



NEW HOPE
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Submitted via: Major Projects Portal

Dear Stephen,

BENGALLA MINE SCOPING REQUEST WATER PIPELINE MODIFICATION 6

I refer to the discussions held between Bengalla Mining Company Pty Limited (BMC) and the Department of Planning, Housing and Infrastructure (DPHI) in March 2024, at which we provided a presentation and discussed a pending application to modify BMC development consent (SSD-5170).

This letter seeks confirmation that a modification application under Section 4.55(2) of the *Environmental Planning & Assessment Act 1979* (EP&A Act) is the appropriate approvals path for the proposed Modification. BMC also seeks confirmation from DPHI that the proposed scope of the Environmental Assessments and the Modification Report, as outlined within this letter, is appropriate and whether any other issues warrant assessment.

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1. INTRODUCTION

BMC operates the Bengalla Mine (Bengalla) on behalf of Bengalla Joint Venture (BJV), which consists of New Hope Bengalla Pty Limited (80%) and Taipower Bengalla Pty Limited (20%) (a wholly owned subsidiary of Taiwan Power Company).

Bengalla is an open cut coal mine located in the Upper Hunter Valley of NSW, approximately 130 kilometres (km) north-west of Newcastle and 4 km south-west of Muswellbrook (see [Figure 1](#)).

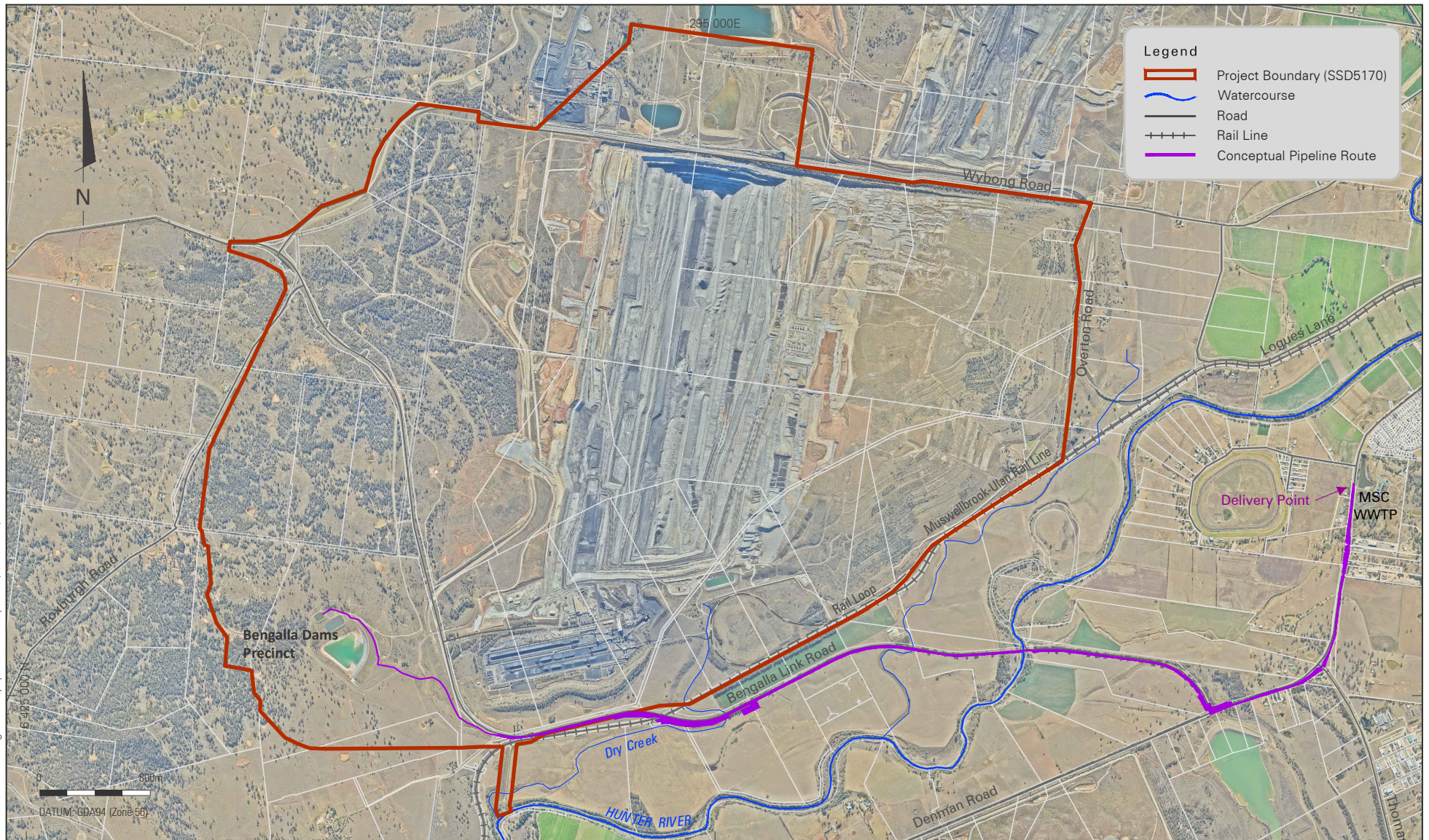
BMC is proposing to lodge an application to seek approval to install and operate two water pipelines from the MSC Wastewater Treatment Plant (WWTP) locality to Bengalla to transfer recycled and potable water for use in operations at Bengalla (proposed Modification). The proposed recycled water pipeline is required by an agreement between Muswellbrook Shire Council and BMC which proposes that BMC receive recycled water from the Council's treatment plant allowing 400 units of high security water presently held by BMC to be used for other purposes by the Council (Recycled Water Agreement). The pipelines will be located within an easement along the public road corridors adjacent to Denman Road and the Bengalla Link Road, before crossing Bengalla owned land and connecting to the Bengalla Washery Dam and potable water tanks. The pipelines will be fixed to the Hunter River bridge on the Bengalla Link Road and will pass under Denman Road. The conceptual layout of the proposed pipeline route is illustrated in [Figure 2](#).



