cockatoo <i>(Calyptrorhynchus lathami lathami)</i>	- Targeted surveys confirmed the species presence within the modification area utilising <i>Allocasuarina littoralis</i> as foraging habitat. - A population of the species is known to occur in the Lake Macquarie region. - Any population present within the modification area is considered to be an important population under the <i>Significant Impact Guidelines and Conservation Advice</i> (DCCEEW). - The habitat present within the modification area is suitable habitat for the Glossy Black-Cockatoo and includes areas of vegetation likely to contain primary feed trees (<i>A. littoralis</i>). The amended BDAR identified that some hollow-bearing trees within the modification area may also be used for breeding (mature trees with hollows located near foraging habitat). - The habitat present within the modification areas is therefore considered critical habitat under the <i>Significant Impact Guidelines and Conservation Advice</i> (DCCEEW). - The modification would remove 2.93 ha of habitat for the Glossy Black-Cockatoo. - The aerial nature of the Glossy Black-Cockatoo would ensure that the species is not restricted or fragmented into two or more populations, as there is a large contiguous area of habitat for this species available within the Lake Macquarie region. - Some hollow-bearing trees within the modification area may be used for breeding (mature trees with hollows located near foraging habitat). Removal of up to 29 hollow-bearing trees associated with the modification is likely to impact on the reproductive success and breeding of the population. - Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed	- Retirement of 95 species credits, following like-for-like offsetting rules and in accordance with the BAM (Development consent condition - Schedule 3, Condition 20A). - Vegetation clearing protocols (as part of the Biodiversity Management Plan). - Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Species	Summary of Impact	Offsets
	control programs, vehicle cleaning etc.) are adhered to. A precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species.	
Swift Parrot <i>(Lathamus discolor)</i>	- The modification area includes areas mapped as important habitat for this species. - The species is therefore considered to be present, regardless of survey results. - The modification would remove up to 1.14 ha of habitat, which is a relatively small area within the surrounding large contiguous area of habitat. The habitat present does not include breeding habitat as the species breeds in Tasmania. Therefore, it is unlikely that the modification would decrease the size of a population. - The loss of up to 1.14 ha of important habitat due to the modification will marginally reduce the area of occupancy of the local population. - The aerial nature of the species would ensure the species is not restricted due to the impacts of the modification. - The removal of up to 1.14 ha of habitat is a relatively minor impact considering the area of suitable habitat available in the Lake Macquarie region. However, the habitat is noted as critical to the species and removal of such habitat may increase foraging and shelter competition within the area. - Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. - A precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species.	- Retirement of 55 species credits, following like-for-like offsetting rules and in accordance with the BAM (Development consent condition - Schedule 3, Condition 20A). - Vegetation clearing protocols (as part of the Biodiversity Management Plan). - Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).
Golden Bell Frog <i>(Litoria aurea)</i>	No record of species during targeted surveys of the modification area.	Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583)

Species	Summary of Impact	Offsets
	• A population of the species is known to occur in the Lake Macquarie region. • This species was not identified during targeted surveys therefore it is determined that an important population does not exist within the modification area. • Given the relatively large contiguous area of potentially suitable habitat for this species within the Lake Macquarie region relative to that present in surrounding regions, it is unlikely that the habitat within the modification area would meet the criteria for being considered critical to the survival of the species. • Further, it is unlikely the habitat to be impacted would be considered critical habitat due to the ephemeral nature of the damp areas of the site and its distance from bodies of water. Therefore, the removal of this habitat is unlikely to cause this species to decline. • The removal of up to 2.933 ha of marginally suitable habitat is a minor impact relative to the area of suitable habitat available in the Lake Macquarie region. • Given this species was not identified during targeted surveys, it is unlikely that an important population occurs within the proposal area and therefore the breeding cycle of this species unlikely to be impacted. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • Significant impacts on species unlikely.	(Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).
Yellow-bellied Glider (<i>Petaurus australis</i>)	• No record of species during targeted surveys of the modification area. • A population of the species is known to occur in the Lake Macquarie region.	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A).

