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12 November 2025

Stephen O'Donoghue
Director, Resource Assessments
NSW Department of Planning, Housing and Infrastructure

By email: stephen.odonoghue@planning.nsw.gov.au

Dear Stephen,

**Cadia Valley Operations | Environmental Assessment | Proposed Modification to PA 06_0295**

## 1. Introduction

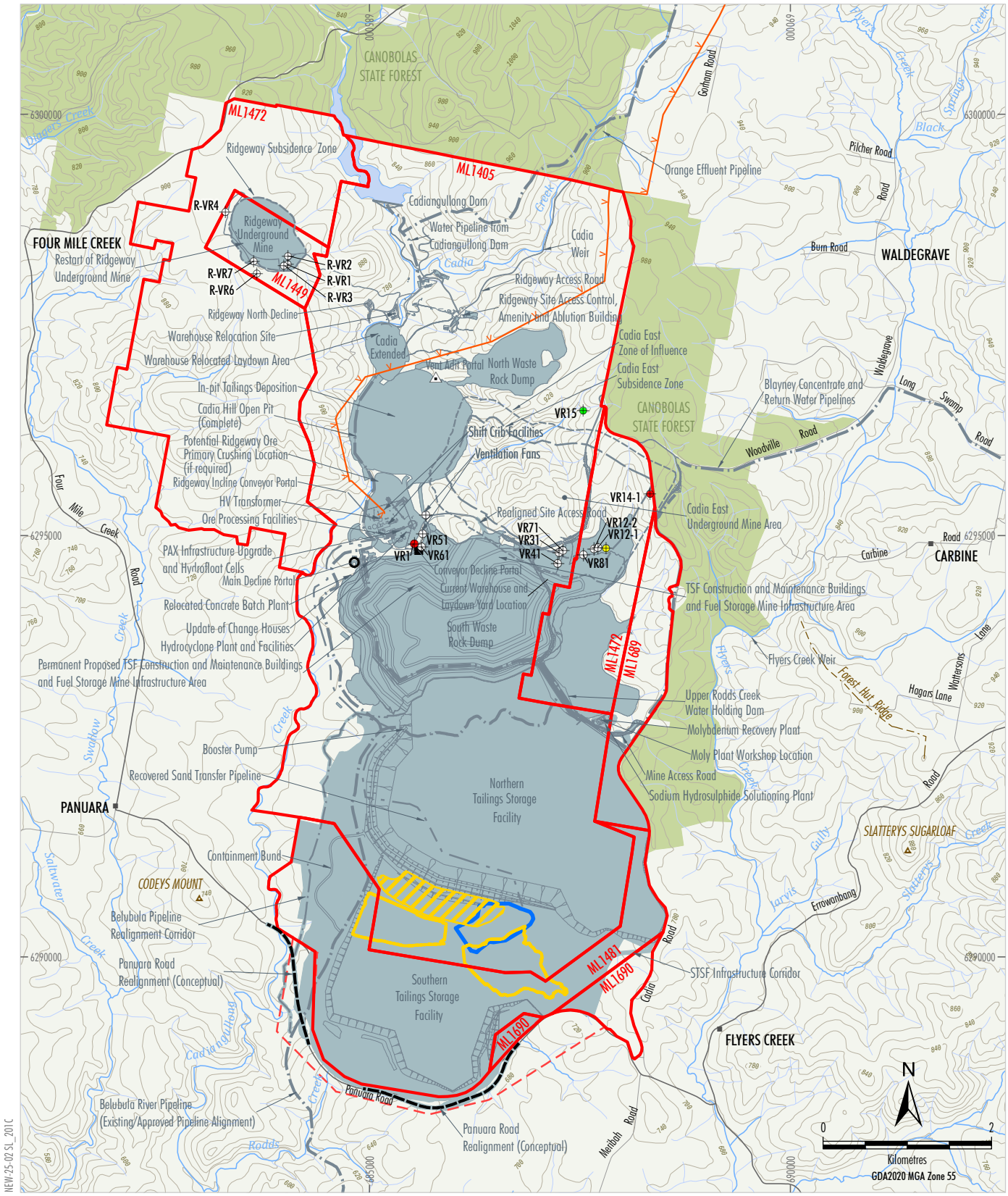
Cadia Holdings Pty Limited (**CHPL**) owns and operates the existing Cadia Valley Operations (**Cadia**) located approximately 25 kilometres (**km**) south-west of Orange in the Blayney Shire and Cabonne Local Government Areas. The mine has operated continuously since 1998 and is one of Australia's largest polymetallic mining operations. Cadia operates under Project Approval 06_0295 (**PA 06_0295**) granted by the Minister for Planning in January 2010, as modified most recently on 31 January 2025.