BENGALLA MINE

Regional Locality

FIGURE 1



BENGALLA MINE

Conceptual Pipeline Layout

FIGURE 2



2. BACKGROUND

2.1 EXISTING APPROVALS PLATFORM

2.1.1 NSW Project Approval

Bengalla is approved by State Significant Development (SSD) SSD-5170 granted under the then Division 4.1 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). SSD-5170 (as modified) authorises the continuation of open cut coal mining and associated activities at Bengalla until 28 February 2039. The approved activities at Bengalla include:

- Continuation of activities approved under the previous development consent including use of existing mining infrastructure;
- Open cut mining towards the west at a maximum extraction rate of 15 million tonnes per annum (Mtpa) of run of mine (ROM) coal;
- The use of a dragline, excavators and loaders, a truck fleet and other ancillary equipment for the purpose of uncovering and extracting the coal resource;
- An out-of-pit Overburden Emplacement Area (OEA) to the west of Dry Creek which may be utilised for excess spoil material until it is intercepted by mining;
- Processing, handling and transportation of coal via a Coal Handling and Preparation Plant (CHPP) and rail loop for domestic and export sale;
- Rejects and tailings co-disposal in the Main OEA and temporary in-pit reject emplacement;
- Relocation of a 6 km section of Bengalla Link Road at approximately Year 15 near the existing mine access road to facilitate coal extraction;
- The diversion of Dry Creek via dams and pipe work with a later permanent alignment of Dry Creek through rehabilitation areas when emplacement areas are suitably advanced;
- Relocation of water storage infrastructure as mining progresses through existing dams (including the Staged Discharge Dam and Hunter River Raw water dam);
- Operation of a mobile rock crushing facility and ancillary equipment, and the use of that crushed rock at Bengalla;
- Disposal of waste tyres in-pit; and
- A workforce of approximately 900 full time equivalent personnel (plus contractors) at peak production.

2.1.2 Commonwealth Approvals

In conjunction with the Project Approval process for the BMC Continuation Project, BMC was granted an approval (EPBC 2012/6378), and subsequently conditioned, under Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to undertake an action that would have a significant impact on matters of national environmental significance.

3. PROPOSED MODIFICATION DESCRIPTION

BMC is seeking a proposed Modification to install and operate two water pipelines from the MSC WWTP locality to Bengalla to transfer recycled and potable water for use in Bengalla operations.

