

APPENDIX O: FINANCIAL PROVISION

BASIS OF ESTIMATE

FOR

MARULA PLATINUM

EMPr AMENDMENT



DRAFT

REPORT NO: 00374

19 NOVEMBER 2021

DOCUMENT CONTROL

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Joani Taljaard <i>Quantity Surveyor</i>	<p>Joani Taljaard graduated with a B.Sc Quantity Surveying (Hons) (Cum Laude) in 2015 from the University of Pretoria. She was a student Quantity Surveyor at Matla Quantity Surveyors (Pretoria) from 2014 to 2015, a junior Quantity Surveyor at Tronkon Construction (Potchefstroom) from 2016 to 2018 and a Candidate Quantity Surveyor at QS Africa Construction Consultants (Klerksdorp) from 2018 to 2021 where she managed the Potchefstroom office. She worked on a wide range of projects, including commercial developments, residential dwellings, health facilities, educational facilities, and insurance claims. She was employed by E-TEK Consulting in 2021 where she focusses on the calculation of closure liability estimates for scheduled and unscheduled closures, as well as the annual updating of the liability estimates.</p>

NAME	EXPERIENCE / PROFESSIONAL REGISTRATION
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TERMS AND ABBREVIATIONS

Table 1: List of Terms and Abbreviations used

TERMS AND ABBREVIATIONS	DESCRIPTION
ASAQS	Association of South African Quantity Surveyors
BoQ	Bill of Quantities
Care and maintenance	This involves the maintaining and corrective action as required as well as conducting the required inspection and monitoring to demonstrate achievement of success of the implemented measures
Closure	This involves the application for closure certificate and initiation of transfer of on-going care and maintenance to third parties
Contingencies	This allows for making reasonable allowance for possible oversights/omissions and possible work not foreseen at the time of compilation of the closure costs. An allowance of between 10 percent and 20 percent would usually be made based on the accuracy of the estimations. The South African Department of Minerals and Energy Guideline (January 2005) requires an allowance of 10 percent
Decommissioning	This relates to the situation after cessation of operations involving the deconstruction/removal and/or transfer of surface infrastructure and the initiation of general site reclamation
DMRE	Department of Mineral Resources and Energy
E-TEK	E-TEK Consulting
EMPr	Environmental Management Programme
FRD	Fine Residue Dump
GA Drawing	General Arrangement Drawing
GNR	Government Notice Regulation
Marula	Marula Platinum Limited
Life of Mine Closure	Closure that happens at the planned date and/or time horizon. Previously referred to as Scheduled Closure
LaRSSA	Land Rehabilitation Society of Southern Africa
MPRDA	Minerals Petroleum Resources Development Act (No. 28 of 2008)
NEMA	National Environmental Management Act (No. 107 of 1998)
Post-closure	The period after mine closure
Preliminary and Generals (P&Gs)	This is a key cost item which is directly related to whether or not third-party contractors have applied for site reclamation. This cost item comprises both fixed and time-related charges. The former makes allowance for establishment (and dis-establishment) of contractors on-site, as well as covering their operational requirements for their offices

	(electricity /water /communications), latrines, etc. Time-related items make allowance for the running costs of the fixed charge items for the contract period
Premature Closure	The immediate closure of a site, representing decommissioning and reclamation of the site in its present state. Previously referred to as Unscheduled Closure
Reclamation	The reinstatement of a disturbed area into a usable state (not necessarily its pre-mining state) as defined by broad land use and related performance objectives
Rehabilitation	The return of a disturbed area to its original state, or as close as possible to this state
Remediation	To assist in the reclamation process by enhancing the quality of an area through specific actions to improve especially bio-physical site conditions
Site relinquishment	Receipt of closure certificate and handover to third parties for on-going care and maintenance, if required
SLR	SLR Consulting (Africa) (Pty) Ltd
VAT	Value-added tax
ZAR	South African Rands

1. INTRODUCTION AND SUMMARY

1.1. INTRODUCTION

E-TEK Consulting (Pty) Ltd (E-TEK) was requested by Marula Platinum (Pty) Ltd (Marula) to assist with the determination of the financial provision for the proposed Ventilation Shaft 8 & 9 at the Marula Platinum Mine, Rustenburg Operation (Marula).

Marula is situated approximately 50km north of Burgersfort in the Limpopo Province. Marula is one of the first operations to be developed on the eastern limb of the Bushveld Complex. The operation consists of two decline shafts, concentrator plant, waste rock dump and a tailings complex.

The financial provision was calculated according to the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). (Refer to Government Notice Regulation (GNR) 1147) (GN R1147) published in November 2015.

This report summarises the financial provision required for the proposed project. The financial provision represents a 10-year liability forecast, as required by legislation:

Table 2: Financial Provision Forecast

OPERATION / PROJECT	PREMATURE CLOSURE	CLOSURE FORECAST
Proposed Ventilation Shaft 8 & 9	Y2021	Y2022 – Y2030

Table 3 presents a list of typical closure components and the applicability thereof as part of the calculation process:

Table 3: List of Closure Components

CLOSURE COMPONENTS		APPLICABLE
1	INFRASTRUCTURAL ASPECTS	
1.1	Plant and Related Structures	No
1.2	Shafts, Audits and Declines	Yes
1.3	Supporting Infrastructure	Yes
1.4	Underground Infrastructure	No
1.5	Social Infrastructure	No
1.6	Off-Site Infrastructure	No
1.7	Linear Items	Yes
1.8	Waste Disposal	Yes
1.9	River Diversion	No

CLOSURE COMPONENTS		APPLICABLE
2	MINING ASPECTS	
2.1	Opencast / Pit Areas	No
2.2	Waste Rock Dumps (WRDs) - Overburden and Spoils	No
2.3	Coarse Residue Deposits - Processing Waste	No
2.4	Fine Residue Deposits - Processing Waste	No
3	BIO-PHYSICAL CLOSURE ASPECTS	
3.1	Water Resources	No
3.2	Sensitive Habitats and Biodiversity	No
3.3	Land Use and Land Capability	No
3.4	Soil	No
3.5	Other; Air Quality and Topography	No
4	SOCIAL CLOSURE ASPECTS	
4.1	Employees	No
4.2	Interested and Affected Parties	No
4.3	Government	No
5	GENERAL ASPECTS	
5.1	General Surfaces	Yes
5.2	Post-Closure Monitoring and Maintenance	Yes
5.3	Specialist Studies	No

Note:

- Quantities were obtained from drawings and information as supplied by SLR.
- Rates used were obtained from E-TEK's existing database and in consultation with demolition and earthworks contractors. The rates are updated annually; and
- Closure cost estimates are based on the Y2021 rates.