Species	Summary of Impact	Offsets
	• This species was not identified during targeted surveys therefore it is determined that an important population does not exist within the modification area. • Given the relatively large contiguous area of potentially suitable habitat for this species within the Lake Macquarie region relative to that present in surrounding regions, it is unlikely that the habitat within the modification area would meet the criteria for being considered critical to the survival of the species. • The removal of up to 2.93 ha of habitat is a minor impact relative to the area of suitable habitat available in the Lake Macquarie region. The modification will permanently remove primary feed trees and up to 29 hollow-bearing trees which are considered critical habitat for the species. This may increase competition for breeding resources and adversely impact the survival of the species in the long-term. • Given that the lack of suitably sized hollow-bearing trees within the modification area, it is considered unlikely that the habitat within the modification area would form important breeding resources and therefore is unlikely to disrupt the breeding cycle of this species. • Removal of potential habitat may increase competition for breeding resources and thus, may interfere with the recovery of the species. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • A precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species.	• Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).
Grey-headed Flying Fox	• No record of species during targeted surveys of the modification area.	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583)

Species	Summary of Impact	Offsets
(Pteropus poliocephalus)	• A population of the species is known to occur in the Lake Macquarie region. • This species was not identified during targeted surveys therefore it is determined that an important population does not exist within the modification area. • Given the relatively large contiguous area of potentially suitable habitat for this species within the Lake Macquarie region relative to that present in surrounding regions, it is unlikely that the habitat within the modification area would meet the criteria for being considered critical to the survival of the species. • The removal of up to 2.93 ha of marginally suitable habitat is a minor impact relative to the area of suitable habitat available in the Lake Macquarie region. • Removal of potential habitat may increase competition for breeding resources and thus, may interfere with the recovery of the species. • Given that no roost sites were identified during targeted surveys, the modification is unlikely to disrupt the breeding cycle of this species. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • A precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species.	(Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan). • Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).
Koala (Phascolarctos cinereus)	• Species was not detected within the modification area during targeted surveys. • The modification would remove up to 2.93 ha of habitat, which is a relatively small area within the surrounding large contiguous area of habitat. • However, the habitat present is likely to constitute breeding habitat as a local population of this species occurs within the locality, with multiple records	• Potential impacts on habitat indirectly offset - ecosystem credit species (PCT 3583) (Development consent condition - Schedule 3, Condition 20A). • Vegetation clearing protocols (as part of the Biodiversity Management Plan).

Species	Summary of Impact	Offsets
	occurring within 1.5km of the modification area. Therefore, there is a potential that the modification would decrease the size of a population. • The permanent loss of up to 2.93 ha of important habitat due to the modification will marginally reduce the area of occupancy of the local population. • The clearing of vegetation will reduce the available habitat and cause a localised barrier, however is unlikely to fragment the local population of this species. • The habitat to be affected by the modification is identified as important habitat for the species. The removal of up to 2.93 ha of habitat is a relatively minor impact considering the area of suitable habitat available in the Lake Macquarie region. However, the habitat is noted as critical to the species and removal of such habitat may increase competition within the area. • The clearing of up to 2.93 ha of vegetation within an area already disturbed by clearing and mining, has the potential to further reduce critical habitat for this species, and cause the competitive dispersal of males beyond the known population. Therefore, there is a potential for the modification to disrupt the breeding cycle of the local population. • Modification is unlikely to contribute to invasive species or plant diseases that are harmful to the species if the proposed mitigation measures (weed control programs, vehicle cleaning etc.) are adhered to. • A precautionary approach has been adopted and the modification was considered to have the potential to result in a significant impact on the species.	• Biodiversity Management Plan update (Development consent condition - Schedule 3, Condition 18).

Offsetting impacts to EPBC listed species

201. **Table 7** in **Section 6.1.5** summarises the credit requirements for the modification. The offsets proposed for species identified as likely to be significantly impacted are as follows:

- Black-eyed Susan (*Tetratheca juncea*) – 95 species credits;

- Small-flower Grevillea (*Grevillea parviflora* subsp. *Parviflora*) – 95 species credits;
- South-eastern Glossy Black Cockatoo (*Calyptorhynchus lathami lathami*) - 95 dual species credits; and
- Swift Parrot (*Lathamus discolor*) - 55 dual species credits.

