

ATTACHMENT 2 – DESCRIPTION OF THE PROPOSED ACTION

The Cadia Continued Operations Project (CCOP) includes:

- Continuation of existing operations beyond 2031 for a period of approximately 25 years from the date of approval of the CCOP (nominally to 2050).
- A lateral and vertical extension to the existing and approved Southern Tailings Storage Facility (STSF) known as STSFX to provide additional storage capacity for the tailings to be generated by the continued processing of the identified reserves of Cadia East and Ridgeway.
- Continuation of underground mining within the approved Cadia East Underground Mine (Cadia East) area plus an extension to these underground mining areas and a refinement of the predicted subsidence zone due to the increased mining footprint.
- Continuation of underground mining within the already approved Ridgeway Underground Mine (Ridgeway) area with an extension to underground mining known as Lift 2. This is not expected to result in a change to the predicted subsidence zone as defined in the Modification Report for Modification 15 of the NSW Cadia East Project Approval. Relevant documentation for Modification 15 can be accessed via the following link: [MOD 15 - Various including tailings dam embankment upgrade | Planning Portal - Department of Planning and Environment \(nsw.gov.au\)](#)
- Realignment of a portion of Panuara Road and a portion of Cadia Road and associated infrastructure.
- Additional infrastructure and changes to site infrastructure and facilities for ongoing mining operations which will include:
 - associated supporting ancillary activities and infrastructure for the proposed STSFX (e.g. internal roads, pipelines, communications, water management infrastructure, monitoring locations/stations etc).
 - other activities ancillary to underground mining including ventilation upcast and downcast shafts and fans, service and distribution boreholes, dewatering and potable water bores, power supply infrastructure such as power lines, substations and switch yards, access roads and other minor infrastructure within the project area
 - surface infrastructure including office, amenities and support services for the construction of the STFSX
 - surface water and mine water management infrastructure including diversion drains, reclaim ponds and associated infrastructure
 - piped services and storage tanks such as those utilised for potable water supply, mine waste water removal, process water supply, diesel storage etc
 - communication and monitoring services
 - changes to public roads.

Planning and design of these components of the CCOP is ongoing, with an overview of each provided in the following sections. Figure 3 in Attachment 1 also provides an overview of the key components of CCOP.

The CCOP also includes all ongoing and approved activities at Cadia including the Cadia Dewatering Facility located near Blayney and the Cadia Concentrate and Return Water Pipeline which connects Cadia to the Dewatering Facility to the east. No changes are proposed to the Dewatering Facility.

Table 1 provides an overview of the CCOP.

Table 1 Overview of Proposed CCOP

Project Component	Cadia Continued Operations Project (CCOP)
Ore Production	Cadia East: Approximately 1150 Mt in total Ridgeway: Approximately 156 Mt in total
Mine Life	25 years life (from date of approval – nominally until 2050)
Mining Methods	Mining methods consistent with existing operations: Cadia East – underground panel caving with development of associated surface subsidence zone. Ridgeway – underground sub-level and block caving with development of associated surface subsidence zone.
Mining Area	Cadia East All existing mining areas plus continuation of the mining areas laterally and deeper than identified for the original Cadia East development. Ridgeway All existing mining areas plus a second lift (Lift 2 production) to deepen the deepest extraction level of the mine by up to 300m.
Subsidence	Cadia East Updated subsidence predictions which indicate a change to the footprint of the subsidence zone. Ridgeway No changes to the subsidence zone is expected relative to those defined in Modification 15 of the NSW Cadia East Project Approval. Updated subsidence predictions for Ridgeway Mine are being undertaken and will be incorporated into the EIS.
Mine Ventilation	Changes to the locations of ventilation adits/shafts are likely to be needed to allow for the extended mining operations of the CCOP. Mine design work is ongoing to confirm ventilation needs and will be further defined in the EIS.
Waste Rock Management & Sourcing of Rock for STSFX Construction	Ongoing use of the existing rock dumps for the life of CCOP with changes to accommodate the site waste rock balance, and potential relocation of areas of the existing rock dump to account for predicted subsidence impacts. It is intended that material for the construction of STSFX and future capping and rehabilitation would be sourced from the footprint of the proposed STSFX, non-acid forming waste rock material from existing waste rock dumps and other locations within areas of disturbance in the CCOP Project Area. Investigations are ongoing into the sourcing of this material and will be further detailed in the EIS. Excavated rock from the STSFX footprint would be stockpiled to provide a supply of rock for future embankments, external drainage layers and future capping and rehabilitation of the TSFs.
Ore Processing	Processing of up to 35 Mtpa of ore (consistent with current operations). Minor processing amendments associated with management and distribution of tailings, process water and runoff ponds, and other minor process plant and infrastructure modifications.