The proposed pipelines will connect from a delivery point at the MSC WWTP and MSC Town Water Supply (at a point to be agreed with MSC), to Bengalla via a combination of water management infrastructure to service the Washery as well as potable water tanks for potable water use. The pipelines will be located within an easement along the public road corridors adjacent to Denman Road and Bengalla Link Road before crossing through Bengalla owned land within the Mining Lease. Under bores for the pipelines will be at Thomas Mitchel Drive, Denman Road and Bengalla Link Road, and will be abutted to the Bridge over the Hunter River. The route for the pipelines is illustrated in [Figure 2](#).

The proposed Modification seeks to improve the efficiency of water management at Bengalla by facilitating the transfer of recycled water from the MSC WWTP for reuse in operations. In return for receiving recycled water from the MSC WWTP, BMC will transfer 400 units of high security Hunter Regulated River share component (subdivided from BMC's Water Access Licence (WAL)) to MSC.

The pipeline will transfer surplus water from MSC WWTP to Bengalla to satisfy operational water demands at Bengalla Mine. This will reduce the need to extract raw water from external sources (e.g. Hunter River Water Source) and the amount of water that MSC would otherwise need to discharge under the *Hunter River Salinity Trading Scheme* (HRST).

The receipt of potable water via pipeline aims to replace the need to truck in water from the MSC town water supply, as is current practice.

The proposed Modification includes the following key components:

- Installation and operation of a recycled water pipeline and potable water pipeline from the MSC WWTP to the Bengalla Washery dam and potable water tank/s;
- Transfer of recycled water from the MSC WWTP to Bengalla Mine for reuse in the CHPP and operations at a quantity of a:
 - Maximum of 2.5 megalitres (ML) per day;
 - Minimum of 56 ML per month; and
 - Maximum of 913 ML per year;

- Construction and use of minor ancillary infrastructure including:
 - Establishment of a Private Supply Works to connect the recycled water pipeline to the Delivery Connection Point at the MSC WWTP;
 - New water tanks installed in the DW1 precinct adjacent to the Washery Dam;
 - Associated pump and pipework manifold at the Washery Dam;
 - Upgrade to the pump and pipelines in the Washery Dam precinct to convey and direct feed water to the CHPP;
 - Installation and utilisation of minor fittings and piping to integrate the pipe inlets into the Bengalla water reticulation system; and
 - Additional access points along the pipeline route and other minor supporting infrastructure to access air and scour valves.
- Establishment of temporary facilities to support construction activities which include a construction office, laydown areas to store pipe and other materials, and a construction pad for the under boring at Thomas Mitchell Drive, Denman Road and Bengalla Link Road.

The proposed Modification will involve the following changes beyond that previously approved under SSD-5170:

- Installation and operation of two pipelines to transfer recycled and potable water from the MSC WWTP to Bengalla Mine;
- Acceptance of up to 913 ML of recycled water from the MSC WWTP for reuse in mine operations at a maximum daily rate of 2.5 ML/day; and
- An additional 13 ha of disturbance outside the approved Disturbance Boundary, i.e. along and adjacent to the road corridor for laydown areas, a temporary office and access for thrust boring.

The proposed Modification does not propose any other changes to Bengalla approved mining operations.

Table 1 summarises the key aspects of the proposed Modification, compared to the current approved operations (as amended by MOD 5).

Table 1 Comparison of the Modification to the Approved Development

Aspect	Approved Development*	Proposed Modification
Land use	Coal mining and ancillary activities.	No change.
Duration	Mining operations until 28 February 2039.	No change.
Mining method	Open cut mining using a dragline, excavators, truck fleet and ancillary equipment.	No change.
Production rate	Maximum production rate of 15 Mtpa of ROM coal.	No change.
Surface infrastructure	CHPP, rail loadout facility, offices, bathhouse, workshop, fuel storages, vehicle wash bays, powerlines, mobile crushing facility, access roads and water management infrastructure.	Upgrade to pumping, piping, valving, water management telemetry and instrumentation; and additional water tanks to integrate the pipelines into the Washery Dam precinct and mining infrastructure area.
Water management	Diversion of clean water around disturbed areas, primarily using the Western Diversion Levee. Capture and containment of mine-affected water in mine water dams. Mine water is reused for operational purposes (e.g. dust suppression, coal washing) wherever possible. If required, surplus mine water can be discharged in accordance with the Hunter River Salinity Trading Scheme. Capture and treatment of sediment-laden water in sediment dams.	Installation and operation of two water pipelines to transfer recycled and potable water from MSC WWTP.
Final landform	Conceptual final landform is shown in Appendix 9 of SSD-5170.	No change.
Operating hours	24 hours per day, 7 days per week.	No change.
Workforce	Maximum of 900 FTE personnel.	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 MOD 5).*