1.2. SUMMARY

The financial provision represents a 10-year forecast of the proposed project. The financial provision takes into consideration the proposed project schedule for implementation. Marula is to financially provide for the highest liability figure out of the 10-year closure forecast, which has been calculated at:

- Closure Forecast (Y2029): R 11, 46million (Rounded).

The above figure includes Preliminary and Generals (P&G's) (6%), Contingencies (10%) and value-added tax (VAT) (15%).

Table 4 provides a summary of the closure liability estimates based on the 10-year Forecast:

Table 4: Marula Platinum Limited – Proposed Ventilation Shaft 8 & 9

MARULA PLATINUM - VENTILATION SHAFT - EMPr AMENDMENT FINANCIAL PROVISION SUMMARY											
ESTIMATED CLOSURE COST ESTIMATES (INCLUDES P&G'S, CONTINGENCIES AND VAT AND EXCLUDES ESCALATION)		Premature Closure	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	
CLOSURE COMPONENTS		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	INFRASTRUCTURAL ASPECTS	R -	R 1 788 534,33	R 3 743 630,12	R 4 128 636,04	R 4 128 636,04	R 4 874 488,13	R 4 874 488,13	R 4 874 488,13	R 7 165 732,21	R 7 165 732,21
1,1	PLANT AND RELATED STRUCTURES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,2	SHAFTS, ADITS AND DECLINES	R -	R 1 384 381,40	R 2 671 367,15	R 2 671 367,15	R 2 671 367,15	R 3 399 027,72	R 3 399 027,72	R 3 399 027,72	R 5 548 682,22	R 5 548 682,22
1,3	SUPPORTING INFRASTRUCTURE	R -	R -	R -	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20
1,4	UNDERGROUND INFRASTRUCTURE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,5	SOCIAL INFRASTRUCTURE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,6	OFF-SITE INFRASTRUCTURE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,7	LINEAR ITEMS	R -	R 360 345,11	R 990 470,11	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81
1,8	WASTE DISPOSAL	R -	R 43 807,82	R 81 792,86	R 106 259,88	R 106 259,88	R 124 451,40	R 124 451,40	R 124 451,40	R 266 040,98	R 266 040,98
2	MINING ASPECTS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,1	OPENCAST / PIT AREAS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,2	WASTE ROCK DUMPS - OVERBURDEN AND SPOILS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,3	COARSE RESIDUE DEPOSITS - PROCESSING WASTE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,4	FINE RESIDUE DEPOSITS - PROCESSING WASTE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3	BIO-PHYSICAL CLOSURE ASPECTS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,1	WATER RESOURCES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,2	CLIMATE CHANGE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,3	SENSITIVE HABITATS & BIODIVERSITY	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,4	LAND USE & LAND CAPABILITY	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,5	SOIL	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,6	OTHER: AIR QUALITY & TOPOGRAPHY	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4	SOCIAL CLOSURE ASPECTS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4,1	EMPLOYEES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4,2	INTERESTED AND AFFECTED PARTIES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4,3	GOVERNMENT	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
5	GENERAL ASPECTS	R -	R 1 407 926,46	R 1 407 926,46	R 1 407 926,46	R 1 749 102,24	R 1 422 690,43	R 1 422 690,43	R 1 422 690,43	R 1 422 690,43	R 1 407 926,46
5,1	GENERAL SURFACES	R -	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 721 389,55	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40
5,2	POST CLOSURE MONITORING AND MAINTENANCE	R -	R 12 989,06	R 12 989,06	R 12 989,06	R 27 712,69	R 27 753,03	R 27 753,03	R 27 753,03	R 27 753,03	R 12 989,06
5,3	SPECIALIST STUDIES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
SUB-TOTAL 1		R -	R 3 196 460,80	R 5 151 556,58	R 5 536 562,51	R 5 877 738,28	R 6 297 178,56	R 6 297 178,56	R 6 297 178,56	R 8 588 422,64	R 8 573 658,68
Weighted Preliminary and General		R -	R 191 008,30	R 308 314,05	R 331 414,41	R 351 001,54	R 376 165,53	R 376 165,53	R 376 165,53	R 513 640,18	R 513 640,18
Weighted Contingencies		R -	R 319 646,08	R 515 155,66	R 553 656,25	R 587 773,83	R 629 717,86	R 629 717,86	R 629 717,86	R 858 842,26	R 857 365,87
SUB-TOTAL 2 FOR P&G's AND CONTINGENCIES		R -	R 510 654,38	R 823 469,71	R 885 070,66	R 938 775,36	R 1 005 883,39	R 1 005 883,39	R 1 005 883,39	R 1 372 482,44	R 1 371 006,04
SUB-TOTAL 3		R -	R 3 707 115,18	R 5 975 026,29	R 6 421 633,16	R 6 816 513,65	R 7 303 061,95	R 7 303 061,95	R 7 303 061,95	R 9 960 905,08	R 9 944 664,72
VAT		R -	R 556 067,28	R 896 253,94	R 963 244,97	R 1 022 477,05	R 1 095 459,29	R 1 095 459,29	R 1 095 459,29	R 1 494 135,76	R 1 491 699,71
GRAND-TOTAL		R -	R 4 263 182,46	R 6 871 280,24	R 7 384 878,14	R 7 838 990,69	R 8 398 521,24	R 8 398 521,24	R 8 398 521,24	R 11 455 040,85	R 11 436 364,43

2. CLOSURE COMPONENTS

The following components were identified and form part of the calculation:

- Ventilation Shaft 8 at the Clapham Shaft:
 - Ventilation shaft (Downcast);
 - Bulk air cooler;
 - Refrigeration plant & Condenser cooling towers.
- Ventilation Shaft 9 at the Driekop Shaft:
 - Ventilation shaft with surface main fans and electrical rooms.
- Water pipelines;
- Wastewater pipelines;
- Powerlines;
- TSF pipeline;
- Clapham change house;
- Driekop change house;
- Low grade ROM stockpile;
- Compressed airline upgrade

See Figure 1 depicting the general arrangement and locality of the proposed project in relation to the existing infrastructure:

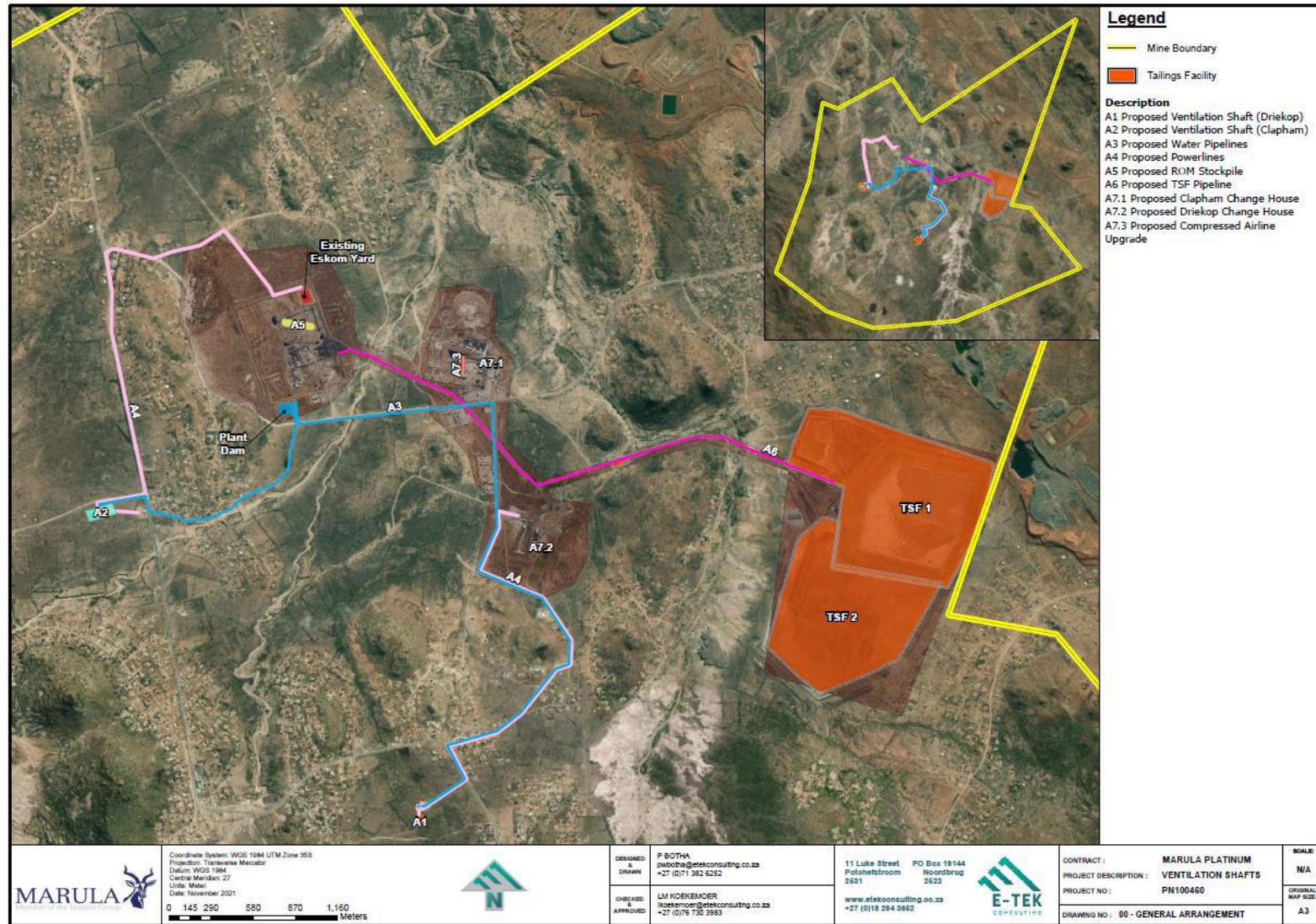


Figure 1: Locality of Proposed Project

3. CLOSURE COST ESTIMATION METHODOLOGY AND PROCEDURE

3.1. METHODOLOGY APPLIED TO LIABILITY MODEL

The following approach was applied to determine the financial provision:

- Financial models were developed to cater for the requirements of GNR 1147;
- The costing models were developed to address all the identified closure components applicable to Marula;
- The costing models provide the following output:
 - Executive Summary (Summary of all closure components and associated costs where applicable);
 - P&G's: Allocation of P&G's for each component and provides weighted P&G's, as certain P&G's allowances, can vary per component);
 - Contingencies (Allocation of Contingencies for each component and provides weighted Contingencies, as certain Contingency allowances can vary per component);
 - Closure Components Summary (Provides a summary of all costs per closure component). The five main closure components have been identified as follows:
 - Infrastructural Aspects;
 - Mining Aspects;
 - Biophysical Closure Aspects;
 - Social Closure Aspects; and
 - General Aspects.
 - Closure Components (Breakdown of the detail facilities and aspects under each of the five main closure components); and
 - Rates Table (Unit rates for various actions required).
- The following information is captured for each closure component where applicable:
 - Reference Map (Reference map number representing the associated closure component);
 - Geographical (GEO) Reference (Reference number for each closure component as represented on the reference map);
 - Year Captured (When each component was captured into the model or updated);
 - Cost Component (Name of closure component captured);
 - Description (Breakdown of the properties per cost component);
 - Supporting Documentation (Hyperlink to associated supporting information such as drawings, designs or Bill of Quantities);
 - Liable (Yes or No, indication if the mine is liable for the component or not);
 - Rate Code (Assigned rate code from the rates table);
 - Quantity (Quantity per component captured);
 - Unit (Unit of measurement);
 - Unit Rate (Rate assigned from the rate code aligned to the activity);

- Unit Total (Total amount for each component);
- Liable Value (Presentation of the total amount liable for per component); and
- Notes (Captures any assumptions or dedicated information).

3.2. ASSESSMENT METHODOLOGY

The approach followed with the determination of the closure costs could be summarised as follows:

- Review of available information and identification of infrastructure that would need to be decommissioned at closure;
- Gathering of relevant data which forms the basis of the calculation;
- All-newly proposed infrastructure was assigned with a reference number which can be referenced directly to the costing model;
- Reference map was created indicating the position of the proposed infrastructure in relation to the existing infrastructure;
- Closure criteria was developed and workshopped with Marula as part of the annual liability assessment;
- The closure forecast was based on the proposed project timeframe;
- Compilation of a Bill of Quantities (BoQ) capturing the quantities and actions relating to the closure of the different closure aspects (Microsoft excel format); and
- Unit rates from E-TEK's database were updated to be aligned with the current market-related rates acquired from local civil- and demolition contractors. (Note – these rates refer to closure conditions when the mine is no longer operational).

4. INFORMATION

The following information formed the basis of the calculation process:

- Closure Criteria (E-TEK Database);
- Latest lidar imagery of 2021 (E-TEK Database);
- General Arrangement Drawing (SLR);
- Project Description (SLR); and
- Project Schedule (SLR).