Following the acquisition of CHPL by Newmont Corporation (**Newmont**) in 2023, CHPL has benefited from Newmont's global experience and specialist insights in the successful design, construction, and operation of modern tailings storage facilities. Leveraging this experience, CHPL has identified an alternative material suitable for use in buttress construction.

On this basis, CHPL is seeking a modification (herein referred to as the **Modification**) to PA 06_0295 to:

- use recovered sand to buttress the southern wall of the Northern Tailings Storage Facility (**NTSF**);
- emplace and stockpile recovered sand within the approved Southern Tailings Storage Facility (**STSF**) disturbance footprint; and
- integrate the recovered sands embankment approved under Modification 15 to PA 06_0295 with the proposed NTSF southern wall recovered sand buttress, with the integrated buttress to remain and form part of the final landform.

The same figure shown in Appendix 2 of PA 06_0295 has been reproduced as Figure 1 with the above proposed Modification elements shown in yellow for ease of comparison.




LEGEND

- Mining Lease Boundary
- Proposed Mining Lease Application Boundary
- State Forest
- Powerline
- Panuara Road Realignment (Conceptual)
- Declines
- Portals
- Adits
- Hydrocyclone Sand Trial Tailing Pilot Plant

Vent Raises

- Approved but not Constructed
- Active
- Decommissioned
- Proposed for Construction in Modification 15

Proposed Modification 16 Elements

- NTSF Recovered Sand Buttress
- Recovered Sand Stockpiles

*Source: Land and Property Information (2017); Department of Primary Industries and Regional Development (2025); CHPL (2018; 2023); Newmont (2025)*

Newmont CADIA

CADIA VALLEY OPERATIONS

**Approved Project and Modification Elements**

Note: Excludes some incidental project components such as water management infrastructure, access tracks, topsoil stockpiles, power supply, temporary offices, other ancillary works and construction disturbance.

**Figure 1**

The proposed Modification would not change the following components approved under PA 06_0295:

- existing/approved disturbance footprint;
- mining method;
- Cadia East and Ridgeway underground mine footprint/dimensions;
- processing rate;
- mine life;
- maximum approved heights of the TSFs; and
- waste rock management.

Attachment 1 provides a comparative summary of the currently approved and modified Cadia as a result of the proposed Modification.

The proposed Modification is described in more detail in Section 4.

CHPL expects that the environmental assessment of the Modification would be undertaken pursuant to section 4.55(2) of the NSW *Environmental Planning and Assessment Act 1979* (**EP&A Act**) and the *Environmental Planning and Assessment Regulation 2021*.

The purpose of this letter is to:

- provide the Department of Planning, Housing and Infrastructure (**DPHI**) with an overview of the proposed Modification;
- identify relevant key environmental matters that will be further investigated in the Modification Report; and
- seek confirmation from DPHI that the Modification application can be determined pursuant to section 4.55(2) of the EP&A Act and confirm that the proposed environmental assessment approach outlined in Section 5 is consistent with DPHI expectations.

## 2. Existing Operations

Cadia produces gold, silver, copper and molybdenum products, with mining operations approved until 30 June 2031. During this period, Cadia will continue to recover ore from the Cadia East Underground Mine and Ridgeway Underground Mine. Ridgeway Underground Mine is currently under care and maintenance.

The currently approved operations at Cadia comprise:

- underground mining of approximately 525 million tonnes (**Mt**) of ore from the Cadia East deposit and approximately 96 Mt of ore from the Ridgeway deposit, using a combination of cave mining methods;
- underground crushing, handling and conveyor systems to transfer ore and waste rock to the surface;
- supporting infrastructure for underground mining including multiple ventilation shafts, and personnel and equipment access systems;
- surface infrastructure, support and processing facilities to enable on-site processing of up to 35 Mt per annum of recovered ore (subject to Condition 6A of Schedule 2 of PA 06_0295);
- the use/placement of waste rock across the site and within the existing South Waste Rock Dump;
- emplacement of the tailings stream in its entirety into the NTSF (up to 779 meters Australian Height Datum [**m AHD**]), STSF (up to 702 m AHD) and the PTSF (up to 713 m AHD of unconsolidated tailings); and
- other associated activities described in PA 06_0295.

The key features of the approved operations under PA 06_0295 (as modified) together with the elements which form this proposed Modification are shown on **Figure 1.**

***Existing and Approved Processing and Separation of Tailings into Sand and Other Components***

The existing ore processing circuit involves the separation of the tailings into coarse and fine fractions via the existing coarse ore flotation cells (including the Hydrocyclones), before being recombined and pumped for emplacement within the approved TSFs.