4. APPROVALS APPROACH & SCOPE OF ENVIRONMENTAL ASSESSMENTS

4.1 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.

For the consideration of the key aspects of the proposed Modification, against the originally approved operations, it is envisaged that the proposed Modification (incorporating the changes approved by subsequent modifications) will result in the following changes:

- Installation and operation of two pipelines to transfer recycled and potable water from the MSC WWTP to Bengalla Mine;
- Acceptance of up to 913 ML of recycled water from the MSC WWTP for reuse in mine operations at a maximum daily rate of 2.5 ML/day;
- Creation of an easement, which covers the route of the pipelines within the road corridor and amendment of the Project Boundary; and
- An additional 13 ha of disturbance along and adjacent to the road corridor.

The following key aspects of the original development 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; and
- Hours of operation.

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 authorised development.

A preliminary assessment of the key environmental impacts from the proposed Modification has identified that biodiversity, archaeology, the site water balance and construction traffic are the key potential environmental impacts which will need to be assessed. These are summarised below according to the physical changes proposed to Bengalla as a result of the proposed Modification.

4.2 ENVIRONMENTAL CONSIDERATIONS

4.2.1 Ecology

The proposed Modification will result in the disturbance to 13 ha of exotic and native vegetation in the road corridor and associated laydown areas.

An *Ecology Due Diligence Survey* (Cumberland Ecology, 2024) was completed by Cumberland Ecology in March 2024. A field survey was completed along the proposed route for the pipelines and the associated laydown areas. The study area included an area of approximately 9 km in length by 10 meters (m) (study area) (refer to [Figure 2](#)).

The field survey did not identify any threatened flora or fauna species within the study area.

Database searches of the '*EPBC Protected Matters Search Tool*' (Department of Climate Change, Energy, the Environment and Water) and the '*NSW Atlas of Wildlife*' (Office of Environment and Heritage) will be undertaken to identify species listed under the EPBC Act and/or *Biodiversity Conservation Act 2016* (BC Act), as previously being recorded, or having potential habitat, within a 10 km radius of the study area.

A Streamlined Biodiversity Development Assessment Report (Streamlined BDAR) will be completed for the proposed Modification in accordance with the '*Biodiversity Assessment Method*' (BAM) (Department of Planning, Industry and Environment, 2020).

The Streamlined BDAR will include:

- An assessment of the biodiversity values;
- The likely biodiversity impacts of the proposed Modification;

- A detailed description of the proposed regime for minimising, managing and reporting on the biodiversity impacts of the Modification; and
- Development of any offset strategy required to offset any residual impacts of the Modification in accordance with the *Biodiversity Conservation Act 2016* and the BAM.

BMC will avoid and minimise potential ecological impacts associated with the additional disturbance. Initial surveys indicate no new species are likely to be significantly affected and impacts from any additional disturbance will remain substantially the same as the existing development.

In accordance with the current approach at Bengalla, BMC will commit to the implementation of appropriate management and offsetting measures (if required) to demonstrate that the ecological impacts of this additional disturbance will remain substantially the same as the existing development (i.e. no additional species are likely to be significantly affected by disturbance within the construction corridor).

4.2.2 Aboriginal Heritage

An ‘*Aboriginal Heritage Due Diligence Assessment for Bengalla Road Water Pipeline*’ (OzArk Environment and Heritage (OzArk), 2024) was completed by OzArk. The study area included a 10 metre (m) wide corridor, approximately 9 km in length, along Bengalla Road and Denman Road, within which the proposed pipeline is to be installed. The study area is shown in [Figure 2](#).

The desktop and visual inspection component of the assessment was completed in accordance with the ‘*Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*’ (Department of Environment, Climate Change and Water, 2010). The field inspection followed the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (Office of Environment and Heritage, 2011).

