

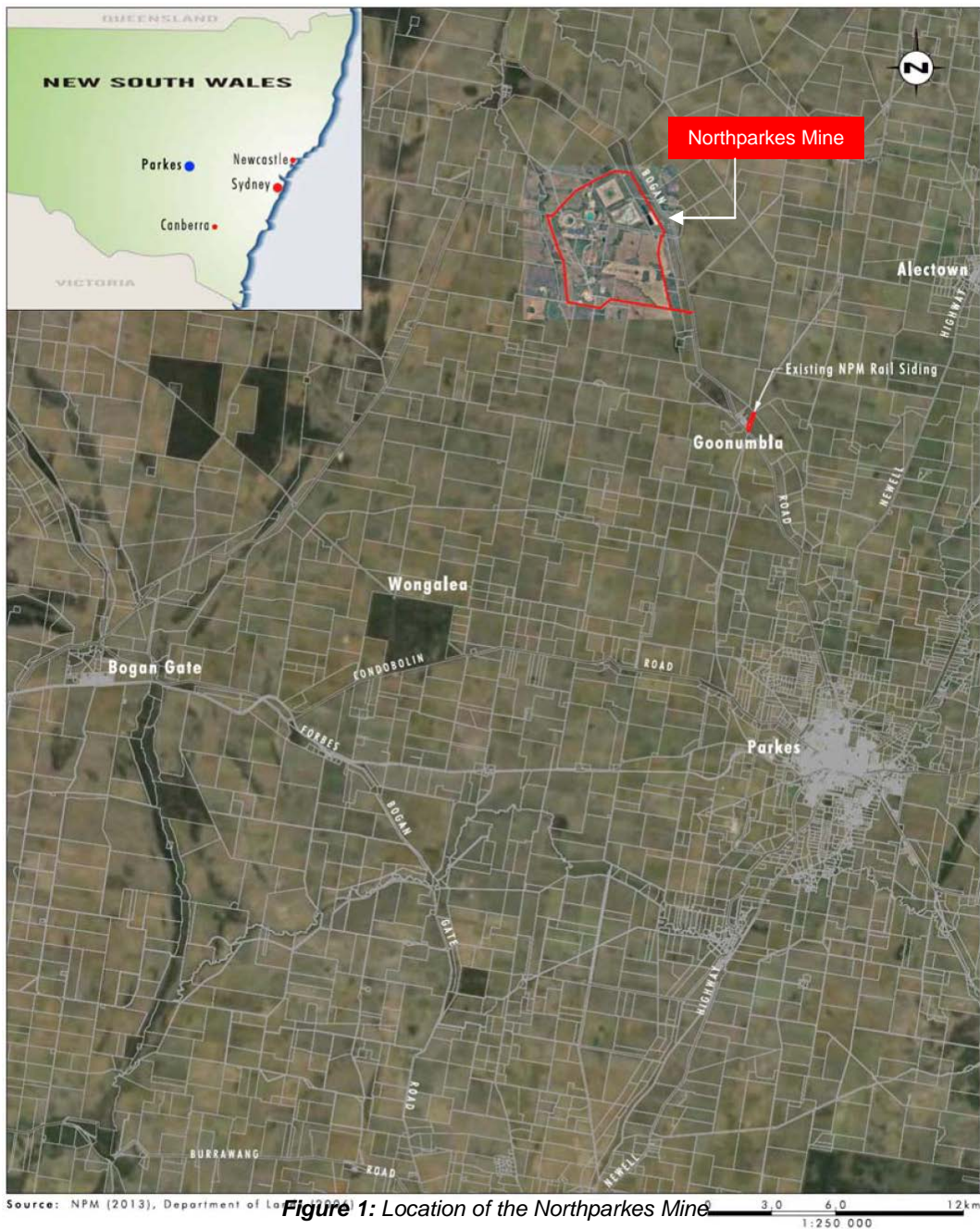
ASSESSMENT REPORT

Northparkes Mine Modification

Sub-Level Caving Mining Method (11_0060 MOD 1)

1 BACKGROUND

The Northparkes Mine is a copper-gold mine located approximately 27 kilometres (km) northwest of Parkes in the Parkes Shire local government area (see Figure 1). The mine is owned and operated by CMOC Mining Pty Ltd (CMOC), a joint venture between CMOC Mining Services (80%) and Sumitomo (20%).



