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2 June 2025

Stephen O'Donoghue
Director Resource and Energy Assessments
Department of Planning, Housing and Infrastructure
Locked Bag 5022
PARRAMATTA NSW 2124

Submitted via: Major Projects Portal

Dear Stephen,

BENGALLA MINE SCOPING REQUEST
SSD-5170 MODIFICATION 8

1. INTRODUCTION

Bengalla Mining Company Pty Limited (BMC) operates Bengalla Mine (Bengalla) on behalf of the Bengalla Joint Venture, which consists of New Hope Bengalla Pty Ltd (80%) and Taipower Bengalla Pty Limited (20%). Bengalla is an open cut coal mine located in the Upper Hunter Valley of NSW (see **Figure 1**).

Bengalla is approved by State Significant Development (SSD) 5170 (as modified) granted under Part 4 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act).

BMC is proposing to lodge an application to modify SSD-5170 under Section 4.55(2) of the EP&A Act to facilitate:

(a) Adjustments to the realignment of Bengalla Link Road as described in the *Continuation of Bengalla Mine Environmental Impact Statement* (Bengalla EIS) (Hansen Bailey, 2013);

(b) Changes to the conceptual final landform;

(c) Changes to the layout of Bengalla infrastructure (to authorise a Run-of-mine (ROM) pad extension and associated water management infrastructure); and

(d) Approval for installation of gas drainage wells and methane flaring infrastructure.

The proposed changes (the Modification) are further described in **Section 3**.

JBA 2422 Bengalla - (EPBC) Regional Locality (15/05/2025)

BENGALLA MINE

Regional Locality

FIGURE 1

Following discussions between BMC and the Department of Planning, Housing and Infrastructure (DPHI) on 23 September 2024, this letter requests confirmation from DPHI that:

- A modification application under Section 4.55(2) of the EP&A Act is the appropriate approvals path for the Modification;
- The proposed scope of the Modification Report outlined within **Section 5** of this letter is appropriate; and
- Whether there are any other aspects relevant to the proposed Modification on which DPHI requires further assessment.

BMC also intends to lodge a Referral under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) in parallel with the Modification application and approvals process, due to impacts to threatened species and ecological communities. BMC anticipates that the EPBC Act Referral will be determined as a 'controlled action' and assessed in accordance with the bilateral arrangements in place between the NSW and Commonwealth Governments.

2. APPROVALS PLATFORM

Development consent DA 211/93 for Bengalla was originally granted on 7 August 1995 and authorised the construction and operation of an open cut coal mine, coal preparation plant, rail loop, loading facilities and associated facilities. BMC was granted its first Mining Lease (ML) 1397 in 1996, with mining operations commencing in 1998.

On 3 March 2015, SSD-5170 was granted.[1] The development application was supported by the Bengalla EIS as modified by the '*Continuation of Bengalla Mine Response to Submissions'* (Bengalla EIS RTS) (Hansen Bailey, 2014a). SSD-5170 authorises the continuation of open cut coal mining and associated activities at Bengalla until 28 February 2039. SSD-5170 has been modified on five occasions (see **Table 1**). The currently approved layout of Bengalla operations is shown on **Figure 2**.

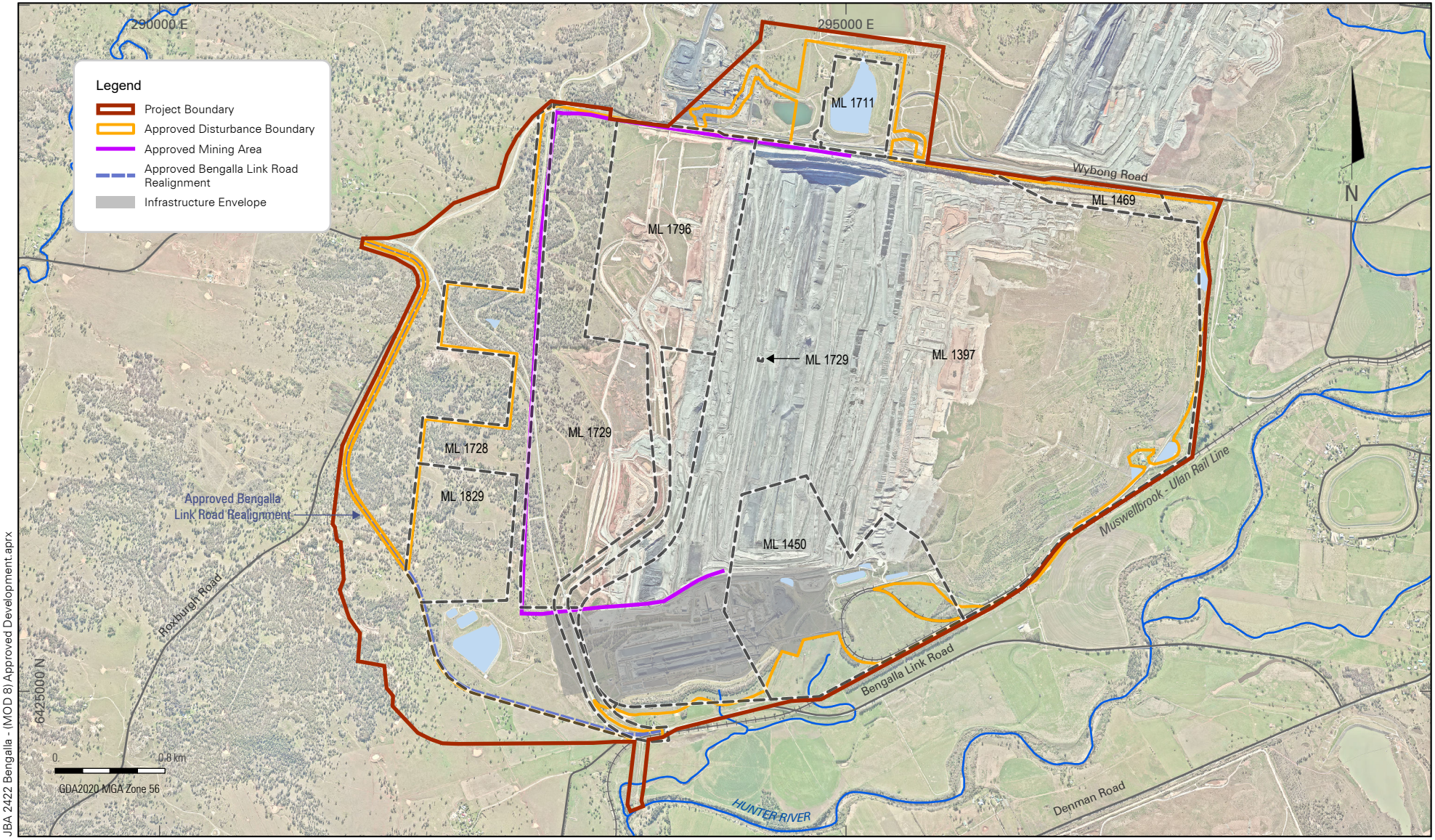
In conjunction with the planning approval process for SSD-5170, BMC was granted an approval (EPBC 2012/6378) under Part 9 of the EPBC Act to undertake an action that would have a significant impact on matters of national environmental significance (MNES).