Project Component	Cadia Continued Operations Project (CCOP)
Process Consumables	<p>Consistent with current operations.</p> <p>Construction and operation of a Sodium Hydrosulphide Solutioning Plant (located adjacent to the Molybdenum Recovery Plant) to produce sodium hydrosulphide on-site to meet Cadia's operational requirements. All other consumables to be delivered to the site for storage and use.</p>
Concentrate Dewatering and Transport	<p>Gold/copper concentrate is transported from the ore processing facilities via a concentrate pipeline to the Cadia Dewatering Facility. Water is returned to Cadia for inclusion in the consolidated water management system of the mine. Dewatered gold/copper mineral concentrate is transported by rail to market or ports for export. Molybdenum concentrate is dewatered within the Molybdenum Recovery Plant (located at Cadia). Dewatered molybdenum is transported from site by truck to market.</p>
Tailings Management	<p>Existing tailings management systems and disposal strategies would continue to be used, particularly during the early stages of the CCOP.</p> <p>Construction and operation of an extension to the STSF (STSFX) and associated tailings delivery infrastructure would also be developed. Coarse sands would be used in the construction of the STSFX wall in a method of embankment construction known as hydrocyclone sands.</p> <p>Storage/stockpiling of HydroFloat Tailings and/or coarse sand tailings within existing TSF areas.</p> <p>Construction, operation and maintenance of downstream drainage and water return infrastructure for STSFX, including a minor realignment of a section of Cadiangullong Creek.</p> <p>Revision to proposed final levels for all Tailings Storage Facilities.</p> <p>Construction and operation of haul roads, access roads and supporting infrastructure.</p> <p>Stockpiling of recovered topsoil and materials from within the footprint of the STSFX.</p> <p>The emplacement of coarse tailings on the NTSF and PTSF surface. This material will be used to establish a final landform profile which is consistent with the stated rehabilitation objectives.</p>
Water Supply and Management	<p>Ongoing use of the existing water management system.</p> <p>Construction and operation of existing and proposed water management infrastructure and transfer systems for improved water security.</p> <p>Realignment of a section of the Cadia Concentrate and Return Water Pipeline adjacent to Cadia Road to align with the proposed realignment of Cadia Road and required due to potential subsidence surface expression impacts.</p>
Power supply	<p>Additional transmission and distribution infrastructure relating to additional infrastructure (e.g. to support pumping infrastructure and potential future electrification of fleet as part of Cadia's decarbonisation pathway).</p>
Site Access and Roads	<p>Ridgeway Road access point will remain the main site access for Cadia with alternative access via the Molybdenum Plant Access Road, as required.</p> <p>New access and maintenance roads off Cadia Road and Panuara Road to access STFSX operational areas.</p>

Project Component	Cadia Continued Operations Project (CCOP)
	<p>Realignment of a section of Panuara Road required to allow for construction of STSFX.</p> <p>Realignment of a section of Cadia Road and the Cadia Rd/Woodville Rd intersection required due to potential subsidence surface expression impacts.</p>
Hours of Operation	<p>Mine complex operations; dewatering facilities – 24 hours, 7 days per week</p> <p>Cadia Dewatering Facility – train loading and concentrate dewatering – daytime, 7 days per week.</p> <p>Cadia Dewatering Facility – train arrival and departure 24 hours, 7 days per week.</p> <p>Construction hours for tailings operations will be consistent with current operations with 24/7 deposition of tailings including associated operational equipment and daytime, 7 days per week for bulk earthworks activities.</p>
Workforce	<p>Ongoing employment for an additional 25 years for the existing workforce for a workforce of approximately 2100 FTE personnel and up to 700 additional personnel during occasional maintenance shutdown periods. No anticipated change to existing workforce numbers beyond those proposed in Mod 15.</p>
Final Landform/Rehabilitation	<p>Overall approach to rehabilitation and final landform is proposed to be consistent with that of the approved operations.</p> <p>Extension to the footprint of the combined TSF complex to accommodate processing of ore with the final landform to be left safe, stable, non-polluting and maximise the potential final land use/reuse options.</p> <p>Additional subsidence associated with Cadia East will result in modifications to the landform which will require rehabilitation, with the subsidence void planned to remain as final void waterbodies. CCOP Project Area will include storage locations for all stockpiles of topsoil and subsoil and excavated materials to be re-used for closure and rehabilitation.</p>