Northparkes Mine has been operating since 1993, and is comprised of open cut and underground block cave mining operations. The mine currently operates under an approval granted under delegation from the Minister for Planning and Environment on 16 July 2014 (11_0060). This approval, known as the Northparkes Extension Project, allows for the continuation and expansion of mining activities including:

- extraction of ore by block cave and open cut mining techniques until the end of December 2032;
- processing up to 8.5 million tonnes per annum of ore to produce copper concentrate;
- operation of a range of ancillary infrastructure including water supply and management infrastructure, tailings storage facilities and mine access roads; and
- transportation of copper concentrate to the Goonumbla rail siding by road, and onward rail to Port Kembla for export.

As a part of the approval, CMOC is permitted to mine the E48 and E26 ore bodies through a combination of open cut and block cave mining methods (see project layout in Figure 2). However, the block cave in the E26 area has failed to recover a significant portion of the resource due to cave propagation issues. Consequently, CMOC is unable to access the entirety of the E26 ore reserve through the approved mining methods.

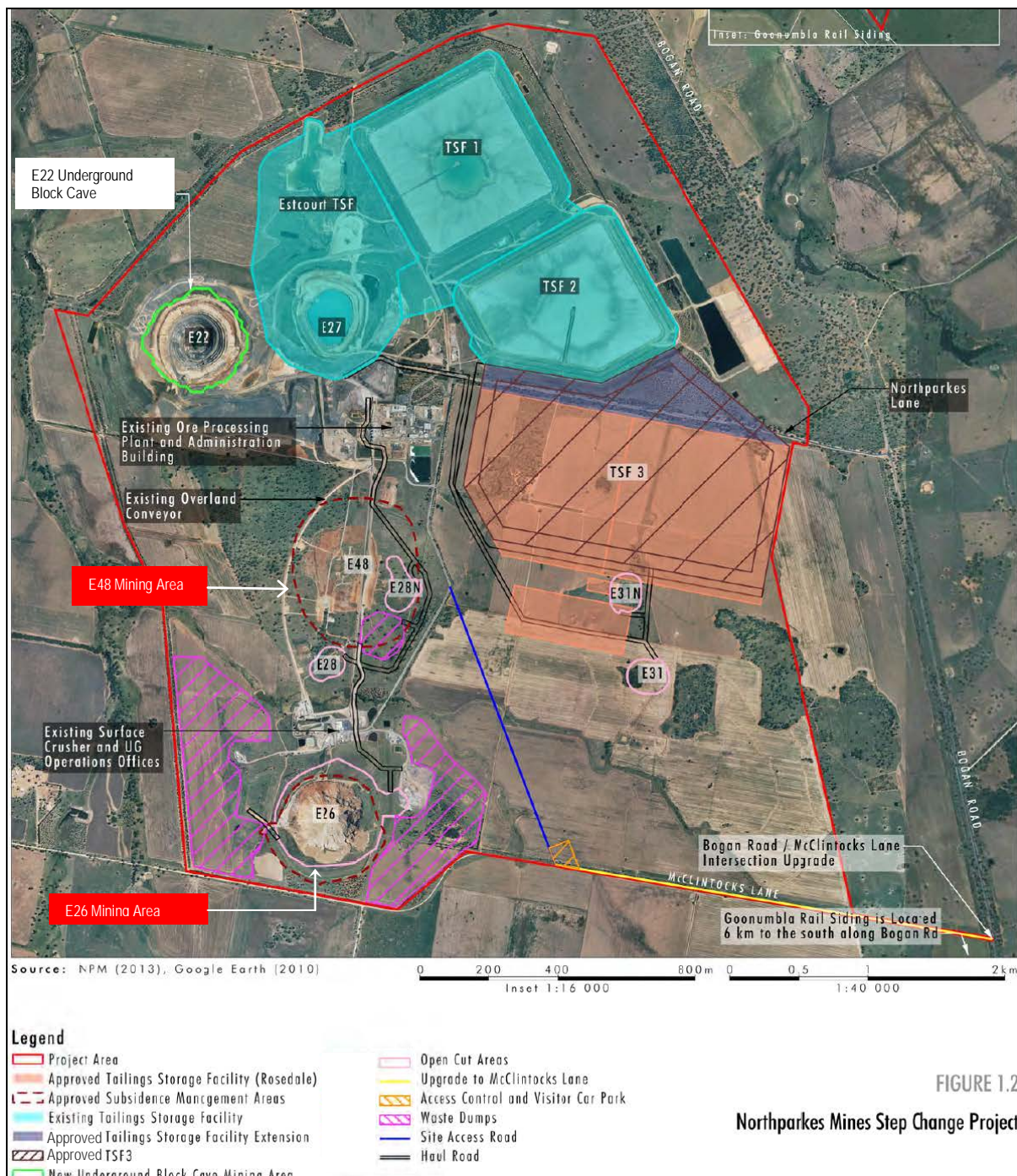


FIGURE 1.2

Northparkes Mines Step Change Project

2 PROPOSED MODIFICATION

CMOC is seeking to modify its project approval to allow sub-level caving to extract ore resources from the E26 and E48 mining areas. CMOC has identified that sub-level caving would be the most effective way to recover ore reserves that failed to cave through block caving mining in the E26 area.