Requirements for decisions about threatened species and endangered ecological communities

202. In accordance with section 139 of the EPBC Act, in deciding whether or not to approve, for the purposes of a subsection of section 18 or section 18A of the EPBC Act, the taking of an action and what conditions to attach to such an approval, the Commonwealth Minister must not act inconsistently with certain international environmental obligations, recovery plans or threat abatement plans. The Commonwealth Minister must also have regard to relevant approved conservation advice.
203. Conservation advice, threat abatement plans, recovery plans and other EPBC plans have been considered for species predicted to be significantly impacted, including (but not limited to) those set out in **Table C3**.

Table C3 | Commonwealth advice and plans considered in the assessment

Species	Relevant plan/s	Consideration
Threatened Flora		
Black-eyed Susan (<i>Tetratheca juncea</i>)	• Approved Conservation advice for <i>Tetratheca juncea</i> (Department of the Environment, Water, Heritage and the Arts (2008)) • Listing advice for <i>Tetratheca juncea</i> (Threatened Species Scientific Committee (2005)) • Two Threat Abatement Plans have been identified as being relevant for this species, being: • Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (Department of the Environment and Energy (2017)) • Threat abatement plan for disease in natural ecosystems	• Key threats associated with the modification include land clearance, weed invasion and stormwater runoff. • Management measures and recommended conditions consistent with the conservation advice include: • Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. • A weed and pest management strategy • Stormwater and erosion control plan • Biodiversity management plan (Schedule 3, Condition 18 of the development consent) • Retirement of species credits (Schedule 3, Condition 20A of the development consent).

Species	Relevant plan/s	Consideration
	<i>caused by Phytophthora cinnamomic</i> (Department of the Environment and Energy (2018)) There is no recovery plan for this species	
Small-flower Grevillea (<i>Grevillea parviflora</i> subsp. <i>parviflora</i>)	- Conservation advice for <i>Grevillea parviflora</i> subsp. <i>parviflora</i> (Department of the Environment, Water, Heritage and the Arts (2008)) - Listing assessment information may be available in the approved Conservation Advice - There is no recovery plan or threat abatement plan for this species	- Key threats associated with the modification include habitat loss and fragmentation and weed invasion. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - A weed and pest management strategy - Stormwater and erosion control plan - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of species credits (Schedule 3, Condition 20A of the development consent).
Wyong Midge Orchid 1 (<i>Corunastylis insignis</i>)	- Conservation advice for <i>Corunastylis insignis</i> (Department of the Environment (2014)) - Listing assessment information may be available in the approved Conservation Advice - There is no recovery plan or threat abatement plan for this species	- Key threats associated with the modification include habitat loss and fragmentation, weed invasion and rabbits. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - A weed and pest management strategy - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).
<i>Genoplesium branwhiteorum</i>	Conservation Advice for <i>Corunastylis</i> sp. <i>Charmhaven Wyong midge orchid 2</i> (Department of the Environment (2014))	Key threats associated with the modification include habitat loss and fragmentation, weed invasion and rabbits.

Species	Relevant plan/s	Consideration
	• Listing assessment information may be available in the approved Conservation Advice • There is no listing advice, recovery plan or threat abatement plan for this species	• Management measures and recommended conditions consistent with the conservation advice include: • Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. • A weed and pest management strategy • Biodiversity management plan (Schedule 3, Condition 18 of the development consent) • Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).
Wyong Sun Orchid <i>(Thelymitra adorata)</i>	• Conservation Advice for <i>Thelymitra adorata</i> (Department of the Environment (2014)) • Listing assessment information may be available in the approved Conservation Advice • There is no recovery plan or threat abatement plan for this species	• Key threats associated with the modification include habitat loss and fragmentation, weed invasion and rabbits. • Management measures and recommended conditions consistent with the conservation advice include: • Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. • A weed and pest management strategy • Biodiversity management plan (Schedule 3, Condition 18 of the development consent) • Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).
Eastern Underground Orchid <i>(Rhizanthella slateri)</i>	• Conservation Advice for <i>Rhizanthella slateri</i> (Department of the Environment (2014)) • Listing Advice for <i>Rhizanthella slateri</i> (Threatened Species Scientific Committee (2007)) • There is no recovery plan or threat abatement plan for this species	• Key threats associated with the modification include habitat loss and fragmentation. • Management measures and recommended conditions consistent with the conservation advice include: • Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. • Biodiversity management plan (Schedule 3, Condition 18 of the development consent) • Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).