Table 1 SSD-5170 Modifications

Modification	Date Granted	Description of Modification
MOD 1	16 December 2015	• Authorise the alteration of various items of water management infrastructure and relocation of an explosives storage facility.
MOD 2	1 July 2016	• Authorise the alteration of the approved Overburden Emplacement Area (OEA) to improve visual amenity; and • Establish a new access road.
MOD 3	23 December 2016	• Authorise minor changes to the positioning and operations of an explosives facility and a reload facility; • Realignment of the Hunter River water supply pipeline; and • Emplacement and use of temporary topsoil stockpiles during the mining process.

[1] DA211/93 (as modified) for Bengalla was surrendered following the grant of SSD-5170.

Modification	Date Granted	Description of Modification
MOD 4	19 December 2018	• Amend the water management system, • Temporary storage of earthen materials for dam construction and other suitable clay material for the future construction of the Dry Creek realignment, • Increased capacity of (and location for) ROM coal stockpiles; and • Additional storage locations for temporary emplacement of reject material.
MOD 5	24 February 2023	• Authorise the use of a mobile crusher to process hard rock for use onsite; • Expansion of ROM coal stockpiling area from 40kt to 150kt; • Changes to the southern visual bund; • Realignment of diversion drains; • In-pit disposal of tyres; and • Minor administrative changes to conditions of SSD-5170.
MOD 6	N/A	• Modification Application for installation and operation of two water transfer pipelines from the Muswellbrook Shire Council Wastewater Treatment Plant to Bengalla.
MOD 7	N/A	• Modification Application for development of a Temporary OEA.



JBA 2422 Bengalla - (MOD 8) Approved Development.aprx

BENGALLA MINE MOD 8

Approved Development Layout

FIGURE 2

3. MODIFICATION DESCRIPTION AND JUSTIFICATION

BMC proposes to lodge an application to modify SSD-5170 under Section 4.55(2) of the EP&A Act to facilitate:

(a) Revision of the realignment of Bengalla Link Road approved under SSD-5170, to:

- Reflect contemporary road safety design guidelines and requirements for intersections with the local road network, including Wybong Road and Roxburgh Road;
- Facilitate construction works, including required erosion and sediment control measures, water management infrastructure and design cut/fill requirements;
- Allow for the relocation of existing third party infrastructure including communications and power infrastructure; and
- Avoid mining authorities held by other parties.

The revised Bengalla Link Road alignment will require the disturbance of approximately 67.5 ha of vegetation in addition to that approved under SSD-5170.

(b) Changes to the approved final landform, including:

- Reduction in the low wall slope angle and associated increase in the footprint and volume of the final void; and
- Incorporating geomorphological design principles in the final landform east of the final void, to create a more naturalistic post-mining landscape (including for the Dry Creek realignment).

(c) Extension of the ROM pad and development of associated water management infrastructure (including a new ROM dam). The extended ROM pad will:

- Increase in area from 1 ha to approximately 9 ha;
- Require the disturbance of approximately 1 ha in addition to that approved under SSD-5170 for temporary erosion and sediment control measures;
- Provide greater ROM pad stockpile capacity, from 150 kt to 600 kt and reduce the need for in-pit coal stockpiling; and
- Incorporate a new ROM Dam with a capacity of approximately 67 ML, to replace the existing ROM Dam which has a capacity of approximately 14 ML.

(d) Installation of up to ten drainage wells and associated methane flaring (combustion) infrastructure within approved SSD-5170 mining areas, to drain gas in advance of open cut mining with the option to use both vertical and horizontal drilling methods.

The conceptual layout of the proposed Modification elements is shown in **Figure 3**.