An overview of mining operations in the E26 area is shown in Figure 3, including the un-caved reserves which would be mined using sub-level caving (shown in blue).

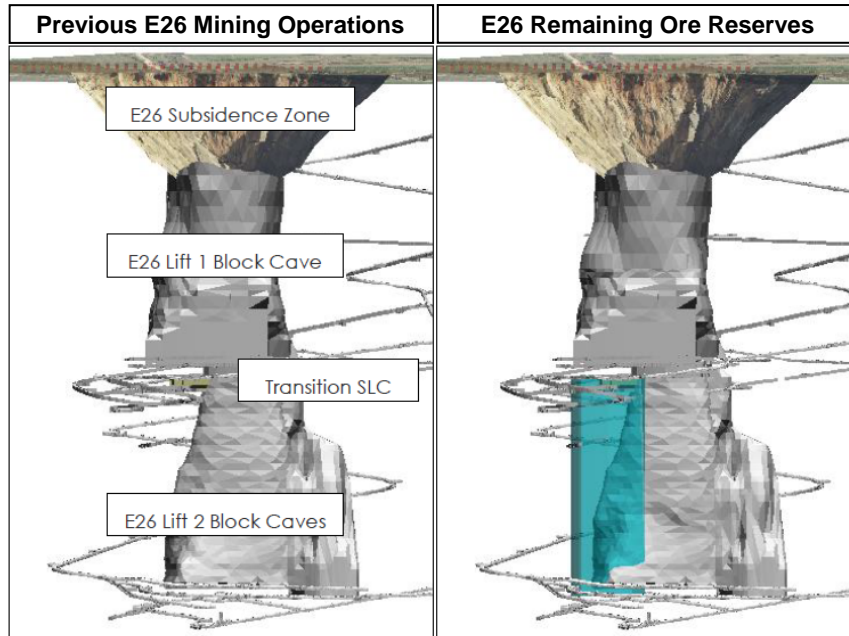


Figure 3: Overview of E26 Mining Operations

CMOC is also seeking approval to carry out sub-level caving in the E48 area in the event that they encounter similar caving difficulties, or if sub-level caving is identified as a more efficient mining method in the future. The proposed modification is described in detail in the Environmental Assessment (EA) submitted in support of application (see Appendix B).

The proposed sub-level caving would not be dissimilar to the approved block cave mining method. Both methods rely on undercutting and the gradual failure of overlying rock due to gravity and stress. In both methods the undercut level (or top level) is retreat drilled and blasted using conventional techniques (see Figure 4). The blasted material is loaded from the undercut level and forms the initial resource production from the mine. Rock above the undercut level progressively fails due to gravity and stress.

In a block cave, the second level is developed as the primary extraction level where the resource is funnelled to long term draw points. In sub level caving, the second and subsequent levels are developed in the same way as the undercut level, which is again retreat drilled and blasted.