5. ASSUMPTIONS

The following general and site-specific assumptions and qualifications for each of the closure components listed in section 2 and 3 for Marula are described below:

5.1. GENERAL ASSUMPTIONS

- The financial provision represents a 10-year closure forecast;
- The currency of estimate: South African Rands (ZAR);
- Costing was based on today's value and no allowance was made for future value;
- As per regulatory requirements, no allowance was made to offset the value of scrap steel and or salvageable equipment to the liability;

- It was accepted that all information used to support the costing supplied by Marula and Specialists was accurate and true; this report only addresses the decommissioning and reclamation costs, equating to an outside (third party) contractor establishing on-site and conducting reclamation-related work. Other components such as staffing of the site after decommissioning, the infrastructure and support services (e.g. power supply, etc.) for this staff as well as workforce matters such as separation packages, retraining /re-skilling, etc. are outside the scope of this report;
- Based on the above, dedicated contractors would be commissioned to conduct the demolition and reclamation work on the site. This would inter alia require the establishment and overhead costs for the contractors and hence, the allowance for P&Gs in the cost estimate;
- Allowance has also been made for third-party contractors and consultants to conduct post-closure care and maintenance work as well as compliance monitoring;
- The financial provision calculated represents the financial requirements to implement the closure criteria identified and agreed upon as part of the closure plan; and
- Weighted percentages for P&Gs and Contingencies have been applied, VAT is also included:
 - P&G's – 6% Overall Allowance;
 - Contingencies – 10% Overall Allowance; and
 - VAT – 15% Overall Allowance

5.2. SITE-SPECIFIC ASSUMPTIONS

- Quantities were obtained from information supplied by SLR and Marula.
- Where information was not available, estimates were made based on experience and benchmarked against similar facilities elsewhere.
- All drawings and information used is in the feasibility phase and construction drawings is required to confirm the final quantities.
- General surface rehabilitation as per Marula's current criteria will apply;
- Steel and re-useable material, salvaged from the plant demolition and which has a salvage value, will be relocated to an authorized facility within a 30km radius to be sold or auctioned off. However, as per the regulatory requirements, the salvage value of steel and salvageable equipment have not been considered as part of the closure costing;
- It has been assumed all inert demolition waste will be disposed of into shaft portals before capping; and
- No beneficial use for infrastructure is currently allowed for an all infrastructure will be removed.

6. CLOSURE CRITERIA

All physical closure criteria were updated and refined during the annual updating process of the liability. Internal workshop sessions were held to update the closure criteria for all physical closure components based on updated information and inputs from operational personnel.

Please see the IA Summary Tab (Appendix A) for the closure criteria applicable to the closure components quantified.

7. CONCLUSION AND WAY FORWARD

7.1. CONCLUSION

The closure costs as reflected in this report have been based on information obtained from SLR, Marula, and quantities updated by E-TEK. In the event of the required information not being available, estimates were made based on experience and benchmarked against similar facilities elsewhere. Unit rates for the costing were obtained from E-TEK's existing database and/or through previous experience and consultation with demolition, earthworks contractors, and rehabilitation practitioners. Where required, these were adapted to reflect site-specific conditions.

Notwithstanding the above, if the closure measures are implemented as envisaged, the reflected costs provide a good indication of the costs for the closure situations as calculated and should provide a good basis for making the required financial provision. The closure costs calculated will only apply to closure situations and do not cater for operational closure and concurrent rehabilitation during the operational phase. Operational closure will require higher allowances for P&G's and Contingencies to appointed contractors.

7.2. WAY FORWARD

Quantities will be verified when construction drawings are issued and updated on an annual basis as part of the annual closure liability update. All variances will be captured and updated accordingly.

Appendix A: Closure Liability Estimate

Appendix B: Reference Map

DOCUMENT SIGN-OFF

CONSULTANT SIGNATORIES:



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Quantity Surveyor

CLIENT SIGNATORIES:

Name
Capacity

Name
Capacity

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- vii. The Client acknowledges that the consultants may have retained sub-consultants affiliated with them to provide Services for the benefit of the consultants. The consultants will be fully responsible to the Client for the Services and work done by all its sub-consultants and subcontractors. The Client agrees that it will only assert claims against and seek to recover losses, damages or other liabilities from the consultants and not the consultants' affiliated companies. To the maximum extent allowed by law, the Client acknowledges and agrees it will not have any legal recourse, and waives any expense, loss, claim, demand, or cause of action, against the consultants' affiliated companies, and their employees, officers and directors.
- viii. This Document is provided for sole use by the Client and is confidential to it and its professional advisers. No responsibility whatsoever for the contents of this Document will be accepted to any person other than the Client. Any use which a third party makes of this Document, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. The consultants accept no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this Document.

