



MANDELA MINING PRECINCT
MINDS FOR MINES



Cnr Carlow & Rustenburg roads
PO Box 91230, Auckland Park, 2006



+27 11 358 0003



enquiries@mandelaminingprecinct.org.za

MEMO

TECHNICAL SUMMARY REPORT: MMS21WP3 MS8

Programme	MMS	Work Package Name			WP3 – Autonomous mining capabilities in SA	
Milestones #	MMS20WP3-8	Milestone Name	Final Report			
Service Provider	UP	Research Lead			Dr Abrie J Oberholster	
Start Date	10/2020	End Date	03/2021	Funding Source	DSI	
Aims and objectives of the study						
The aim of the study is to determine most promising autonomous mining equipment and systems suitable for implementation in the NRHR mining environment in SA						
Methodology			Key Findings			
Consisting of eight milestones, selection criteria for autonomous NRHR mining were established. A comprehensive survey was launched into autonomous equipment and systems, both locally and internationally, across all commodities. The selection criteria were then used to identify potential autonomous NRHR mining equipment and systems. An options and technology alignment analysis were conducted, which was used in the evaluation model. After establishing an evaluation model, a list of the most promising autonomous NRHR mining equipment and systems are presented			Poor response from manufacturers to the survey questions resulted in limited data received which restricted the effective demonstration of the evaluation model.			
Key Recommendations and Conclusions			Next Steps			
A framework was created in this work package to obtain information from OEMs to evaluate and compare various solutions. Although the evaluation model could not be demonstrated on representative data, it remains a powerful tool and should be applied when sufficient data becomes available.			The evaluation model is to be demonstrated in the 2021/22 WP4 work.			
Category (RDI)	Research					

Attachments

Milestone report:

[MMP REP 2020 MMS20WP3MS8 \[18-06-2021\] A.pdf](#)

Figures:

[Figure 1-Criteria grouping.png](#)

[Figure 2- RFI layout.png](#)

[Figure 3-Example Weight assignment to individual requirements and outcomes.png](#)