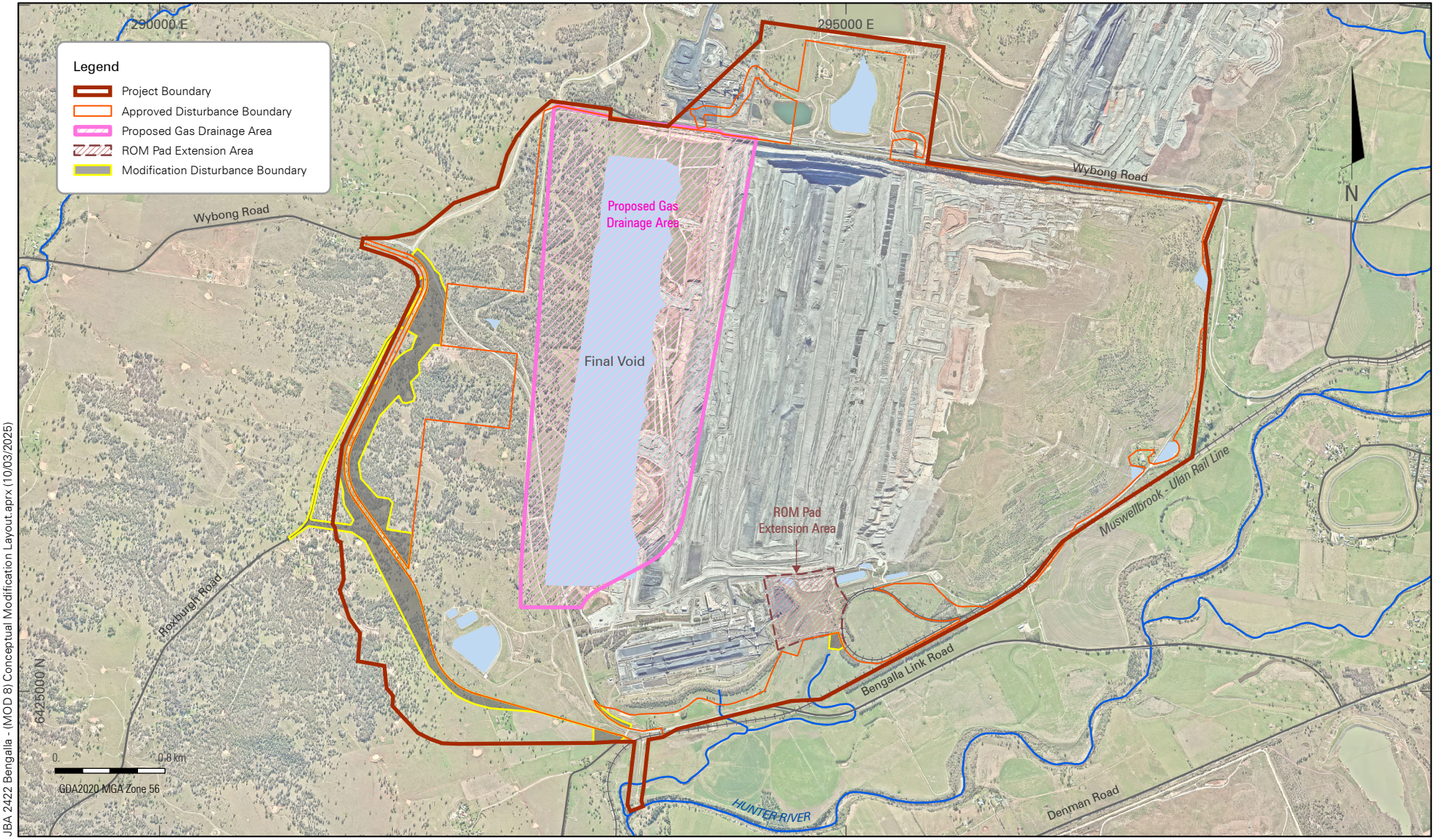
The reasons for the Modification include the following:

(a) **Bengalla Link Road** – update the previously approved realignment of Bengalla Link Road to reflect the current condition of the surrounding road network (including an increase in the speed limit from 80 km/hour to 100 km/hour) and align with contemporary road safety and design guidelines that have come into effect since the realignment was approved in 2015;

(b) **Conceptual Final Landform** – improve the appearance of the western slope of the mine by incorporating modern geomorphic design principles into some areas of the final landform to create a more naturalistic post-mining landscape. The proposed changes to the mine plan will also result in greater mining efficiency and ability to incorporate improvements in safety outcomes;

(c) **ROM Pad Extension** – provide Bengalla with greater coal storage capacity at the ROM coal stockpile and increased flexibility in the coal handling, preparation and storage process; and

(d) **Gas Drainage Infrastructure** – explore technologies that have the potential to reduce greenhouse gas emissions from Bengalla, through operation of proposed gas drainage infrastructure.



JBA 2422 Bengalla - (MOD 8) Conceptual Modification Layout.aprx (10/03/2025)

BENGALLA MINE MOD 8

Conceptual Modification Layout

FIGURE 3

4. APPROVALS APPROACH

Section 4.55(2) of the EP&A Act enables a consent authority to modify a development consent. This power to modify is governed by certain requirements including the need for the consent authority to be satisfied that the modified development is 'substantially the same development' as the original development (before any modifications) for which consent was granted. When compared against the originally approved development, the proposed Modification will result in the following changes:

When compared against the originally approved development, the proposed Modification will result in the following changes:

(a) Adjustments to the previously approved realignment of the Bengalla Link Road;

(b) Changes to the approved conceptual final landform;

(c) ROM pad extension and associated water management infrastructure (including a new ROM dam); and

(d) Installation of gas drainage wells and methane flaring infrastructure.

The following key aspects of the development originally approved by SSD-5170 will remain unchanged:

- Mining methods;
- Maximum coal production rate;
- Duration of mining operations;
- Methods and rates of coal processing and transportation;
- Hours of operation; and
- Workforce.

Table 2 summarises the key aspects of the proposed Modification, compared to the current approved operations (as amended by MOD 5). Modification 6 and 7 applications have been excluded from **Table 2** as they have not been determined.

Given that the major characteristics of the development will not be affected by the proposed Modification, the modified development is considered to be substantially the same development as the approved development.