The Hydrocyclone Sands Trial Tailings Pilot Plant approved under Modification 15[1] consists of two primary elements, namely:

- installation and operation of Hydrocyclone infrastructure; and
- construction of recovered sand embankments (known as the recovered sand demonstration embankment and previously referred to as the Hydrocyclone sands tailings test embankments).

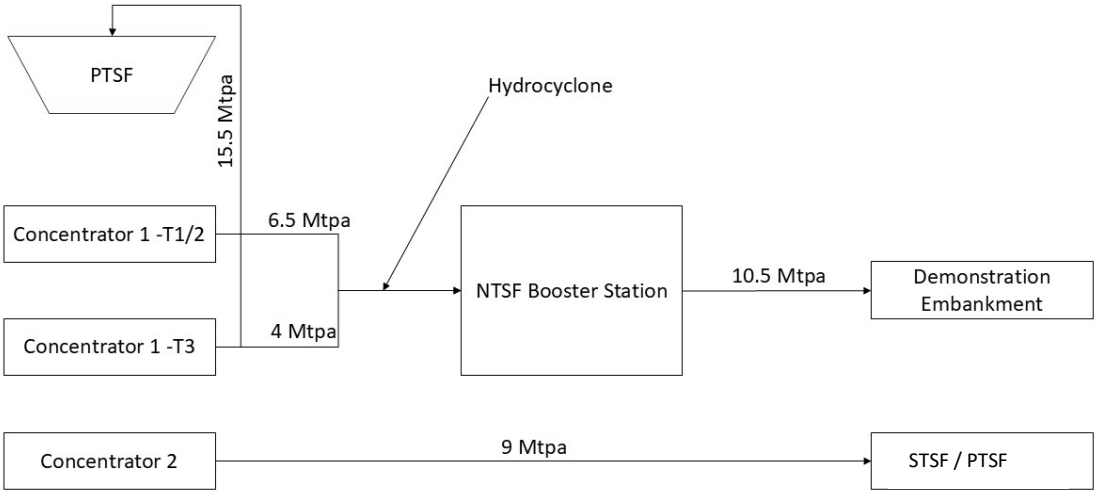
[1] Note that the relevant phases described in Schedule 2 Condition 14A of PA 06_0295 have not commenced at the time of writing.

A simplified schematic of the recovered sand production process and the overall tailings management process is shown on Flow Chart 1. Flow Chart 1 shows recovered sand is sourced from the coarse ore flotation circuit associated with Concentrator 1. This material would be passed through the hydrocyclone infrastructure to prepare it for pumping, involving dewatering and size separation. The material would then be pumped to the embankment. The remaining portion of the tailings from Concentrator 1 and the hydrocyclone (i.e. the fines) is emplaced within the Pit TSF (**PTSF**).

The supporting infrastructure includes:

- the hydrocyclone plant and facilities located at the existing ore process area (see Figure 1); and
- the installation of a dedicated recovered sand transfer pipeline and three booster pumps within the existing and approved disturbance footprint.

Tailings (i.e. fines and coarse material, including recovered sand) from Concentrator 2 is emplaced into the PTSF and / or the STSF[2].




**Flow Chart 1 - Recovered Sands Production**

[2] For clarity, the Modification would not change the approved ability for Cadia to emplace any size fraction of the tailings stream or part there of (i.e. sand, fines and/ or whole tailings) using traditional hydraulic emplacement across the entire surface of the STSF.

## 3. Proposed Modification

This proposed Modification seeks approval to reuse the hydrocyclone infrastructure established as part of the Hydrocyclone Sands Trial Tailings Pilot Plant to produce, transport and use the recovered sand to buttress the southern wall of the NTSF. The construction of the buttress would involve the following general steps:

1) Construction of a rock platform and an underdrainage system made via crushing rock sourced from the South Waste Rock Dump.
2) Formation of successive 'cells' above the under drainage system using recovered sands with a slope and drainage box to assist with dewatering.
3) Pumping of recovered sand and emplacement in cells.
4) Use of tractors to compact the recovered sand within cells.
5) Progressive rehabilitation of the completed buttress using a cover crop, followed by final rehabilitation as a part of closure of the TSFs.

The production of recovered sand for the proposed buttressing would entirely be created at the ore treatment mill and therefore is directly dependent on the mill production rate. As the mill typical operates with a consistent throughput a recovered sand production rate of approximately 29,000 tonnes per day is expected. Due to constraints associated with the cell availability for recovered sands placement within the buttress, supporting stockpiling locations are required. This excess recovered sand, that is not directly emplaced in the buttress, would be hydraulically emplaced and stockpiled on the STSF. The excess sand emplacements/stockpiles would be hydraulically placed and spread with rubber tracked/tyred equipment, as required.