Species	Relevant plan/s	Consideration
Leafless Tongue-orchid (<i>Cryptostylis hunteriana</i>)	- Conservation Advice for <i>Cryptostylis hunteriana</i> (Department of the Environment, Water, Heritage and the Arts (2008)) - Listing assessment information may be available in the approved Conservation Advice - There is no recovery plan or threat abatement plan for this species	- Key threats associated with the modification include habitat loss and fragmentation, soil changes and drainage alteration. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - Stormwater and erosion control plan - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).
Heath Wrinklewort (<i>Rutidosus heterogama</i>)	- Conservation Advice for <i>Rutidosus heterogama</i> (Department of the Environment, Water, Heritage and the Arts (2008)). - Listing assessment information may be available in the approved Conservation Advice - One Threat Abatement Plan has been identified as being relevant for this species, being <i>Threat abatement plan for competition and land degradation by rabbits</i> (Department of the Environment and Energy (2016)).	- Key threats associated with the modification include habitat loss and fragmentation, weeds and pest invasion. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - Stormwater and erosion control plan - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).
Threatened Fauna		
Swift Parrot (<i>Lathamus discolor</i>)	- Conservation Advice <i>Lathamus discolor</i> (swift parrot) (Threatened Species Scientific Committee, 2016). - Listing assessment information may be available in the approved Conservation Advice. - The National Recovery Plan for the swift parrot (<i>Lathamus discolor</i>) (DCCEW, 2024a).	- Key threats associated with the modification include land clearance, predation and increased competition. - The modification would conflict with the recovery objectives to: - Maintain or improve the extent, condition and connectivity of habitat of the swift parrot - Reduce anthropogenic threats.

Species	Relevant plan/s	Consideration
	One Threat Abatement Plan has been identified as being relevant for this species, being <i>Threat abatement plan for predation by feral cats</i> (Commonwealth of Australia, 2015).	- The modification would remove up to 1.14 ha of habitat for the Swift Parrot, which is a relatively minor impact considering the area of suitable habitat available in the Lake Macquarie region. However, the habitat is noted as critical to the species and removal of such habitat may increase foraging and shelter competition within the area. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - A weed and pest management strategy - Stormwater and erosion control plan - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of species credits (Schedule 3, Condition 20A of the development consent).
South-eastern Glossy Black-Cockatoo <i>(Calyptorhynchus lathami lathami)</i>	- Conservation Advice for <i>Calyptorhynchus lathami lathami</i> (Department of Climate Change, Energy, the Environment and Water (2022) - Listing assessment information may be available in the approved Conservation Advice - There is no recovery plan for this species - One Threat Abatement Plan has been identified as being relevant for this species, being <i>Threat abatement plan for predation by feral cats 2024</i> (Department of Climate Change, Energy, the Environment and Water (2024))	- Key threats associated with the modification include land clearance and fragmentation. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - A weed and pest management strategy - Stormwater and erosion control plan - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of species credits (Schedule 3, Condition 20A of the development consent).

Species	Relevant plan/s	Consideration
Koala (<i>Phascolarctos cinereus</i>)	- Conservation Advice for <i>Phascolarctos cinereus</i> (Koala) (combined populations of Queensland, New South Wales and the Australian Capital Territory) (Department of Agriculture, Water and the Environment, 2022). - Listing assessment information may be available in the approved Conservation Advice. - National Recovery Plan for the Koala <i>Phascolarctos cinereus</i> (combined populations of Queensland, New South Wales and the Australian Capital Territory) (DAWE, 2022). - One Threat Abatement Plan has been identified as being relevant for this species, being <i>Threat abatement plan for predation by feral cats 2024</i> (Commonwealth of Australia, 2015).	- Key threats associated with the modification include land clearance and fragmentation and vehicle strike. - The modification is not likely to interfere with the recovery plan objectives, and it does not occur in a priority population for the NSW Koala Strategy. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of ecosystem credits. (Schedule 3, Condition 20A of the development consent)
Yellow-bellied Glider (south-eastern) (<i>Petaurus australis australis</i>)	- Conservation Advice for <i>Petaurus australis australis</i> (Department of Agriculture, Water and the Environment (2022) - Listing assessment information may be available in the approved Conservation Advice - There is no recovery plan for this species - One Threat Abatement Plan has been identified as being relevant for this species, being <i>Threat abatement plan for predation by feral cats 2024</i> (Commonwealth of Australia, 2015).	- Key threats associated with the modification include habitat loss and disease dieback. - Management measures and recommended conditions consistent with the conservation advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - A weed and pest management strategy - Stormwater and erosion control plan - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).
Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>)	There is no approved conservation advice for this species	Key threats associated with the modification include habitat loss and fragmentation.