Marula Platinum
Ventilation Shaft 8 & 9 - EMPr Amendment

MARULA PLATINUM - VENTILATION SHAFT - EMPr AMENDMENT FINANCIAL PROVISION SUMMARY											
ESTIMATED CLOSURE COST ESTIMATES (INCLUDES P&G'S, CONTINGENCIES AND VAT AND EXCLUDES ESCALATION)		Premature Closure	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast
CLOSURE COMPONENTS		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	INFRASTRUCTURAL ASPECTS	R -	R 1 788 534,33	R 3 743 630,12	R 4 128 636,04	R 4 128 636,04	R 4 874 488,13	R 4 874 488,13	R 4 874 488,13	R 7 165 732,21	R 7 165 732,21
1,1	PLANT AND RELATED STRUCTURES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,2	SHAFTS, ADITS AND DECLINES	R -	R 1 384 381,40	R 2 671 367,15	R 2 671 367,15	R 2 671 367,15	R 3 399 027,72	R 3 399 027,72	R 3 399 027,72	R 5 548 682,22	R 5 548 682,22
1,3	SUPPORTING INFRASTRUCTURE	R -	R -	R -	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20
1,4	UNDERGROUND INFRASTRUCTURE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,5	SOCIAL INFRASTRUCTURE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,6	OFF-SITE INFRASTRUCTURE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,7	LINEAR ITEMS	R -	R 360 345,11	R 990 470,11	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81	R 994 349,81
1,8	WASTE DISPOSAL	R -	R 43 807,82	R 81 792,86	R 106 259,88	R 106 259,88	R 124 451,40	R 124 451,40	R 124 451,40	R 266 040,98	R 266 040,98
2	MINING ASPECTS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,1	OPENCAST / PIT AREAS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,2	WASTE ROCK DUMPS - OVERBURDEN AND SPOILS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,3	COARSE RESIDUE DEPOSITS - PROCESSING WASTE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
2,4	FINE RESIDUE DEPOSITS - PROCESSING WASTE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3	BIO-PHYSICAL CLOSURE ASPECTS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,1	WATER RESOURCES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,2	CLIMATE CHANGE	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,3	SENSITIVE HABITATS & BIODIVERSITY	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,4	LAND USE & LAND CAPABILITY	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,5	SOIL	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
3,6	OTHER: AIR QUALITY & TOPOGRAPHY	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4	SOCIAL CLOSURE ASPECTS	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4,1	EMPLOYEES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4,2	INTERESTED AND AFFECTED PARTIES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
4,3	GOVERNMENT	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
5	GENERAL ASPECTS	R -	R 1 407 926,46	R 1 407 926,46	R 1 407 926,46	R 1 749 102,24	R 1 422 690,43	R 1 422 690,43	R 1 422 690,43	R 1 422 690,43	R 1 407 926,46
5,1	GENERAL SURFACES	R -	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 721 389,55	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40
5,2	POST CLOSURE MONITORING AND MAINTENANCE	R -	R 12 989,06	R 12 989,06	R 12 989,06	R 27 712,69	R 27 753,03	R 27 753,03	R 27 753,03	R 27 753,03	R 12 989,06
5,3	SPECIALIST STUDIES	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
SUB-TOTAL 1		R -	R 3 196 460,80	R 5 151 556,58	R 5 536 562,51	R 5 877 738,28	R 6 297 178,56	R 6 297 178,56	R 6 297 178,56	R 8 588 422,64	R 8 573 658,68
Weighted Preliminary and General		R -	R 191 008,30	R 308 314,05	R 331 414,41	R 351 001,54	R 376 165,53	R 376 165,53	R 376 165,53	R 513 640,18	R 513 640,18
Weighted Contingencies		R -	R 319 646,08	R 515 155,66	R 553 656,25	R 587 773,83	R 629 717,86	R 629 717,86	R 629 717,86	R 858 842,26	R 857 365,87
SUB-TOTAL 2 FOR P&G's AND CONTINGENCIES		R -	R 510 654,38	R 823 469,71	R 885 070,66	R 938 775,36	R 1 005 883,39	R 1 005 883,39	R 1 005 883,39	R 1 372 482,44	R 1 371 006,04
SUB-TOTAL 3		R -	R 3 707 115,18	R 5 975 026,29	R 6 421 633,16	R 6 816 513,65	R 7 303 061,95	R 7 303 061,95	R 7 303 061,95	R 9 960 905,08	R 9 944 664,72
VAT		R -	R 556 067,28	R 896 253,94	R 963 244,97	R 1 022 477,05	R 1 095 459,29	R 1 095 459,29	R 1 095 459,29	R 1 494 135,76	R 1 491 699,71
GRAND-TOTAL		R -	R 4 263 182,46	R 6 871 280,24	R 7 384 878,14	R 7 838 990,69	R 8 398 521,24	R 8 398 521,24	R 8 398 521,24	R 11 455 040,85	R 11 436 364,43

Marula Platinum
Ventilation Shaft 8 & 9 - EMPr Amendment

SUMMARY - INFRASTRUCTURAL ASPECTS												
1 INFRASTRUCTURAL CLOSURE COMPONENTS & CRITERIA			Premature Closure	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	
ID	COMPONENT	CLOSURE CRITERIA	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1,1	PLANT AND RELATED STRUCTURES	i. Removal of salvageable equipment (i.e. steel and re-useable material) ii. All plants and related infrastructure will be dismantled and removed at closure iii. All linear items will be removed (i.e. pipelines, powerlines and conveyors) (Refer to Linear Items component) iv. Foundations and structures will be removed to 1m below ground level v. Load and haul material (non-inert waste) vi. General surface rehabilitation of footprint areas (Refer to General Surfaces component) vii. Sorting, screening and disposal of demolition waste (Refer to Waste Disposal component)	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
1,2	SHAFTS, ADITS AND DECLINES	Ventilation shafts: i. Ventilation shafts and related infrastructure will be dismantled and removed ii. Concrete seal will be constructed as per Mine Health and Safety requirements iii. General surface rehabilitation of footprint areas (Refer to General Surfaces component) iv. Sorting, screening and disposal of demolition waste (Refer to Waste Disposal component)	R -	R 1 384 381,40	R 2 671 367,15	R 2 671 367,15	R 2 671 367,15	R 3 399 027,72	R 3 399 027,72	R 3 399 027,72	R 5 548 682,22	R 5 548 682,22
		Decline shafts (Clapham and Driekop): i. Concrete seal will be constructed at each of the 2 decline shafts as per Mine Health and Safety requirements ii. Portals will be backfilled with inert demolition waste iii. In addition portals will be backfilled with a combination of material sourced from the infrastructural footprint (engineered fill), balanced cut to fill and cemented dry tailings (3% cementation process)										
1,3	SUPPORTING INFRASTRUCTURE	i. All infrastructure will be dismantled and removed at closure ii. Foundations and underground structures will be removed to 1m below ground level iii. Mobile homes and steel containers will be load and hauled to nearest town (Burgersfort) iv. General surface rehabilitation of footprint areas (Refer to General Surfaces component) v. Sorting, screening and disposal of demolition waste (Refer to Waste Disposal component)										
		Return water dams: i. Remove the HDPE liner and dispose of at a licensed disposal facility ii. Remove a layer of 150mm of sediment material from the dam basin iii. Load and haul the material and dump onto the tailings facility before rehabilitation commences on the top surface of the tailings complex iv. Dam walls will be breached and the material will be dozed inwards to fill the dam basins v. Ameliorate and vegetate Settling dams & Earth lined stormwater dams: i. Remove the sediment layer 1.1m and 1.2m thick respectively from the dam basins. ii. Load and haul the material and dump onto the tailings facility before rehabilitation commences on the top surface of the tailings complex iii. Dam walls will be breached and the material will be dozed inwards to fill the dam basins iv. Ameliorate and vegetate	R -	R -	R -	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20	R 356 659,20