The buttressing, recovered sand emplacement and stockpiling works (including tractor use), as well as construction of the sand demonstration embankment approved under Modification 15 would be undertaken 24 hours a day, seven days a week to align with the mill production and operability requirements.

All proposed recovered sand buttressing and emplacement/stockpiling activities and infrastructure would be located within Cadia's existing/approved disturbance footprint. Importantly, the proposed Modification would not change the key TSF controls in PA 06_2095, namely:

**Schedule 3, Condition 35B.**

*35B. The Applicant must comply with the following mine water management performance measures to the satisfaction of the Secretary, including:*

*(a) ensure that the capacity of the NTSF and STSF, and any relocated or newly constructed dams which receive runoff or seepage from the tailings storage facilities are designed to meet the requirements of the Australian National Committee on Large Dams' Guidelines on Tailings Dams – Planning Design and Construction, Operation and Closure (July 2019) or its latest version, and that the core embankment and foundations achieves a permeability standard of at least 1 x $10^{-9}$ m/s and 1 metre depth (or equivalent permeability performance), unless otherwise agreed by the EPA and the Secretary;*

*…*

*d) the design, construction and maintenance of tailings storage facilities (including seepage storages) and wastewater storage must maintain a minimum freeboard to accommodate a 1 in 100 year Australian Recurrence Interval (ARI), 72 hour rainfall event without discharge; and*

## 4. Strategic Context and Justification

On Friday, 9 March 2018, Cadia experienced a partial slump of the NTSF embankment that was fully contained within the adjacent STSF. Following identification of this partial slump, CHPL adopted a precautionary approach by temporarily suspending operations at Cadia and ceasing/limiting the emplacement of additional tailings in the NTSF and STSF.

CHPL has since progressively recommenced operations at Cadia through a series of modifications that have facilitated the emplacement of tailings into the PTSF, along with measured and a progressive sequence of buttressing works to the NTSF and STSF embankments using rock fill, including the application of findings from ongoing technical/engineering studies.

The strategic context of the proposed Modification continues to build on the existing process of progressive buttressing. The Modification proposes buttressing of the NTSF internal embankment using a sand product (referred to as **recovered sand**) from the tailings stream, rather than rock.

The production of recovered sand is a wet process (i.e. can be pumped and directly emplaced), and its use as a buttress material would:

- optimise the life of the TSFs;
- provide improved environmental outcomes by avoiding the use of plant to load, haul and place rock to complete buttressing of the NTSF's southern embankment; and
- not change the performance measures in PA 06_0295.

This optimised methodology is expected to result in reduced buttress construction timeframes and an overall reduction in noise, air quality impacts and greenhouse gas emissions from the buttressing activities.

In addition, excess recovered sand would be emplaced and stockpiled within the STSF as required.

Cadia is recognised as a current major operating mine in the *Future of Minerals in NSW Report* (DPIE, 2020) and as a world class deposit of copper and gold in the *NSW critical minerals and high-tech metals strategy 2024–35* (Department of Primary Industries and Regional Development, 2024) which allow for the continued support for the extraction and processing of critical and strategic minerals, including copper. The proposed Modification would support the continued production of copper, gold, silver and molybdenum products at Cadia, in alignment with Commonwealth and NSW Government strategic policy objectives and allow for significant ongoing benefits to local, regional, State and National economies.

## 5. Planning Approval Pathway

PA 06_0295 was initially granted by the NSW Minister for Planning under Part 3A of the EP&A Act on 6 January 2010 and was most recently modified on 31 January 2025. This consent provides for the consolidated regulation of all mining operations at the site to 30 June 2031 and incorporates all previously approved mining operations at Cadia Hill, Cadia East and Ridgeway, along with concentrate dewatering facilities in Blayney (the Cadia Dewatering Facility) and a wide range of associated surface operations, processing facilities, tailings storage, ancillary and supporting infrastructure.

CHPL is proposing to lodge the Modification to PA 06_0295 under section 4.55(2) of the EP&A Act and considers that the development, as proposed, would remain 'substantially the same' development as the approved operations, as last modified under Section 75W of the EP&A Act (i.e. Modification 10). Attachment 1 provides a comparison of the Approved Cadia and the Modification, which demonstrates that the Modification would remain 'substantially the same'.