Although detailed environmental studies are yet to be completed, a preliminary review indicates that the potential environmental impacts will not result in any substantial changes to those impacts which have already been approved. Accordingly, the development after the Modification, will remain substantially the same development as originally approved and is within the modification power contained within Section 4.55(2) of the EP&A Act.

Further context in relation to the environmental considerations over the Modification is provided in **Appendix A**.

Table 2 Comparison of the Modification to the Approved Development

SSD-5170 Aspect	Approved Development	MOD1	MOD2	MOD3	MOD4	MOD5	MOD 8
Approval Date	03 March 2015	16 December 2015	01 July 2016	23 December 2016	19 December 2018	24 February 2023	N/A
Project Boundary	As shown in Appendix 2 of SSD-5170	No change	No change	No change	No change	No change	Amendment to the Project Boundary to account for elements as shown in **Figure 3**
Land use	Coal mining and ancillary activities	No change	No change	No change	No change	No change	No change
Surface Disturbance	Westward extension of mining comprising an additional 964 hectares (ha), with the total area disturbed equivalent to 1,938 ha	Clearing 3.52 ha (including 1.24 ha of EEC) and indirectly impacting on an extra 5.56 ha	No change	No change	No change	No change	Clearing an additional 68.5 ha (including 63.6 ha of EEC)
Project Duration	Mining operations until 28 February 2039	No change	No change	No change	No change	No change	No change
Mining method	Open cut mining using a dragline, excavators, truck fleet and ancillary equipment	No change	No change	No change	No change	No change	No change
Production Rate (ROM coal)	Maximum production rate of 15 Mtpa of ROM coal	No change	No change	No change	No change	No change	No change
ROM Coal Stockpile	350,000 t ROM coal stockpile capacity (including 40,000 t capacity at the ROM hopper) Total stockpile capacity 1,215,000 t				Increase ROM stockpile capacity to 1,250,000 t Total stockpile capacity increased to 2,115,000 t	Increase ROM Hopper pad stockpile capacity to 150,000 t	Increase ROM Hopper pad stockpile capacity to 600,000 t No changes to total stockpiling capacity

SSD-5170 Aspect	Approved Development	MOD1	MOD2	MOD3	MOD4	MOD5	MOD 8
Blasting	Maximum of 2 blasts a day and 6 blasts per week averaged over a calendar year	No change	No change	No change	No change	No change	No change
Surface infrastructure	• CHPP, rail loadout facility, offices, bathhouse, workshop, fuel storages, vehicle wash bays, powerlines, access roads, realignment of Bengalla Link Road and water management infrastructure	• Additional locations for the approved explosives storage facility • Placing soil from construction of the CW 1 dam adjacent to the dam • Various changes to water management infrastructure	Construct the Bengalla Homestead access road (500m gravel access track)	• Relocate surface infrastructure as mining progresses including: • Explosives storage facility and reload facility • Hunter River Pipeline • Temporary topsoil stockpiles	Temporary clay stockpile within the main OEA or to the west for later use in the reinstatement of Dry Creek	• Addition of a mobile crushing facility • Upgrade of the haul road from the mining area to the ROM coal stockpile	• Installation of gas drainage wells and flaring infrastructure • BLR realignment disturbance boundary adjustment
Water management	• Diversion of clean water around disturbed areas, primarily using the Western Diversion Levee • 900 ML clean water diversion dam (CW1), Mt Pleasant Discharge Dam and relocation of existing infrastructure • Temporary diversion of Dry Creek. • Capture and containment of	• Clean water diversion levees associated with CW1 • Satellite Pit used as a temporary dirty water storage dam • Revising the locations of the Hunter River Raw Water and Washery dams • Relocation of the Staged	No change	No change	• Increase capacity of ED1 from 300ML to 700ML • Construction of Dry Creek East Dam for additional mine water storage • Relocation of approved temporary OEA Sediment Dam on the Main OEA	Realignment of sections of the Western Diversion Levee and additional diversion drains within the Disturbance Boundary. Clean water will continue to be diverted around disturbed areas.	Construction of a replacement ROM Dam for storage of mine water

SSD-5170 Aspect	Approved Development	MOD1	MOD2	MOD3	MOD4	MOD5	MOD 8
	mine-affected water in mine water dams for reuse or it can be discharged in accordance with the Hunter River Salinity Trading Scheme • Capture and treatment of sediment-laden water in sediment dams	Discharge Dam HRSTS discharge point					
Management of Overburden and Reject Materials	• Overburden disposed in the Overburden Emplacement Area to the west of mining and in pit once mining from that area has ceased • Construct the Main OEA to a height of 270 m Reduced Level (RL) • Coarse rejects and tailings dewatered and co-disposed with overburden materials	No change	Addition of two Visual Relief Areas on top of the Main OEA as macro topographic highs (or knolls) that mimic the surrounding natural undulating landscape: • 30 m Northern Relief Area, constructed to a maximum height of 300 m RL; and • 20 m Southern Relief Area, constructed to a maximum height of 290 m RL	No change	Flexibility in the location for temporary stockpile of reject material	Dispose of end-of-life heavy plant tyres within the approved OEA	Incorporate fluvial geomorphology (Geofluv) design OEA
Coal Transportation	Rail transportation of product coal to	No change	No change	No change	No change	No change	No change