Species	Relevant plan/s	Consideration
	- Commonwealth Listing Advice on <i>Pteropus poliocephalus</i> (Grey-headed Flying-fox) (Threatened Species Scientific Committee (2001) - National Recovery Plan for the Grey-headed Flying-fox <i>Pteropus poliocephalus</i> (Department of Agriculture, Water and the Environment (2021)) - One Threat Abatement Plan has been identified as being relevant for this species, being <i>Threat abatement plan for predation by feral cats 2024</i> (Commonwealth of Australia, 2015).	- The modification would conflict with the recovery objectives to: - Protect, enhance and rehabilitate native vegetation to minimise habitat loss and degradation - Reduce anthropogenic threats. - This species was not identified during targeted surveys therefore it is determined that an important population does not exist within the modification area. - Given the relatively large contiguous area of potentially suitable habitat for this species within the Lake Macquarie region relative to that present in surrounding regions, it is unlikely that the habitat within the modification area would meet the criteria for being considered critical to the survival of the species. - The removal of up to 2.93 ha of marginally suitable habitat is a minor impact relative to the area of suitable habitat available in the Lake Macquarie region. - Management measures and recommended conditions consistent with the listing advice include: - Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. - A weed and pest management strategy - Stormwater and erosion control plan - Biodiversity management plan (Schedule 3, Condition 18 of the development consent) - Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).
Golden Bell Frog <i>(Litoria aurea)</i>	- Conservation Advice for <i>Litoria aurea</i> (Department of the Environment (2014) - Listing assessment information may be available in the approved Conservation Advice	- Key threats associated with the modification include habitat loss, changes to structure and diversity of aquatic vegetation and disease. - Management measures and recommended conditions consistent with the conservation advice include:

Species	Relevant plan/s	Consideration
	• There is no recovery plan for this species • Three Threat Abatement Plans have been identified as being relevant for this species, being: • <i>Threat abatement plan for predation by feral cats 2024</i> (Department of Climate Change, Energy, the Environment and Water (2024)) • <i>Threat abatement plan for infection of amphibians with chytrid fungus resulting in chytridiomycosis</i> (Department of the Environment and Energy (2016)) • <i>Threat abatement plan for predation by the European red fox</i> (Department of the Environment, Water, Heritage and the Arts (2008))	• Preventing access to areas of habitat through demarcation of clearing limits and no-go zones. • A weed and pest management strategy (as part of the Biodiversity Management Plan) • Stormwater and erosion control plan • Biodiversity management plan (Schedule 3, Condition 18 of the development consent) • Retirement of ecosystem credits (Schedule 3, Condition 20A of the development consent).

Australia's International Obligations

204. Australia's obligations under the *Convention on Biological Diversity* (Biodiversity Convention) include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.
205. The recommendations of this assessment report are not inconsistent with the Biodiversity Convention, which promotes environmental impact assessment (such as this process) to avoid and minimise adverse impacts on biological diversity. The recommended conditions require avoidance, mitigation and management measures for listed threatened species and communities, and all information related to the modification is required to be publicly available to ensure equitable sharing of information and improved knowledge relating to biodiversity.
206. Australia's obligations under the *Convention on Conservation of Nature in the South Pacific* (Apia Convention) include encouraging the creation of protected areas which together with existing

protected areas would safeguard representative samples of the natural ecosystems occurring therein (particular attention being given to endangered species), as well as superlative scenery, striking geological formations and regions. Additional obligations include using their best endeavours to protect such fauna and flora (special attention being given to migratory species) so as to safeguard them from unwise exploitation and other threats that may lead to their extinction. While the Apia Convention was formally suspended on 13 September 2006, the recommendations are not inconsistent with the obligations under the Convention, which has the general aims of conservation of biodiversity.