The proposed Section 4.55(2) planning pathway is considered appropriate given:

- no changes are proposed with respect to the key elements of the project, including the disturbance footprint, mining methods, annual production rates, workforce numbers or product transport;
- no significant changes are proposed with respect to equipment use, intensity or location of works, relative to approved operations;
- the proposed activities are contained within the footprint limits of the existing TSFs; and
- the proposed activities are not expected to result in any material increase in offsite amenity or environmental impacts beyond those already approved for operations at Cadia whilst creating opportunity for improved environmental outcomes.

CHPL is seeking DPHI's confirmation that the proposed Modification under section 4.55(2) of the EP&A Act would be an acceptable planning pathway. Considering the 'substantially the same' development test to apply when compared to the last modification under Section 75W of the EP&A Act (i.e. Modification 10).

Since no change to the approved footprint is sought, no referral under the *Environment Protection and Biodiversity Conservation Act 1999* would be required.

## 6. Environmental Assessment Scope

The proposed Modification would not change the existing project boundary, mine life, extraction limits, mining methods nor the general surface operations/processing activities associated with the existing Cadia East Project. The proposed activities would be undertaken by the existing Cadia workforce and would not require any changes to the existing/approved disturbance footprint.

Accordingly, the proposed Modification is not expected to change any disturbance footprint related impacts including biodiversity, Aboriginal and European heritage, agriculture and land use interactions, workforce and employment numbers, or any material change to traffic and transport arrangements along with waste streams associated with the existing approved Cadia East Project.

A preliminary assessment of potential environment and community issues that may arise as a result of the proposed Modification has been undertaken based on CHPL's detailed knowledge of the existing site environment, the nature of the proposed Modification and the likelihood of changed environmental impacts relative to the approved operations. This preliminary assessment has identified the following potential environmental and community aspects which would be subject to detailed technical assessment being air quality (dust emissions), noise, landscape and visual, and geotechnical. Further discussion on these assessments is provided in Table 6.1.

**Table 6.1 - Preliminary Environmental Assessment**

| Aspect | Potential Impact | Proposed Assessment Approach |
|---|---|---|
| Air Quality and Greenhouse Gases | The proposed Modification involves minor amendments to existing tailings management/emplacement activities. The emplacement and compaction of the recovered sands is not expected to materially alter air quality impacts beyond those of the existing approved project.<br><br>As the proposed buttressing methodology is a wet process (i.e. can be pumped and directly emplaced as per existing tailings discharge operations) the proposed Modification would be expected to have a net reduction in potential air quality emissions relative to the use of waste rock material that requires excavation and handling, truck haulage, emplacement and bulldozing.<br><br>The recovered sand particles are larger than typical tailings and therefore less likely to become airborne, however, controls would continue to be implemented including the use of water sprays, application of dust suppressant (i.e. application of hydromulch and/or soil binding agents) and establishment of temporary stabilization (e.g. cover crop vegetation and / or application of soil binding agents) on areas not subject to ongoing and/or active emplacement.<br><br>The construction of the TSF rock buttress approved via Modification 15 assumed a fleet of earthmoving equipment for the loading, movement and placement of rock. Under the proposed Modification, the recovered sand is delivered hydraulically to the location by pipe (i.e. pumped) and therefore eliminates the fleet associated with the loading and movement of rock. Once the recovered sand is hydraulically placed, heavy earthmoving equipment (i.e. rubber tracked/tyred dozers) are used for spreading and compaction. Given the pumping of recovered sand was approved under Modification 15 and the elimination of the fleet associated with the loading and movement activities, the greenhouse gas emissions associated with the proposed Modification is therefore expected to decrease relative to that approved. | An air quality impact assessment (dust emissions) would be completed in consideration of the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2022) and included with the Modification Report.<br><br>The Modification Report would confirm that the Modification (alone) would not meet the threshold for which the *NSW Guide for Large Emitters* (EPA, 2025) applies (i.e. 25,000 tonnes or more of scope 1 and 2 emissions carbon dioxide equivalent ($CO_2$-e) in any financial year). |