The assessment confirmed there are no previously recorded sites within the study area and no other sources of information indicating the presence of Aboriginal objects were identified. A visual inspection on 7 February 2024 did not identify any Aboriginal objects or potential archaeological deposits within the proposed disturbance area.

Bengalla operates in accordance with the approved BMC Aboriginal Cultural Heritage Management Plan (ACHMP) in accordance with the requirements of SSD-5170 Schedule 3, Condition 31. The ACHMP includes procedures for dealing with discoveries of unrecorded sites (i.e. unanticipated finds). These

procedures will remain applicable in the unlikely event that unanticipated finds are encountered during construction works described in the proposed Modification.

Given that no heritage sites were recorded within the Disturbance Boundary, there will be no additional management measures required for the proposed Modification. As initial surveys indicate no additional Aboriginal objects or potential archaeological deposits are likely to be disturbed, the impacts from any additional disturbance will remain substantially the same as the existing development.

4.2.3 Traffic

There is the potential for traffic impacts during construction activities associated with the installation of the pipelines within the road corridor. A Traffic Management Plan (TMP) will be prepared for the proposed Modification in accordance with the Transport for NSW (TfNSW) '*Traffic Control at Worksites Technical Manual Issue 6.1*' (TfNSW, 2022). The TMP will aim to describe how the construction activities will effectively ensure the safety of road workers and users as well as minimising potential impacts or delays to road users is addressed. The TMP will include:

- A description of the works including work hours, duration of works and expected traffic volumes;
- Outline worker and work zone clearance to traffic lanes;
- Existing posted speed limits;
- Description of safety barrier controls that may be used for delineation;
- Identification of sight distance requirements (desk-top based);
- Documentation of the need for any temporary detours or lane closures;
- Assessment of impacts to general traffic, public transport, pedestrians and cyclists during construction and ongoing routine maintenance;
- Description of the types of risk assessment that will be used for construction which includes any hazard/risk identification;
- Identify where any constraints to driveway or property access will need to be communicated; and
- Confirm the Traffic Guidance Scheme (TGS) to be implemented.

4.2.4 Water

Bengalla's water management performance measures include minimising the use of clean water on-site, minimising the need for make-up water from external supplies and minimising cumulative water impacts with other mines.

There will be no net increase in water consumption at Bengalla as a result of the proposed Modification. Water sourced from the *Hunter Regulated River Water Source (Zone 1A) Water Sharing Plan for the Hunter Regulated Water Source 2016* (Hunter River Water Source) is currently used as Raw Water for use in the CHPP, vehicle wash-down, for fire suppression and dust suppression as required. Potable water is used for drinking, shower and toiletry purposes within the main office, bathhouse, adjacent workshop areas, relocatable facilities and dragline and drills.

Potable water is currently trucked in from the Muswellbrook town water supply. The installation of a potable water pipeline would negate the need to truck in potable water, whilst the receipt of recycled water from the MSC WWTP would minimise the amount of water to be extracted from the Hunter River Water Source.

BMC utilises the computer based OPSIM model to simulate the Bengalla water balance under varying climatic conditions. WSP (formerly Parsons Brinckerhoff) prepared the *BMC Modification 4 Surface Water Impact Assessment* (MOD4 SWIA) (PB, 2017), which included water balance modelling using OPSIM. In 2022 WSP completed subsequent water balance studies for BMC, using the MOD4 SWIA model, as part of considering whether to enter agreement with MSC regarding the supply of treated wastewater. This included modelled options for the use of a constant supply of 912.5 ML/year (2.5 ML/day) treated wastewater from MSC WWTP at Bengalla.

The results of the WSP 2022 water balance modelling will be utilised as the basis of a new Water Balance Assessment (WBA) for the proposed Modification. The WBA will provide background information on the existing surface water management system as well as the modelling methodology and assumptions. The WBA will provide details of the changes proposed and implications to the mine water management system. A high-level qualitative analysis is also proposed to assess recent climate data and potential future climate change and how this might impact the existing mine water balance.