207. The *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. The recommendations are not inconsistent with CITES as the modification does not involve international trade.

Additional EPBC Act considerations

208. **Table C2** contains the additional mandatory considerations, factors to be taken into account and factors to have regard to under the EPBC Act, which are additional to those already addressed.

Table C2 | Additional considerations for the Commonwealth Minister under the EPBC Act

EPBC Act Section	Considerations	Conclusion
Mandatory considerations		
136(1)(b)	Social and economic matters are discussed in Section 6 and 7 of the assessment report	The Department considers that the modification would result in a range of benefits for the local and regional economy and is of public benefit.
Factors to be taken into account		
136(2)(a)	The principles of ecologically sustainable development (ESD), including the precautionary principle, have been taken into account. In particular in: long and short term economic, environmental, social and equity considerations relevant to this decision;	The Department considers that, subject to the recommended conditions of consent the modification could be undertaken in a manner that is consistent with the principles of ESD. Appendix B contains the Department's consideration of the principles of ESD.

EPBC Act Section	Considerations	Conclusion
	- conditions that restrict environmental impacts, impose monitoring and adaptive management requirements and reduce uncertainty related to the potential impacts of the modification. - conditions requiring the modification to be delivered and operated in a sustainable way that protects the environment for future generations and conserves matters of national environmental significance. - advice provided within this report which reflects the importance of conserving biological diversity and ecological integrity in relation to all of the controlling provisions for this modification; and - mitigation measures that reflect improved valuation, pricing and incentive mechanisms that promote a financial cost on the applicant to mitigate the environmental impacts of the modification.	
136(2)(e)	Other information on the relevant impacts of the action	The Department considers that all information relevant to the impacts of the modification has been taken into account.
Factors to have regard to		
176(5)	Bioregional plans	The modification is located in the Sydney Basin IBRA Bioregion and within the Wyong IBRA Subregion. The modification would result in the clearing of some vegetation in these bioregions; however, it would involve an offset that would contribute to funding and in-perpetuity managed conservation areas in the bioregions. The modification is unlikely to significantly impact the water resources in these bioregions.

EPBC Act Section	Considerations	Conclusion
Considerations on deciding on conditions		
134(4)	Must consider: - information provided by the person proposing to undertake the action or by the designated applicant of the action; and - desirability of ensuring as far as practicable that the condition is a cost- effective means for the Commonwealth and the person taking the action to achieve the object of the condition.	Documents provided by Centennial are provided at Appendix A The Department considers that the conditions for the modification (see Appendix D) are a cost-effective means of achieving their purpose. The conditions are based on the information provided by Centennial and were prepared in consultation with relevant government agencies.

Conclusions on Controlling Provisions

Threatened species and communities (sections 18 and 18A)

209. The assessment identifies that the modification has the potential to result in significant impacts to the Black-eyed Susan (*Tetradlea juncea*) and Small-flower Grevillea (*Grevillea parviflora* subsp. *Parviflora*).
210. The Department considers that the impacts of the modification on these MNES would be acceptable, subject to the avoidance, mitigation, offsetting and management measures described in Centennial's environmental assessment documents and the requirements of the Department's recommended conditions of consent (see **Appendix D**).

Other Protected matters

211. The Commonwealth DCCEW determined that other matters listed under the EPBC Act are not controlling provisions with respect to the modification. These include listed World Heritage, National Heritage, migratory species, Ramsar wetlands, Commonwealth marine environment, Commonwealth land, Commonwealth actions, nuclear actions, the Great Barrier Reef Marine Park and Commonwealth Heritage places overseas.

Conclusions

212. The Department considers that the recommended conditions would provide suitable protection for all MNES listed under the EPBC Act that may be significantly impacted by the modification. The Department notes that, if approved, the modification would be referred by the Department to the Commonwealth Minister for the Environment and Water for determination under the EPBC Act.

Appendix D – Recommended consolidated development consent

<https://www.planningportal.nsw.gov.au/major-projects/projects/mod-4-cooranbong-coal-stockpile-extension/recommendation>

Appendix E – Recommended instrument of modification

<https://www.planningportal.nsw.gov.au/major-projects/projects/mod-4-cooranbong-coal-stockpile-extension/recommendation>