**Table 6.1 - Preliminary Environmental Assessment**

| Aspect | Potential Impact | Proposed Assessment Approach |
|---|---|---|
| Noise | The construction of the TSF rock buttress, approved via Modification 15, assumed a fleet of earthmoving equipment for the loading, movement and placement of rock during the day and evening periods. Under the proposed Modification, the recovered sand is delivered by pipe (i.e. pumped) during the day, evening and night periods to the recovered sand buttressing and/ or stockpiling locations and therefore eliminates the fleet associated with the loading and movement of rock and the associated noise sources.<br><br>Despite the expectation that noise impacts associated with the proposed Modification would be limited (potentially lower due to the reduced number of mobile plant), further assessment is required to quantify the potential impacts and, if necessary, recommended mitigation measures for the proposed activities. | A Noise Assessment would be completed for the proposed Modification in accordance with the Noise Policy for Industry (EPA, 2017) and included with the Modification Report. |
| Water Resources | The proposed Modification involves placing recovered sand within the approved footprint and envelope of the STSF at the approved rate of production. As such no groundwater or surface water impacts are expected beyond those that have already been approved.<br><br>All construction activities would be undertaken within the existing water management arrangements and as such no impact on surface water are expected.<br><br>The proposed Modification activities would not require any material alterations to existing tailings or water management procedures. Water from the deposition of recovered sand buttressing, stockpiling and / or emplacement areas would drain to the existing decant ponds in the STSF and be returned to the Mine Water Management System for reuse within the ore processing circuit. The recovery of water under this scenario (i.e. ongoing emplacement within the PTSF and recovered sand) is more water efficient due to the lower evaporative loss rates from the smaller surface area and porosity/free draining nature of sand relative to that which has been approved (i.e. sequential radial hydraulic placement across the surface of the Northern and Southern TSFs.)<br><br>The emplacement and buttressing actions would be undertaken to maintain the minimum freeboard to accommodate a 1 in 100 year Australian Recurrence Interval, 72 hour rainfall event without discharge of the STSF. The STSF embankments would be lifted as required to maintain the required storage capacities/freeboard.<br><br>As the proposed Modification is not expected to materially change the existing final landform and surface water drainage from the TSFs, no long term changes to surface water flows are predicted. | No detailed technical assessment is proposed, however qualitative consideration of the potential impacts to water resources would be included in the Modification Report to describe how existing water performance measures would be maintained. |

**Table 6.1 - Preliminary Environmental Assessment**

| Aspect | Potential Impact | Proposed Assessment Approach |
|---|---|---|
| Landscape and Visual | The proposed Modification does not alter the existing approved footprint or height of the NTSF, but would alter the width of the embankment buttress between the NTSF and STSF (i.e. shallower slope).<br>Given the nearest public vantage points are more than 2 km away, the proposed Modification is considered unlikely to change to the maximum extent of approved visual amenity impacts offsite and has the potential to improve the optical integration of the NTSF and STSF landforms. | A technical assessment within the main text of the Modification Report including visual simulations is proposed and will be included within the Modification Report. |
| Rehabilitation | The proposed Modification would not alter the existing approved footprint or height limit of the NTSF or STSF and would not preclude the achievement of the existing approved final landform for the site which assumed that the NTSF and STSF are utilised to their full capacity.<br><br>The emplacement of material along the southern wall of the NTSF would marginally alter the final landform height of the STSF in this area (i.e. shallower angle of the recovered sand buttress) but would not preclude the achievement of appropriate design standards or drainage. The pilot plant embankment would also be incorporated into the final landform. | Updated Final Rehabilitation Plans would be included with the Modification Report. |
| Social Impacts and Opportunities | In light of new global engineering experience and the identification of an alternative approach to the buttressing of the internal NTSF embankment, the proposed Modification provides the opportunity to substantially reduce the equipment fleet and intensity of operations relative to the approved buttressing activities.<br><br>Unlike the approved buttressing activities that require a significant loading, haulage and placement fleet, the proposed Modification uses pumps for the movement (i.e. loading and haulage) of the recovered sand to the buttressing, stockpiling and emplacement areas. The material used for buttressing would then be compacted by a fleet of up to four rubber tracked/tyred plant, as needed. In addition, the stockpiled material would be spread and if needed compacted using the same rubber tracked/tyred plant With these measures in place, CHPL expects that the construction time required to complete the buttressing of the NTSF southern embankment would be reduced as compared to the rock buttress methodology.<br><br>The buttressing and emplacement stockpiling works would be undertaken within the approved operating hours (24/7) as described in PA 06_0295.<br><br>No change to the employment numbers are proposed. | Given the proposed Modification is considered to be substantially the same development as the existing approved operations, it is proposed to review and update key elements the previous assessment had undertaken for Modification 15.<br><br>The potential for amenity and other impacts on neighbouring landholders would be considered in the Modification Report.<br><br>Consultation on the Modification would include announcement in community newsletters, near neighbour meetings and involvement of the Consultative Community Committee. |

**Table 6.1 - Preliminary Environmental Assessment**

| Aspect | Potential Impact | Proposed Assessment Approach |
|---|---|---|
| Geotechnical Stability | The substitution to recovered sand (i.e. from rock) as the buttress construction material and its potential impact on the long term stability of the embankment structure and recommencing recovered sand buttressing, stockpiling and / or emplacement within the STSF are relevant considerations. | A geotechnical assessment would be undertaken to validate the stability of the new buttress material, construction approach in the long term and the buttressing, stockpiling and emplacement of recovered sand within the STSF. |
| Economics | No changes to production or employment therefore no changes to economic assessment. | No further assessment proposed. |

## 7. Proposed Timeframe

Subject to DPHI's confirmation with the proposed environmental assessment approach outlined in this letter, it is anticipated that the Modification Report would be placed on public exhibition by DPHI in quarter 1, 2026.

