

**CLOSURE AND FINANCIAL PROVISION ASSESSMENT**  
**MOOIPLAATS SOUTH COLLIERY - OPTION 2- MP30/5/1/2/2/68MR**

Date

2018/08/15

**Project Details:**

Project Risk Class: A  
Project Area Sensitivity: Medium  
Weighting Factor 1: 1  
Weighting Factor 2: 1.05

No	Sub-Task	Unit	A. Quantity	B. Master Rate	C. Multiplication factor	D. Weighting Factor 1	E. = A*B*C*D
1	Dismantling of processing plant and related structures (including overland conveyors and power lines).	m3	0	R 14.46	1.00	1.00	R 0.00
2A	Demolition of steel buildings and structures.	m2	200	R 201.43	1.00	1.00	R 40 285.35
2B	Demolition of reinforced concrete buildings and structures.	m2	0	R 296.84	1.00	1.00	R 0.00
3	Rehabilitation of access roads.	m2	8000	R 36.04	1.00	1.00	R 288 358.32
4A	Demolition and rehabilitation of electrified railway lines.	m	0	R 349.85	1.00	1.00	R 0.00
4B	Demolition and rehabilitation of non-electrified railway lines .	m	0	R 190.83	1.00	1.00	R 0.00
5	Demolition of housing and facilities.	m2	0	R 402.85	1.00	1.00	R 0.00
6	Opencast rehabilitation including final voids and ramps .	ha	0	R 205 031.25	0.52	1.00	R 0.00
7	Sealing of shafts, adits and inclines.	m3	4400	R 108.13	1.00	1.00	R 475 791.23
8A	Rehabilitation of overburden and spoils.	ha	0	R 140 786.71	1.00	1.00	R 0.00
8B	Rehabilitation of processing waste deposits and evaporation ponds (basic, salt-producing waste).	ha	0	R 175 347.30	1.00	1.00	R 0.00
8C	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich waste).	ha	0	R 509 291.68	0.80	1.00	R 0.00
9	Rehabilitation of subsided areas .	ha	0	R 117 887.67	1.00	1.00	R 0.00
10	General surface rehabilitation, including grassing of all denuded areas.	ha	1.60	R 111 526.82	1.00	1.00	R 178 442.91
11	River diversions .	ha	0	R 111 526.82	1.00	1.00	R 0.00
12	Fencing.	m	444	R 127.22	1.00	1.00	R 56 484.31
13	Water management (Separating clean and dirty water, managing polluted water and managing the impact on groundwater, including treatment, when required).	ha	1.60	R 42 405.64	0.67	1.00	R 45 458.84
14	2 to 3 years of aftercare and maintenance	ha	1.60	R 14 841.97	R 1.00	1.00	R 23 747.16
<b>SUB-TOTAL</b>							<b>R 1 108 568.12</b>
<b>SUB-TOTAL 1 (Planned Closure)</b>				<b>Weighting Factor 2 (Step 4.4)</b>		<b>1.05</b>	<b>R 1 163 996.53</b>
<b>Time, Fee and Contingencies</b>							
1	Preliminary and general		12% of Sub-total 1 if <R100 000 000	R			139 679.58
1A	Management and administration		Add 6% of Sub-total 1	R			69 839.79
1B	Administration and supervision		Add 2% of Sub-total 1	R			23 279.93
1C	Engineering Drawings and specifications		Add 2.5% of Sub-total 1	R			29 099.91
1D	Specialist inputs		Add 1.25% of Sub-total 1	R			14 549.96
1E	Closure plan		Add 1.25% of Sub-total 1	R			14 549.96
1F	Final groundwater modelling		Add 1.25% of Sub-total 1	R			14 549.96
<b>SUB-TOTAL 2</b>							<b>R 1 454 995.66</b>
2	<b>Contingencies</b>		Add 10% of Sub-total 1	R			116 399.65
<b>SUB-TOTAL 3</b>							<b>R 1 571 395.31</b>
<b>VAT</b>				at 15% of Sub-total 3	R		235 709.30
<b>GRAND TOTAL</b>							<b>R 1 807 104.61</b>

**Notes:**

- This financial provision is based on the items and units provided in the quantum of financial provision calculations submitted with the 2009 Section 102 Application.
- DMR Master Rates have been updated to reflect April 2018 escalation.
- This calculation is based on the project Option 2 (mining through the geological intrusion that exists between the Mooiplaats North reserves and Mooiplaats South reserves) as presented in the EIA supporting the Section 102.
- Surface infrastructure is limited to: Two additional vent shafts, one off each of the main drives. Each vent shaft is assumed to be supplied with power via local on-site diesel generators, and surrounded by a security fence. It is assumed that a short access road will be constructed to each vent shaft from a local road (assume a maximum of 500m long and 8m wide).
- Based on the findings of the Specialist undermining report (Appendix L) included in the S102 EIA it is understood that "The calculated pillar life is so great that it can be said that the pillars will never collapse". No provision has therefore been made for rehabilitation of subsided areas.
- It is assumed that Mooiplaats South is a LIFEX project and therefore there is no requirement for capacity and footprint expansions at Mooiplaats North. I.e. the financial provisions for Mooiplaats North account for the rehabilitation and decommissioning of the ROM, processing, and waste areas. It is assumed that the current design capacities for the discard dump consider the Mooiplaats south project and that further footprint expansion is not required.
- It is assumed that all underground access and infrastructure required for the Mooiplaats South areas will be provided through the existing Mooiplaats North workings (i.e. no additional surface infrastructure for power, water supply, etc).
- Based on the Section 102 EIA, "with mitigation there will be no decant of groundwater from the study area and thus no impact in the long term on surface waters".