SSD-5170 Aspect	Approved Development	MOD1	MOD2	MOD3	MOD4	MOD5	MOD 8
	Newcastle Port for export Transportation of up to 16 laden trains per day						
Employment	Maximum of 900 FTE personnel	No change	No change	No change	No change	No change	No change
Operational hours	24 hours per day, 7 days per week	No change	No change	No change	No change	No change	No change
Final landform	• Progressive rehabilitation of the site • Rehabilitated to agricultural use (grazing), with plantings of native woodland vegetation on the eastern face of the OEA • Reinstate Dry Creek through rehabilitated mine landform • Final void approximately 342 ha predicted to fill with water in the long term (1,000 years) to RL 70 m, approximately 100 m below the rehabilitated surface level • Conceptual final landform generally in accordance with	Revised conceptual final landform to account for the modified project	Revised SSD-5170 Appendix 9 conceptual final landform to account for the modified project	No change	No change	No change	Larger final void footprint to incorporate geomorphology (Geofluv) design OEA

SSD-5170 Aspect	Approved Development	MOD1	MOD2	MOD3	MOD4	MOD5	MOD 8
	Appendix 9 of SSD-5170						
Exploration Activities	Not described	No change	No change	No change	No change	Approval to undertake geotechnical investigations and prospecting operations in accordance with relevant approvals	No change
Visual	Install tree screening along those sections of Denman Road, Roxburgh Road and Wybong Road that will have direct views of mining operations	No change	No change	No change	No change	Allowed flexibility around the visual mitigation measures required to be implemented along Denman Road, Roxburgh Road and Wybong Road	No change

**Details in the 'Approved Development" column are the same for both the originally approved development (before modification) and the currently approved development (as modified up to and including Modification 5).*

5. MODIFICATION REPORT SCOPE

This application will be supported by a Modification Report prepared with reference to the '*State significant development guidelines – preparing a modification report*' (DPIE, 2022). The Modification Report is likely to be structured as follows:

- Introduction;
- Strategic Context;
- Modification Description;
- Statutory Context;
- Stakeholder Consultation;
- Assessment of Impacts; and
- Merit Evaluation.

The Modification Report is proposed to include technical specialist reports to assess any potential impacts including:

- Aboriginal and Historic Heritage;
- Air Quality & Greenhouse Gas Emissions;
- Ecology;
- Noise;
- Groundwater;
- Surface Water;
- Traffic;
- Social;
- Economics; and
- Visual.

These technical specialist reports will also identify any recommended additional mitigation and management measures for the Modification. An assessment of impacts including a preliminary outline of environmental considerations along with the proposed scopes of the key technical studies to be undertaken is provided in **Appendix A**.

6. CONCLUSION

This letter sets out the key aspects of the proposed Modification. It would be appreciated if DPHI could confirm:

- An application under Section 4.55(2) of the EP&A Act is the appropriate approach for the Modification; and
- The proposed scope of the assessment outlined in Section 5 (and **Appendix A**) is adequate. If there are any other matters that require consideration in the Modification Report, please let us know.

Please do not hesitate to contact me, should you require any further information from BMC.

Yours faithfully,

Hayley Frazer

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APPENDIX A

CONSIDERATION OF POTENTIAL ENVIRONMENTAL IMPACTS

CONSIDERATION OF POTENTIAL ENVIRONMENTAL IMPACTS

1. OVERVIEW

BMC has considered the key environmental aspects which will be impacted as a result of the Modification. A preliminary review of the key environmental, social and economic impacts resulting from the proposed activities under the Modification and the proposed assessment approach for each is described within the following sections.

2. ABORIGINAL ARCHAEOLOGY

The area surrounding Bengalla has been the subject of extensive Aboriginal cultural heritage assessments to support previous approval applications. AECOM completed the *'Aboriginal Archaeological and Cultural Heritage Impact Assessment' (*AECOM Australia Pty Ltd, 2013*)* as part of the Bengalla EIS. A total of 289 registered Aboriginal archaeological sites comprising 285 open artefact sites (artefact scatters and isolated artefacts), three potential scarred trees and one stone quarry (fragmented into two sites) were identified within the Project Boundary. A total of 263 open artefact sites were located within the Disturbance Boundary. Salvage of the registered Aboriginal archaeological sites within the Disturbance Boundary was undertaken in 2015 and 2016. The approved Bengalla *Aboriginal Cultural Heritage Management Plan* (ACHMP) (Hansen Bailey, 2017) sets out the procedures for the care and salvage of Aboriginal objects within the Project Boundary.

The Modification proposes to disturb an additional area beyond the approved Disturbance Boundary in association with the revised realignment of Bengalla Link Road approved under SSD-5170 and the temporary erosion and sediment control measures for the ROM pad. OzArk has been commissioned to complete an Aboriginal Cultural Heritage Assessment to support the Modification. The assessment will be undertaken in accordance with the relevant guidelines, including:

- *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW, 2010).
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (the Guide; OEH, 2011); and
- *Aboriginal cultural heritage consultation requirements for proponents* (ACHCRs; DECCW, 2010).

The Aboriginal Cultural Heritage Assessment will incorporate:

- Desktop review of the AHIMS database, Native Title and previously completed studies conducted in the area;
- Aboriginal stakeholder consultation;
- A field-based survey with members of the local Aboriginal community;
- Preparation of an assessment report in accordance with relevant guidelines in consultation with the local Aboriginal community; and
- Development of appropriate management and mitigation strategies.

3. HISTORIC HERITAGE

The area surrounding Bengalla has been the subject of extensive historic heritage assessments to support previous approval applications. AECOM completed the *Bengalla Mine Continuation Environmental Project Impact Statement: Historical Heritage Report* (AECOM Australia Pty Ltd,2013) as part of the Bengalla EIS. Five historic sites have been identified within the approved Project Boundary and a further six sites with potential historic heritage value have been identified on land adjacent to Bengalla. Potential impacts from the continuation of mining were considered including blasting, dust, traffic, visual impacts, and the long term lack of use potentially leading to deterioration. BMC manages historic heritage in accordance with the approved *Historic Heritage Management Plan* (HHMP) (Hansen Bailey, 2017).