## 8. Consultation Proposed

CHPL will provide opportunities for community consultation as part of the extensive existing ongoing two-way engagement programs that the site has in place. For stakeholders with specific queries or requiring additional information on this proposed Modification, individual discussions with relevant Cadia team members will be made available. Key objectives of this program are to:

- identify the potentially impacted people, groups or stakeholders relevant to the Modification;
- use the most effective ways to engage with and seek feedback from relevant stakeholders;
- time consultation to align with key milestones of the environmental assessment process; and
- continue communications between CHPL and stakeholders regarding the development of Cadia.

The stakeholders relevant to the proposed Modification would include:

- Cadia community and landowners.
- Local community groups.
- Community Consultative Committee.
- Local councils (i.e. Orange City Council, Cabonne Council and Blayney Shire Council).
- Resources Regulator.
- NSW Environment Protection Authority.
- Dams Safety NSW.

## 9. Conclusion

This letter has outlined the proposed Modification to PA 06_0295 for Cadia. The identified environmental aspects will be subject to assessment as part of the Modification Report as detailed in Section 6. Mitigation measures will be developed for inclusion in the Modification Report and will address the management of any potential issues identified in the assessment process.

It would be appreciated if DPHI would confirm its satisfaction with the:

- application of section 4.55(2) as an appropriate planning pathway for the proposed Modification, provided that the Modification Report appropriately demonstrates that the proposal meets the relevant statutory tests; and
- proposed scope of environmental assessments and/or advise of any further assessment requirements that may be required in addition to the proposed assessment approach outlined above.

I trust this information provides you with the necessary content on the proposed Modification. Please do not hesitate to contact the undersigned should you require clarification or further information.

Yours sincerely,

Rodney Williams
*Specialist, Environmental Projects & Permitting*
Newmont Asia Pacific
E| Rodney.Williams1@newmont.com

## 10. References

NSW Environment Protection Authority (2017) *Noise Policy for Industry.*

NSW Environment Protection Authority (2022) *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales.*

NSW Environment Protection Authority (2025) *NSW Guide for Large Emitters – Guidance on how to prepare a greenhouse gas assessment as part of NSW environmental planning processes.*

Department of Planning, Industry and Environment (2020) *Future of Minerals in NSW – Report.*

## Attachment 1

### Table A-1 - Comparison of the Approved Cadia and the Modification

| Project Component | Approved Cadia* | Cadia Incorporating the Modification |
|---|---|---|
| Mining Methods | Cadia Hill - conventional open pit mining methods (mining now completed).<br>Ridgeway - underground sub-level and block caving with development of associated surface subsidence zone.<br>Cadia East - underground panel caving with development of associated surface subsidence zone. | No change. |
| Life of Mine Cadia East and Ridgeway Ore Production | Approximately 525 Mt of Cadia East Ore.<br>Approximately 96 Mt of Ridgeway Ore. | No change. |
| Waste Rock Management | Deposition in the North and South Waste Rock Dumps and mined-out void of the Cadia Extended open pit. Cadia East waste rock to be deposited in the South Waste Rock Dump.<br>Material for the construction of the NTSF encapsulation and STSF embankment construction to be sourced from NAF material from the site waste rock dumps. | No change. |
| Life of Mine | Mining up until approximately 2031.<br>Project Approval until 2031. | No change. |
| Tailings Management | Use of the NTSF and STSF and raising of these storages via centreline/downstream embankment lifts. Installation of additional buttressing of the STSF embankment.<br>Emplacement of tailings in the Cadia Hill open pit to its full capacity, to a (pre-consolidation) level of approximately 713 m AHD.<br>Cumulative tailings disposal volume of 674 Mt from 2013.<br>NTSF repairs to restore embankment by encapsulation of majority of the slumped section.<br>Additional material (i.e. rock buttressing) to be placed on the exterior embankments of the NTSF and STSF, such that the embankment and associated disturbance area extents include areas outside of the southern extent of ML 1481.<br>Construction of a sand embankment from recovered sand.<br>Change to working hours for TSF construction into the evening. | Recovered sand to be used as buttressing material for a portion of the NTSF southern embankment.<br><br>Emplacement and stockpiling of recovered sand not used for buttressing, within the approved STSF disturbance footprint. |