1,4	UNDERGROUND INFRASTRUCTURE	Remove all infrastructure with pollution potential and decontaminate the areas.	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-
1,5	SOCIAL INFRASTRUCTURE	<ul style="list-style-type: none"> i. All infrastructure will be dismantled and removed at closure ii. Foundations and underground structures will be removed to 1m below ground level iii. All mobile homes and steel containers will be load and hauled to nearest town (Burgersfort) iv. General surface rehabilitation of footprint areas (Refer to General Surfaces component) v. Sorting, screening and disposal of demolition waste (Refer to Waste Disposal component) 	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-
1,6	OFF-SITE INFRASTRUCTURE	No formal closure criteria for off-site infrastructure	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-
1,7	LINEAR ITEMS	<ul style="list-style-type: none"> i. All linear items such as pipelines, fences (including security fences), power lines and overland conveyors will be removed ii. General surface rehabilitation of footprint areas (Refer to General Surfaces component) iii. Sorting, screening and disposal of demolition waste (Refer to Waste Disposal component) 	R	-	R	360 345,11	R	990 470,11	R	994 349,81	R	994 349,81	R	994 349,81	R	994 349,81	R	994 349,81
1,8	WASTE DISPOSAL	<ul style="list-style-type: none"> i. Sorting and screening of waste ii. Additional allowance was made to backfill the two portals with inert demolition waste - on site waste disposal iii. Domestic and non-hazardous waste are taken to the nearest, registered municipal waste sites (Atok) iv. 5% allowance for decontamination of waste v. X-ray machine at clinic - Radio-active waste (inventory) 	R	-	R	43 807,82	R	81 792,86	R	106 259,88	R	106 259,88	R	124 451,40	R	124 451,40	R	266 040,98
SUB-TOTAL 1			R	-	R	1 788 534,33	R	3 743 630,12	R	4 128 636,04	R	4 128 636,04	R	4 874 488,13	R	4 874 488,13	R	7 165 732,21

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Premature Closure					2021		
1,2		SHAFTS, ADITS AND DECLINES											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R -	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m²	R 1 198,08	R -	R -	Construction to commence in 2023
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m³	R 937,53	R -	R -	
6				Sealing of vertical shaft	Sealing of vertical shaft	No	7.1.1	0,00	sum	R 672 312,29	R -	R -	
7	00-GA	A2	Y2021	Bulk Air Cooler									Construction to commence in 2026
8				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m²	R 1 198,08	R -	R -	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m³	R 937,53	R -	R -	
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m²	R 816,93	R -	R -	
14													
15				Driekop Shaft Complex				0,00				R -	
16				Driekop Ventilation Shaft 9									
17	00-GA	A1	Y2021	Vent Shaft 9									
18				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m²	R 1 198,08	R -	R -	Construction to commence in 2022
19				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m³	R 937,53	R -	R -	
20				Sealing of vertical shaft	Sealing of vertical shaft	No	7.1.1	0,00	sum	R 672 312,29	R -	R -	
21				Sub station	Single storey building	No	3.2.1	0,00	m²	R 816,93	R -	R -	
22													
23				Tailings Complex				0,00				R -	
24					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R -	
Preliminaries and General Contingency 6%												R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R -	
GRAND-TOTAL												R -	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2022		
1,2		SHAFTS, ADITS AND DECLINES											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R -	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m²	R 1 198,08	R -	R -	Construction to commence in 2023
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
6				Sealing of vertical shaft	Sealing of vertical shaft	No	7.1.1	0,00	sum	R 672 312,29	R -	R -	
7	00-GA	A2	Y2021	Bulk Air Cooler									Construction to commence in 2026
8				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m²	R 1 198,08	R -	R -	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m²	R 816,93	R -	R -	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m²	R 1 198,08	R 430 110,72	R 430 110,72	Construction commenced
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	150,00	m³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m²	R 816,93	R 141 328,89	R 141 328,89	
21													
22													
23				Tailings Complex				0,00				R -	
24					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 1 384 381,40	
Preliminaries and General Contingency												R 83 062,88	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 221 501,02	
GRAND-TOTAL												R 1 605 882,42	

6%
10%

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2023		
1,2 SHAFTS, ADITS AND DECLINES													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				148,30				R 1 286 985,75	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m²	R 1 198,08	R 475 637,76	R 475 637,76	Construction commenced
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	148,30	m³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									Construction to commence in 2026
8				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m²	R 1 198,08	R -	R -	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m²	R 816,93	R -	R -	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m²	R 1 198,08	R 430 110,72	R 430 110,72	
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	150,00	m³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m²	R 816,93	R 141 328,89	R 141 328,89	
21													
22													
23				Tailings Complex				0,00				R -	
24					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 2 671 367,15	
Preliminaries and General Contingency												R 160 282,03	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 427 418,74	
GRAND-TOTAL												R 3 098 785,89	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2024		
1,2		SHAFTS, ADITS AND DECLINES											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				148,30				R 1 286 985,75	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m²	R 1 198,08	R 475 637,76	R 475 637,76	
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	148,30	m³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									Construction to commence in 2026
8				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m²	R 1 198,08	R -	R -	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m²	R 816,93	R -	R -	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m²	R 1 198,08	R 430 110,72	R 430 110,72	
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	150,00	m³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m²	R 816,93	R 141 328,89	R 141 328,89	
21													
22													
23				Tailings Complex				0,00				R -	
24					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 2 671 367,15	
Preliminaries and General Contingency												R 160 282,03	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 427 418,74	
GRAND-TOTAL												R 3 098 785,89	