The Modification proposes to disturb an additional area beyond the approved Disturbance Boundary in association with the revised realignment of Bengalla Link Road approved under SSD-5170 and the temporary erosion and sediment control measures for the ROM pad. OzArk has been commissioned to complete a Historic Heritage Impact Assessment for the Modification. The assessment will be undertaken in accordance with the relevant guidelines, including:

- *Assessing Heritage Significance* (DPE, 2023);
- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (NSW Heritage Council, 2009);
- *Statements of Heritage Impact* (Environment and Heritage DPE, 2023); and
- *Burra Charter* (Australia International Council on Monuments and Sites, 2013).

The Historic Heritage Impact Assessment will incorporate an updated search of the relevant heritage registers for heritage inventories, a field survey, assessment of significance, impact assessment and identification of any required mitigation and management measures.

4. AIR QUALITY AND GREENHOUSE GAS

The activities proposed by the Modification that have the potential to generate additional dust emissions and associated air quality impacts include:

- Temporary construction works and land disturbance (vegetation clearing and topsoil stripping) associated with the revised Bengalla Link Road alignment;
- Enlargement of the ROM hopper coal stockpile and associated infrastructure;
- Drilling and installation of gas drainage wells and methane flaring infrastructure; and
- Emplacement of overburden within the existing overburden emplacement footprint to achieve the revised final landform.

A greenhouse gas (GHG) assessment will be undertaken to determine any changes to the predicted Scope 1, 2 and 3 emissions. The Modification includes the continuation of mining operations utilising existing equipment and at rates consistent with those currently approved. Accordingly, it is considered that GHG emissions will likely remain consistent with those reported for the current operations with potential improvements associated with the installation of gas drainage wells and methane flaring infrastructure.

A qualitative assessment of potential impacts on air quality and GHG emissions will be undertaken by Todoroski Air Sciences Pty Ltd (TAS) in accordance with the '*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*' (EPA, 2022).

The scope of assessment will include:

- Review of existing environmental meteorological and air quality conditions and any previous air quality and GHG assessments for approved Bengalla and associated modifications to establish baseline conditions;
- Identification of the sources of air emissions associated with the Modification activities during the construction and operational phases;
- Qualitative assessment of the potential for air quality impacts associated with the Modification; and
- Identification of any additional mitigation options and management measures to ensure predicted air quality impacts are below applicable criteria.

The scope of the GHG assessment includes:

- A comparison to state and national inventories and emission reduction targets/legislation; and
- Calculate the change in GHG emissions associated with the Modification features (i.e. gas drainage and methane flaring infrastructure).

The air quality impact assessment will determine the nature and extent of the impacts that the project may have on air quality in isolation as well as the cumulative impacts the project may have on the surrounding environment and sensitive receivers.

5. ECOLOGY

Cumberland Ecology completed the *Continuation of Bengalla Mine Project Ecological Impact Assessment* (Cumberland Ecology, 2013) as part of the Bengalla EIS to consider the impacts from the continued mining operations within the Bengalla Project Boundary. Much of Bengalla's immediate locality consists of industry, farmland and remnant vegetation. As a result, there is little connecting ecological habitat between Bengalla and the wider Hunter Valley. The Bengalla Project Boundary largely includes Derived Native Grasslands and to a lesser extent, regenerating woodland and open forest that have been thinned or cleared in the past. This vegetation contributes to a larger, diffuse patch of forest and woodland which extends southwest away from Bengalla.

The 2013 Bengalla EIS described a number of mitigation, management and compensation measures to avoid, minimise and manage the impacts on biodiversity values within the region. The *Bengalla Biodiversity Offset Strategy* (Cumberland Ecology, 2014) aims to maintain or enhance the long- term environmental outcomes. This is achieved through the protection, maintenance, and enhancement of woodland and forest vegetation. Additionally, the strategy focuses on establishing high quality ecological communities in degraded and cleared areas as habitat for a wide range of species. BMC currently manages biodiversity in accordance with the sites *Biodiversity Management Plan* (BMP) (New Hope, 2017). This BMP sets out the procedures for biodiversity management, reporting and auditing of ecological issues within the Bengalla Project Boundary.

The Modification proposes to disturb additional vegetation beyond the approved Disturbance Boundary in association with the revised realignment of Bengalla Link Road approved under SSD-5170 and the temporary erosion and sediment control measures for the ROM pad.

A Biodiversity Development Assessment Report (BDAR) will be completed for the Modification in accordance with:

- *Biodiversity Assessment Method 2020* (NSW Government 2020);
- *Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method* (DPIE 2020);
- Other survey guidelines in accordance with the *NSW Threatened Biodiversity Data Collection* as relevant; and
- *'Species credit' threatened bats and their habitats. NSW survey guide for the Biodiversity Assessment Method* (OEH 2018).

A number of targeted seasonal surveys have been undertaken to date by Cumberland Ecology during 2023 and 2024. These surveys included the review of State and Commonwealth listed threatened species, migratory species and Threatened Ecological Communities (TEC) that are present, or have the potential to occur, in the Modification Disturbance Boundary.

To date, the Modification Disturbance Boundary has been identified to comprise the following biodiversity values:

- One vegetation community, PCT 3431 Central Hunter Ironbark Grassy Woodland occurring in a woodland and a Derived Native Grassland condition;
- No threatened flora species were recorded within the Modification Disturbance Boundary and none are considered likely to occur;
- Two threatened fauna species (listed under the BC Act and EPBC Act) were recorded within the Modification Disturbance Boundary:
  - *Delma vescolineata*/Hunter Valley Delma; and
  - *Myotis Macropus*/Southern Myotis.