**Table A-1 - Comparison of the Approved Cadia and the Modification**

| Project Component | Approved Cadia* | Cadia Incorporating the Modification |
|---|---|---|
| Ventilation Adit | The mining complex includes several ventilation adits/shafts for ventilation of underground mining areas.<br>Decommissioning and closure of existing adit VR101 located within the Cadia Hill open pit.<br>Ventilation shaft within the current approved mine disturbance footprint to replace adit VR101. | No change. |
| Ore Processing | On-site processing of up to 32 Mtpa of gold/copper ore. Increasing the on-site ore processing to 35 Mtpa is subject to Condition 6A of Schedule 2.<br><br>Refinement to the process of recovering sand by maintaining the separation of the coarse and fine tailings fractions. The coarse tailings portion (recovered sand) would be dewatered using hydrocyclones. | No change. |
| Concentrate Transport and Dewatering | Gold/copper concentrate is transported from the ore processing facilities via a concentrate pipeline to the Blayney Dewatering Facility (now decommissioned and the Modification proposes to remove all conditions associated with the decommissioned Blayney Dewatering Facility).<br>The Cadia Dewatering Facility to the east of Blayney and the subsequent decommissioning of the existing Blayney Dewatering Facility (now complete).<br>Concentrate pipeline from Cadia to the Cadia Dewatering Facility.<br>Transport of dewatered mineral concentrate by rail to the eastern seaboard.<br>Changes to the operation of the Cadia Dewatering Facility to allow train arrivals and departure during evening and night-time hours. This would not result in any change to the total number of train movements generated by Cadia. | No change. |
| Process Consumables | Use of various chemicals and reagents typically used in gold/copper mining and processing.<br>Sodium Hydrosulphide (NaHS) Solutioning Plant (located adjacent to the Molybdenum Recovery Plant) to produce NaHS on-site to meet Cadia's operational requirements.<br>Upgrades to the PAX facility. | No change. |

**Table A-1 - Comparison of the Approved Cadia and the Modification**

| Project Component | Approved Cadia* | Cadia Incorporating the Modification |
|---|---|---|
| Water Supply and Management | Water supply sourced from the Cadiangullong Dam, Flyers Creek Weir, Cadia Creek Weir, Orange Sewage Treatment Plant treated effluent, Blayney Sewage Treatment Plant treated effluent, on-site groundwater bores, Belubula River, Cadia Extended open pit and site runoff.<br>Additional pipeline/pumping systems and raising of the Upper Rodds Creek Water Holding Dam.<br>Contingent transfer of supernatant tailings water from STSF and NTSF to Cadia Hill open pit for water management.<br>Internal tailings return water pipeline and pumping systems from Cadia Hill open pit.<br>Further realignment of a portion of the Belubula River pipeline. | No change. |
| Power Demand and Supply | Peak demand to 194 megawatts (MW) (using existing power supply infrastructure).<br>132 kV electrical substation.<br>Expansion of the existing 132 kV electrical substation | No change. |
| Employment | An average of approximately 1,090 to 1,140 employees with an additional construction/development workforce of up to approximately 970 personnel. Intermittent shutdown periods require a nominal workforce of approximately<br>300 – 700 additional personnel during these periods. | No change. |
| Final Landform | Includes South Waste Rock Dump, North Waste Rock Dump, NTSF, STSF, Cadia East Subsidence Zone, Ridgeway Subsidence Zone, Cadia Hill open pit, Cadia Extended open pit, Cadiangullong Dam, Upper Rodds Creek Water Holding Dam and other water management infrastructure.<br>The final landform of Cadia Hill pit would be a pit lake (i.e. a wet cover).<br>No intersection between the Cadia East Underground Mine subsidence zone and Cadia Hill open pit in the long term and, therefore, two separate final void waterbodies (smaller in extent compared with the approved subsidence zone) (as described in Modification 13). | Buttressing the southern embankment of the NTSF changing the location of the embankment toe (i.e. footprint).<br><br>Integrate the approved sand embankment with the proposed sand buttress at the southern embankment of the NTSF, the integrated buttress to form a permanent feature of the final landform. |

* PA 06_0295 for the Cadia East Underground Mine, as modified by section 75W Modifications numbered 1 to 10, section 4.55(1A) Modification numbers 11 to 13 and section 4.55(2) Modification numbers 14 and 15. Consistent with Clause 3BA of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, the consent authority is required to satisfy itself that any consent as modified would result in the Cadia East Underground Mine remaining substantially the same development as was last modified under section 75W (i.e. Modification 10), inclusive of consideration of the changes arising from the previously approved modifications (i.e. Modifications 11 to 15).