6%
10%

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2025		
1,2 SHAFTS, ADITS AND DECLINES													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				148,30				R 1 286 985,75	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m ²	R 1 198,08	R 475 637,76	R 475 637,76	
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	148,30	m ³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									Construction to commence in 2026
8				Plant superstructures	Medium plant structures	No	2.3.2	0,00	m ²	R 1 198,08	R -	R -	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m ³	R 937,53	R -	R -	
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m ³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m ³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m ²	R 816,93	R -	R -	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m ²	R 1 198,08	R 430 110,72	R 430 110,72	
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	150,00	m ³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m ²	R 816,93	R 141 328,89	R 141 328,89	
21													
22													
23				Tailings Complex				0,00				R -	
24					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 2 671 367,15	
Preliminaries and General Contingency												R 160 282,03	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 427 418,74	
GRAND-TOTAL												R 3 098 785,89	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2026		
1,2		SHAFTS, ADITS AND DECLINES											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				148,30				R 2 014 646,32	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m ²	R 1 198,08	R 475 637,76	R 475 637,76	
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	148,30	m ³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									
8				Plant superstructures	Medium plant structures	Yes	2.3.2	265,00	m ²	R 1 198,08	R 317 491,20	R 317 491,20	Construction commenced
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	437,50	m ³	R 937,53	R 410 169,38	R 410 169,38	Assume 10m high
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m ³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4,2	0,00	m ³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m ²	R 816,93	R -	R -	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m ²	R 1 198,08	R 430 110,72	R 430 110,72	
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	150,00	m ³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m ²	R 816,93	R 141 328,89	R 141 328,89	
21				Tailings Complex				0,00				R -	
22				Not Applicable		Yes	1,1	0,00	na	R -	R -	R -	
23													
24													
SUB-TOTAL 1												R 3 399 027,72	
Preliminaries and General Contingency												R 203 941,66	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 339 902,77	
GRAND-TOTAL												R 543 844,44	
												R 3 942 872,16	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2027		
1,2 SHAFTS, ADITS AND DECLINES													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
Clapham Shaft Complex													
1				Clapham Ventilation Shaft 8				148,30				R 2 014 646,32	
2													
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m ²	R 1 198,08	R 475 637,76	R 475 637,76	
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4.2	148,30	m ³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									
8				Plant superstructures	Medium plant structures	Yes	2.3.2	265,00	m ²	R 1 198,08	R 317 491,20	R 317 491,20	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4.2	437,50	m ³	R 937,53	R 410 169,38	R 410 169,38	Assume 10m high
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m ³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m ³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m ²	R 816,93	R -	R -	
14													
15				Driekop Shaft Complex				234,77				R 1 384 381,40	
16				Driekop Ventilation Shaft 9									
17	00-GA	A1	Y2021	Vent Shaft 9									
18				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m ²	R 1 198,08	R 430 110,72	R 430 110,72	
19				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4.2	150,00	m ³	R 937,53	R 140 629,50	R 140 629,50	
20				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
21				Sub station	Single storey building	Yes	3.2.1	173,00	m ²	R 816,93	R 141 328,89	R 141 328,89	
22													
23				Tailings Complex				0,00				R -	
24					Not Applicable	Yes	1.1	0,00	na	R -	R -	R -	
SUB-TOTAL 1											R 3 399 027,72		
Preliminaries and General Contingency						6%					R 203 941,66		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)											R 339 902,77		
GRAND-TOTAL											R 543 844,44		
											R 3 942 872,16		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2028		
1,2 SHAFTS, ADITS AND DECLINES													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				148,30				R 2 014 646,32	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m ²	R 1 198,08	R 475 637,76	R 475 637,76	
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4.2	148,30	m ³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									
8				Plant superstructures	Medium plant structures	Yes	2.3.2	265,00	m ²	R 1 198,08	R 317 491,20	R 317 491,20	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4.2	437,50	m ³	R 937,53	R 410 169,38	R 410 169,38	Assume 10m high
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction to commence in 2029
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m ³	R 937,53	R -	R -	
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	No	4.2	0,00	m ³	R 937,53	R -	R -	
13				Transformer, LV & MV Room	Single storey building	No	3.2.1	0,00	m ²	R 816,93	R -	R -	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m ²	R 1 198,08	R 430 110,72	R 430 110,72	
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4.2	150,00	m ³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m ²	R 816,93	R 141 328,89	R 141 328,89	
21													
22													
23				Tailings Complex				0,00				R -	
24					Not Applicable	Yes	1.1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 3 399 027,72	
Preliminaries and General Contingency												R 203 941,66	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 339 902,77	
GRAND-TOTAL												R 543 844,44	
GRAND-TOTAL												R 3 942 872,16	

6%
10%

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2029		
1,2 SHAFTS, ADITS AND DECLINES													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				2390,47				R 4 164 300,82	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m ²	R 1 198,08	R 475 637,76	R 475 637,76	
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	148,30	m ³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									
8				Plant superstructures	Medium plant structures	Yes	2.3.2	265,00	m ²	R 1 198,08	R 317 491,20	R 317 491,20	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	437,50	m ³	R 937,53	R 410 169,38	R 410 169,38	Assume 10m high
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									Construction commenced
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	Yes	4,2	1249,50	m ³	R 937,53	R 1 171 443,74	R 1 171 443,74	Assume 10m high
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	Yes	4,2	927,50	m ³	R 937,53	R 869 559,08	R 869 559,08	Assume 10m high
13				Transformer, LV & MV Room	Single storey building	Yes	3.2.1	133,00	m ²	R 816,93	R 108 651,69	R 108 651,69	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m ²	R 1 198,08	R 430 110,72	R 430 110,72	
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	150,00	m ³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m ²	R 816,93	R 141 328,89	R 141 328,89	
21				Tailings Complex				0,00				R -	
22				Not Applicable		Yes	1,1	0,00	na	R -	R -	R -	
23													
24													
SUB-TOTAL 1												R 5 548 682,22	
Preliminaries and General Contingency												R 332 920,93	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 554 868,22	
GRAND-TOTAL												R 887 789,16	
												R 6 436 471,38	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2030		
1,2		SHAFTS, ADITS AND DECLINES											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				2390,47				R 4 164 300,82	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	Vent Shaft 8									
4				Plant superstructures	Medium plant structures	Yes	2.3.2	397,00	m ²	R 1 198,08	R 475 637,76	R 475 637,76	
5				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	148,30	m ³	R 937,53	R 139 035,70	R 139 035,70	
6				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
7	00-GA	A2	Y2021	Bulk Air Cooler									
8				Plant superstructures	Medium plant structures	Yes	2.3.2	265,00	m ²	R 1 198,08	R 317 491,20	R 317 491,20	
9				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	437,50	m ³	R 937,53	R 410 169,38	R 410 169,38	Assume 10m high
10	00-GA	A2	Y2021	Refrigeration Plant & Condenser Cooling Towers									
11				Refrigeration Plant Structure	Medium concrete, thickness between 250 and 750mm	Yes	4,2	1249,50	m ³	R 937,53	R 1 171 443,74	R 1 171 443,74	Assume 10m high
12				Cooling Tower Structure	Medium concrete, thickness between 250 and 750mm	Yes	4,2	927,50	m ³	R 937,53	R 869 559,08	R 869 559,08	Assume 10m high
13				Transformer, LV & MV Room	Single storey building	Yes	3.2.1	133,00	m ²	R 816,93	R 108 651,69	R 108 651,69	
14				Driekop Shaft Complex				234,77				R 1 384 381,40	
15				Driekop Ventilation Shaft 9									
16	00-GA	A1	Y2021	Vent Shaft 9									
17				Plant superstructures	Medium plant structures	Yes	2.3.2	359,00	m ²	R 1 198,08	R 430 110,72	R 430 110,72	
18				Structural Concrete	Medium concrete, thickness between 250 and 750mm	Yes	4,2	150,00	m ³	R 937,53	R 140 629,50	R 140 629,50	
19				Sealing of vertical shaft	Sealing of vertical shaft	Yes	7.1.1	1,00	sum	R 672 312,29	R 672 312,29	R 672 312,29	
20				Sub station	Single storey building	Yes	3.2.1	173,00	m ²	R 816,93	R 141 328,89	R 141 328,89	
21				Tailings Complex				0,00				R -	
22				Not Applicable		Yes	1,1	0,00	na	R -	R -	R -	
23													
24													
SUB-TOTAL 1												R 5 548 682,22	
Preliminaries and General Contingency												R 332 920,93	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 554 868,22	
GRAND-TOTAL												R 887 789,16	
												R 6 436 471,38	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Premature Closure					2021		
1,3		SUPPORTING INFRASTRUCTURE											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R -	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	No	3.1.1	0,00	m²	R 440,32	R -	R -	Construction to commence in 2024
4													
5				Driekop Shaft Complex				0,00				R -	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	No	3.1.1	0,00	m²	R 440,32	R -	R -	Construction to commence in 2024
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R -	
Preliminaries and General Contingency												R -	
6%												R -	
10%												R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R -	
GRAND-TOTAL												R -	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2022		
1.3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R -	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	No	3.1.1	0,00	m²	R 440,32	R -	R -	Construction to commence in 2024
4													
5				Driekop Shaft Complex				0,00				R -	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	No	3.1.1	0,00	m²	R 440,32	R -	R -	Construction to commence in 2024
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R -	
Preliminaries and General Contingency												R -	
6%												R -	
10%												R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R -	
GRAND-TOTAL												R -	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2023		
1.3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R	-
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	No	3.1.1	0,00	m ²	R 440,32	R -	R -	Construction to commence in 2024
4													
5				Driekop Shaft Complex				0,00				R	-
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	No	3.1.1	0,00	m ²	R 440,32	R -	R -	Construction to commence in 2024
8													
9				Tailings Complex								R	-
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R	-
Preliminaries and General												R	-
Contingency												R	-
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	-
GRAND-TOTAL												R	-