In light of the factors above, it is unlikely the Modification will be able to avoid all impacts to biodiversity. The residual impacts of the Modification will therefore likely trigger the requirement for an assessment under the NSW Biodiversity Offset Scheme to achieve 'no net loss' of biodiversity values within the region.

Offsetting requirements will be determined through the application of the Biodiversity Assessment Method (BAM) and Biodiversity Assessment Calculator whilst preparing the BDAR. Offsetting obligations will require delivery in accordance with the Biodiversity Offset Scheme either by direct payment to the Biodiversity Conservation Fund or retirement of biodiversity credits.

The Assessment Bilateral Agreement between NSW State and Commonwealth currently incorporates the NSW Biodiversity Assessment Method as an endorsed assessment methodology for the assessment of impacts to biodiversity aspects. In this regard, it is envisaged that the Commonwealth requirements will be appropriately addressed within the BDAR for the Modification.

6. NOISE

The continued mining operations towards the west under the Modification is likely to result in similar noise impacts from those currently approved. As such, the Modification is not likely to lead to any material additional noise impacts to privately owned receivers surrounding Bengalla. This is due to the continued use of the same equipment fleet and methods of mining as those previously assessed.

Potential noise impacts as a result of the Modification include:

- Noise emissions from the temporary construction works and land disturbance associated with the revised Bengalla Link Road alignment including bulk earthmoving and pavement construction;
- Noise generated by operational traffic from the completed Bengalla Link Road;
- Enlargement of the ROM coal stockpile and associated infrastructure;
- Drilling and installation of gas drainage wells and methane flaring infrastructure; and
- Cumulative noise impacts with surrounding industry.

The Noise Impact Assessment will be conducted in accordance with:

- *NSW Noise Policy for Industry* (EPA, 2017);
- *NSW Road Noise Policy* and associated Application Notes (EPA, 2011);
- *Interim Construction Noise Guideline* (NSW DECCW, 2009); and
- *Assessing Vibration – A Technical Guideline* (NSW DEC, 2006).

A semi-quantitative assessment will be completed for the Modification. Modelling has been proposed for activities with the potential to impact sensitive receptors, and all other elements will be qualitatively reviewed. The scope of the noise impact assessment will include:

- Review of previous noise impact assessments for Bengalla and its modifications to establish baseline conditions;
- Identify noise sources (construction and operation), sensitive receivers and relevant noise criteria;
- Assess the potential noise impacts of the Modification, including:
  - Detailed noise modelling of the construction and operation of the Bengalla Link Road realignment;
  - Qualitative assessment of the changes to the approved final landform, extension of the ROM pad and associated water management infrastructure and installation of up to ten drainage wells and associated methane flaring infrastructure;
  - Potential cumulative impacts; and
- Recommend any additional mitigation measures required to ensure predicted noise levels remain below applicable criteria.

7. WATER

WRM Water and Environment completed the *Bengalla Mine Continuation Environmental Project Impact Statement: Surface Water Impact Assessment* (WRM, 2013) as part of the Bengalla EIS. Bengalla is located adjacent to the Hunter River floodplain and is entirely encompassed by the Hunter River catchment. Upstream of Muswellbrook the Hunter River has a catchment area of approximately 4,200 km^2.

The local drainage network generally consists of relatively steep gullies draining from the surrounding hills into flat, meandering tributaries across the Hunter River floodplain. Dry Creek, an ephemeral tributary of the Hunter River, has been temporarily diverted to facilitate mining operations at Bengalla and is currently approved to be re-instated as part of the final landform. The water management strategy for surface water at Bengalla is described in the approved *Water Management Plan* (WMP; New Hope, 2023).

WSP Australia Pty Limited (WSP) has been engaged to prepare a Surface Water Impact Assessment (SWIA) for the Modification. Surface water impacts considered as part of the Modification assessment generally relate to the onsite management of surface water, and sediment and erosion control including:

- Increased turbidity and sedimentation during construction of the realigned Bengalla Link Road resulting in impacts to water quality downstream;
- Potential for additional demands on existing water sources;
- Required changes to the site water management system;
- Amendments to the catchment areas following changes to final landform, with consequent impacts on catchment yields and drainage downstream of the site;
- Impacts to other licensed users of surface water sources;
- Changes to flooding regimes in the local catchment;
- Dry creek re-instatement design and flood modelling; and
- Post-mining impacts on catchment yields, water quality and quantity.

The assessment will include a revised Site Water Balance, an assessment of the surface water management system, updated design and flood modelling for the proposed Dry Creek reinstatement consideration of impacts to surface water resources and to recommend any additional surface water mitigation and management measures.

A Groundwater Impact Assessment (GIA) for the Bengalla EIS was conducted by Australasian Groundwater and Environmental Consultants Pty Ltd (AGE), titled *Bengalla EIS Continuation of Bengalla Mine Groundwater Impact Assessment* (AGE, 2013). The assessment concluded the Permian sequence would experience depressurisation and lowering of groundwater levels. No significant drawdown was anticipated to occur in the alluvial aquifer, with the predicted drawdown being less than 1 m. As such, there are no anticipated impacts to known groundwater users in the region where the drawdown would exceed 1 m. Stygofauna and groundwater-dependent vegetation were also not expected to be significantly impacted by the limited drawdown. Detailed monitoring and management measures are prescribed in the approved Bengalla WMP including trigger levels and action plans for any results outside the predictions from the EIS.

There are no proposed changes to the mining method, depth of mining, duration of operations and maximum coal production rate. Accordingly, it is expected that the impacts resulting from the Modification will be minimal and generally consistent with those previously considered. AGE have been engaged to prepare a qualitative GIA for the Modification. Groundwater impacts resulting from the modified Conceptual Final Landform will be considered as part of the GIA for the Modification.