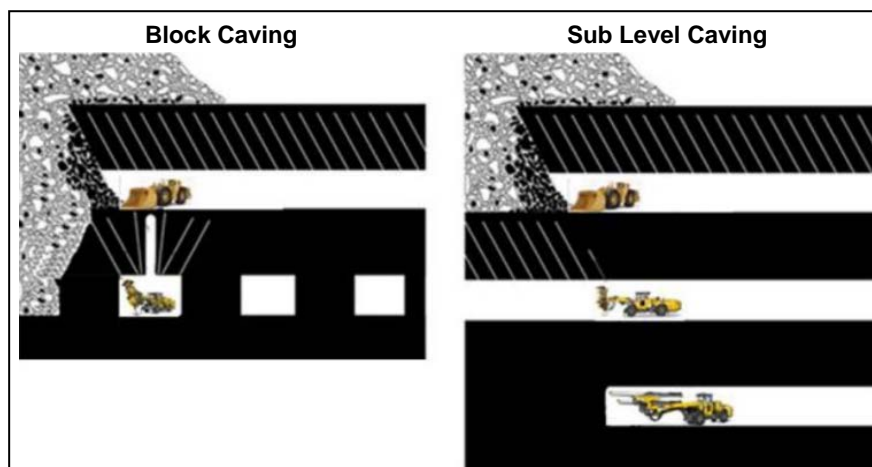


Figure 4: Indicative comparison between Block Caving and Sub-Level Caving

3 STATUTORY CONTEXT

3.1 Section 75W Modification

The Northparkes Mine was originally approved under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Although Part 3A was repealed on 1 October 2011, the project remains a 'transitional Part 3A project' under Schedule 6A of the EP&A Act, and hence any modification to this approval must be made under the former Section 75W of the Act.

Based on its assessment, the Department is satisfied that the application can be characterised as a modification to the existing approval (rather than a new project in its own right) as the proposal would:

- not alter the approved mining or subsidence footprint;
- not alter maximum production rates;
- not alter the transportation methods; or
- not significantly increase the environmental impacts of the project.

3.2 Approval Authority

The Minister for Planning was the approval authority for the original project application, and is therefore the approval authority for this modification application. However, under the Minister's delegation dated 16 February 2015, the Director, Resources Assessments, may determine the application. This is because no public submissions in the form of objections were received on the proposal, no reportable political donations were made and Northparkes Shire Council (Council) raised no objections to the proposal.

4 CONSULTATION

Under Section 75X of the EP&A Act, the Secretary is required to make the modification application publically available. In accordance with this provision, the Department placed the application and accompanying information (see Appendix B) on its website. The Department also consulted with Council and the Division of Resources and Energy (DRE). However, neither Council nor DRE raised any concerns about the proposed modification. There were no public submissions on the proposed modification.

5 ASSESSMENT

In assessing the merits of the proposal, the Department has considered:

- the modification application;
- the EA and conditions of approval for the original project;
- relevant environmental planning instruments, policies and guidelines; and
- the requirements of the EP&A Act.

The Department considers that the proposed modification would be unlikely to result in any significant impacts beyond those already assessed and approved with regard to the block cave mining method.

Although sub-level caving involves significantly more development than block caving (through the construction of additional undercut levels), it still relies on the same undercutting and caving techniques. Consequently, the impacts associated with both methods are ultimately the same.

Therefore, the modification application would be unlikely to result in any additional subsidence and surface disturbance. The modification would also be unlikely to result in any additional impacts to water resources or public safety.

The Department notes that the conditions of approval require CMOC to comply with a range of rehabilitation objectives including minimising the size and depth of subsidence zones and the drainage catchment of the subsidence zones as far as are reasonable and feasible. The conditions also require the development of a rehabilitation management plan to manage potential subsidence impacts.

The Department is satisfied that these conditions are adequate for managing and mitigating possible impacts that might arise from the proposed modification and that no amendments or additional conditions are necessary.

6 RECOMMENDED CONDITIONS

The Department has drafted a recommended notice of modification (see Appendix A). These conditions would allow CMOC to carry out sub-level caving and panel and block caving in mining areas E26 and E48, in accordance with the information provided in the modification application.

7 CONCLUSION

The Department has assessed the modification application and supporting information in accordance with the relevant requirements of the EP&A Act.

The Department believes it is in the public interest to allow sub-level caving as it would allow access to a resource approved for extraction, which would otherwise be sterilised. The Department is satisfied that the proposed modification would not result in any significant environmental impacts beyond those approved under the Northparkes Extension Project. Consequently, the Department believes the modification should be approved, subject to exiting conditions.

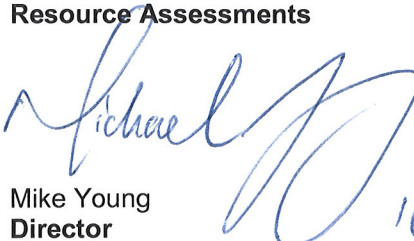
8 RECOMMENDATION

It is RECOMMENDED that the Director, Resources Assessments, as delegate of the Minister:

- **considers** the findings and recommendations of this report;
- **determines** that the modification is within the scope of section 75W of the EP&A Act;
- **approves** the application under section 75W, subject to conditions; and
- **signs** the notice of modification (**Appendix A**).

 16/6/15

Matthew Riley
Planning Officer
Resource Assessments

 16.6.15.

Mike Young
Director
Resource Assessments

APPENDIX A: NOTICE OF MODIFICATION

APPENDIX B: ENVIRONMENTAL ASSESSMENT