MSC will be responsible for monitoring the quality of the recycled water supplied to Bengalla and using reasonable endeavours to ensure it is of a quality which is within the approved 'Water Quality Parameters'. In the event that monitoring demonstrates any element of the recycled water is not in accordance with these parameters, the transfer of the recycled water will cease until the water quality improves. This process will ensure the quality of water is suitable for use in the Bengalla operations and will not cause contamination of any water resources.

Metering will be installed on the recycled and potable water pipelines to measure and ensure the quantity of water transferred from MSC water supplies are within the limits specified. Differential flow meters will be installed for leak detection, which will have the capability to shut down pumping in the event of a leak. All pipeline metering will be incorporated into Bengalla's real time environmental monitoring system.

Bengalla has an approved Water Management Plan (WMP) developed in accordance with the requirements of Schedule 3, Conditions 24 and 25 of SSD-5170. Management and mitigation measures will continue to be implemented in accordance with the WMP, including erosion and sediment controls required during construction activities, ongoing management of water quality data and measurement of the quantity of water transferred/ received. As the proposed Modification aligns with the Bengalla water management performance measures and there will be no net increase in water consumption at Bengalla, the potential water impacts will remain substantially the same as the existing development.

4.2.5 Other

Noise and air quality emissions will be limited to the following aspects of the proposed Modification:

- Construction of the water pipeline and ancillary infrastructure; and
- Rehabilitation of the water pipeline route following installation.

These activities will involve a small fleet of earthmoving equipment. Dust and noise emissions from these activities will be negligible in the context of emissions from the existing approved mining operations in the locality. BMC has established noise and air quality management, mitigation and monitoring practices in place which will continue to be implemented to manage the potential impacts from the proposed Modification and Bengalla operations, as outlined in the approved BMC Air Quality Management Plan (AQMP) and Noise Management Plan (NMP) respectively. Similarly, there will be minimal additional visual impacts as the pipeline will be buried and additional ancillary infrastructure will be located adjacent to existing infrastructure.

Bengalla is required to operate in accordance with the facility-specific requirements of the 'Safeguard Mechanism'. As such, as of 1 July 2023, BMC has been required to reduce its direct greenhouse gas emissions each year in line with Australia's emission reduction targets by 2030 under the Commonwealth *Climate Change Act 2022*. Bengalla are actively working to find opportunities to reduce and manage its emissions under the mandated GHG emission reduction targets, whilst providing a relatively high quality thermal and coking coal product to the international coal market. The proposed Modification will not cause additional greenhouse gas emissions from the operation of Bengalla.

The installation of the pipeline will involve welding activities during the construction period. BMC will take practicable steps to prevent the occurrence of bushfires. Appropriate bushfire controls will be implemented in accordance with BMC's internal Bushfire Management Procedure, and adherence to subsequent Bengalla Hot Work Permitting requirements for welding activities.

4.2.6 Conclusion

Although detailed environmental studies are yet to be finalised, a review of preliminary assessments indicates that the potential environmental impacts will not result in substantial changes to the impacts which have been previously approved for Bengalla. Accordingly, from an environmental impact perspective, a compelling argument exists that, with the proposed Modification, SSD-5170 will remain substantially the same development as approved and hence the modification approvals path is available.

4.3 SCOPE OF MODIFICATION REPORT

The application for the proposed Modification will be supported with a Modification Report prepared in accordance with the '*State significant development guidelines – preparing a modification report*' (Department of Planning, Infrastructure and Environment, 2022).

It is anticipated that the Modification Report will include the following details:

- Executive Summary;
- Background;
- Strategic Context;
- Modification Description (including a discussion of alternatives considered);
- Statutory Context;

- Stakeholder Engagement;
- Environmental Impact Assessment (including technical studies):
 - Ecology;
 - Aboriginal Heritage;
 - Site Water Balance;
 - Construction Traffic Management; and
 - Other minor environmental impact assessments including construction noise and air quality, greenhouse gas emissions and bushfire; and
- Merit Evaluation.

5. CONCLUSION

We trust that this letter provides the information required for a Scoping request. It would be appreciated if DPHI could please confirm:

- An application under Section 4.55(2) of the EP&A Act is the appropriate approval approach for the proposed Modification to SSD-5170; and
- The scope of the assessment outlined in [Section 4](#) is adequate and/or if there are any other matters that require consideration.

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

Yours faithfully



Hayley Frazer

Environment and Approvals Superintendent

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