The SWIA and GIA will consider the following guidelines and policies as relevant:

- *Protection of the Environment Operations Act 1997;*
- *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002;*
- *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Amendment Regulation 2016*;
- *Water Management Act 2000* (and associated Water Sharing Plans);
- *Managing Urban Stormwater: Soils and Construction - Volume 2E Mines and Quarries* (Department of Environment and Climate Change (DECC), 2008);
- *Environment Protection and Biodiversity Conservation Act 1999;*
- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (Australian and New Zealand Environment and Conservation Council (ANZECC) & Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), 2000);

- *NSW Water Quality and River Flow Objectives*; and
- *Dam Safety Act 2015.*

8. TRAFFIC

Bengalla is currently approved under SSD-5170 to realign the Bengalla Link Road to the west, to allow for the progression of mining operations. During the preparation of the Bengalla EIS only conceptual road design plans were available. The impacts of the realignment were assessed in detail in the *Traffic and Transport Impact Assessment* (DC Traffic Engineering Pty Ltd, 2013). WSP has been engaged to develop a detailed design for the new alignment, ensuring the Bengalla Link Road meets contemporary design standards. The additional modification disturbance area is necessary to facilitate:

- Construction activities including required erosion and sediment control measures, water management infrastructure and design cut/fill requirements;
- Relocation of existing third party infrastructure; and
- Avoid mining authorities held by other parties.

The Bengalla Link Road will be dedicated as a public road and BMC has been in ongoing consultation with Muswellbrook Shire Council and Crown Roads regarding the technical design and placement within relevant Crown Land and cadastral boundaries.

Bengalla Link Road will continue to serve as a vital freight transport route accommodating over-size over-mass vehicle movements for the mines in the Muswellbrook Local Government Area (LGA). With increased access to Renewable Energy Zones (REZ) in the Central West Orana and New England regions. The government announced in 2024 that Bengalla Road will be reclassified from local to state owned (NSW Government, 2024). Consequently, upgrading and widening the BLR to meet contemporary design guidelines will benefit both the community and various industries through improved road safety.

The operation of the existing road network will be maintained during construction for public and emergency vehicles. A technical advice paper will be provided as part of the Modification Report to support the proposed design and confirm compliance with the relevant road safety design guidelines for intersections with the local road network, including Wybong Road and Roxburgh Road.

A Traffic Management Plan will be prepared prior to construction in accordance with the *Traffic control at work sites (TCAWS) Technical Manual* (Transport for NSW, 2022) and relevant Austroads guidelines in consultation with Muswellbrook Shire Council and Transport for NSW.

9. SOCIAL

BMC has been operating on the site for over 29 years and currently employs directly approximately 764 personnel as well as contractors, including in the mining, administration and maintenance sectors. Social impacts will likely remain consistent with those reported for the current operations as the proposed modification does not include any change to operational hours, mine life or an increase in full time employees from that already approved. The construction activities will generate short term work opportunities for the local and regional labour force.

Xenith Consulting will complete a Social Impact Assessment in consideration of the *Social Impact Assessment Guideline* (Department of Planning and Environment (DPE), 2023a) and the associated *Technical Supplement Social Impact Assessment Guideline for State Significant Projects* (DPE, 2023b). A key component of the process will be community engagement, which will inform the assessment of the social and economic impacts. The assessment will outline the measures that will be implemented to manage, mitigate and offset incremental social impacts and identifies opportunities to enhance social benefits.

10. ECONOMICS

Existing operations are economically beneficial at a local, regional and State level through the generation of coal royalties, employment, contributing to the viability of local businesses and involvement with the local community. Gillespie Economics have been engaged to complete an Economic Assessment consistent with the *Guideline for the Economic Assessment of Mining and Coal Seam Gas Proposals* (NSW Government, 2015). The assessment will include a cost benefit analysis and Local Effects Analysis of the proposed Modification.

11. VISUAL

A Visual Impact Assessment (VIA) for Bengalla was undertaken as part of the Bengalla EIS titled '*Continuation of Bengalla Mine Project Visual Impact Assessment*' (JVP Visual Planning and Design, 2013) (2013 EIS VIA). Five modifications to SSD-5170 have been approved to date of which the majority did not propose any material changes to the visual character of Bengalla.

The '*Bengalla Development Consent Modification 2 Statement of Environmental Effects Visual Impact Assessment'* (VPA Visual Planning & Assessment, 2016) (2016 MOD2 VIA) was undertaken to support the '*Bengalla Mine Development Consent Modification Statement of Environmental Effects*' (Hansen Bailey, 2016a) (MOD2 SEE). The 2016 MOD2 VIA quantified the visual impacts associated with changes to the main Overburden Emplacement Area (OEA), which was designed to incorporate two Visual Relief Areas.

The Bengalla Visual Impact Mitigation Plan (VIMP) (Hansen Bailey, 2016) has been developed in accordance with the requirements of Schedule 3, Conditions 37 to 39 of SSD-5170 as modified. The VIMP describes the various appropriate site specific visual mitigation measures recommended to reduce visual impact of Bengalla's operations at affected sensitive receivers.

The Modification includes the continuation of mining within the existing extraction limit, consistent with those currently approved. Accordingly, it is considered that visual impacts will likely remain consistent with those approved for the current operations with long term improvements to the final landform anticipated from the undulating profile created by the refined naturalistic geofluv design.

O'Hanlon Design Pty Ltd has been engaged to prepare a Visual Impact Assessment (VIA) for the proposed Modification. The VIA will assess the visual impacts to the contemporary landscape values as a result of the Modification beyond those approved for Bengalla (as modified). The VIA will include photomontages using a computer-generated topographic assessment to compare the approved conceptual landform against the proposed revised final landform.