6%
10%

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2024		
1,3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				215,60				R 193 740,80	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	Yes	3.1.1	440,00	m²	R 440,32	R 193 740,80	R 193 740,80	Construction commenced
4													
5				Driekop Shaft Complex				181,30				R 162 918,40	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	Yes	3.1.1	370,00	m²	R 440,32	R 162 918,40	R 162 918,40	Construction commenced
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 356 659,20	
Preliminaries and General Contingency												R 21 399,55	
6% 10%												R 35 665,92	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 57 065,47	
GRAND-TOTAL												R 413 724,67	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2025		
1,3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				215,60				R 193 740,80	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	Yes	3.1.1	440,00	m²	R 440,32	R 193 740,80	R 193 740,80	
4													
5				Driekop Shaft Complex				181,30				R 162 918,40	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	Yes	3.1.1	370,00	m²	R 440,32	R 162 918,40	R 162 918,40	
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 356 659,20	
Preliminaries and General Contingency												R 21 399,55	
6% 10%												R 35 665,92	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 57 065,47	
GRAND-TOTAL												R 413 724,67	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2026		
1,3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				215,60				R 193 740,80	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	Yes	3.1.1	440,00	m²	R 440,32	R 193 740,80	R 193 740,80	
4													
5				Driekop Shaft Complex				181,30				R 162 918,40	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	Yes	3.1.1	370,00	m²	R 440,32	R 162 918,40	R 162 918,40	
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 356 659,20	
Preliminaries and General Contingency												R 21 399,55	
6% 10%												R 35 665,92	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 57 065,47	
GRAND-TOTAL												R 413 724,67	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2027		
1,3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				215,60				R 193 740,80	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	Yes	3.1.1	440,00	m²	R 440,32	R 193 740,80	R 193 740,80	
4													
5				Driekop Shaft Complex				181,30				R 162 918,40	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	Yes	3.1.1	370,00	m²	R 440,32	R 162 918,40	R 162 918,40	
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 356 659,20	
Preliminaries and General Contingency												R 21 399,55	
6% 10%												R 35 665,92	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 57 065,47	
GRAND-TOTAL												R 413 724,67	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2028		
1,3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				215,60				R 193 740,80	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	Yes	3.1.1	440,00	m²	R 440,32	R 193 740,80	R 193 740,80	
4													
5				Driekop Shaft Complex				181,30				R 162 918,40	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	Yes	3.1.1	370,00	m²	R 440,32	R 162 918,40	R 162 918,40	
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 356 659,20	
Preliminaries and General Contingency												R 21 399,55	
6% 10%												R 35 665,92	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 57 065,47	
GRAND-TOTAL												R 413 724,67	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2029		
1,3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				215,60				R 193 740,80	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	Yes	3.1.1	440,00	m²	R 440,32	R 193 740,80	R 193 740,80	
4													
5				Driekop Shaft Complex				181,30				R 162 918,40	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	Yes	3.1.1	370,00	m²	R 440,32	R 162 918,40	R 162 918,40	
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 356 659,20	
Preliminaries and General Contingency												R 21 399,55	
6% 10%												R 35 665,92	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 57 065,47	
GRAND-TOTAL												R 413 724,67	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2030		
1,3 SUPPORTING INFRASTRUCTURE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				215,60				R 193 740,80	
2				Clapham Ventilation Shaft 8									
3	00-GA	A7.1	Y2021	Change House	Single storey building	Yes	3.1.1	440,00	m ²	R 440,32	R 193 740,80	R 193 740,80	
4													
5				Driekop Shaft Complex				181,30				R 162 918,40	
6				Driekop Ventilation Shaft 9									
7	00-GA	A7.2	Y2021	Change house	Single storey building	Yes	3.1.1	370,00	m ²	R 440,32	R 162 918,40	R 162 918,40	
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 356 659,20	
Preliminaries and General Contingency												R 21 399,55	
6% 10%												R 35 665,92	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 57 065,47	
GRAND-TOTAL												R 413 724,67	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Premature Closure						2021	
1,7		LINEAR ITEMS											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R	-
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	0,00	m	R 17,07	R -	R -	Construction to commence in 2023
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	0,00	m	R 17,07	R -	R -	Construction to commence in 2023
5	00-GA	A4	Y2021	Power Line	Major lines	No	5.3.2	0,00	m	R 88,75	R -	R -	Construction to commence in 2023
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	No	5.2.6	0,00	m	R 35,27	R -	R -	Construction to commence in 2024
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	No	5.5.3	0,00	m	R 23,89	R -	R -	Construction to commence in 2022
8	00-GA	A2	Y2022	Fencing - Around Fridge Palnt & Cooling Tower	Dismantling of security fencing	No	5.5.3	0,00	m	R 23,89	R -	R -	Construction to commence in 2022
9				Driekop Shaft Complex				0,00				R	-
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	0,00	m	R 17,07	R -	R -	Construction to commence in 2023
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	0,00	m	R 17,07	R -	R -	Construction to commence in 2023
14	00-GA	A4	Y2021	Power Line	Major lines	No	5.3.2	0,00	m	R 88,75	R -	R -	Construction to commence in 2023
15				Tailings Complex				0,00				R	-
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	No	5.2.3	0,00	m	R 95,57	R -	R -	
SUB-TOTAL 1												R	-
Preliminaries and General Contingency												R	-
6% 10%												R	-
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	-
GRAND-TOTAL												R	-

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast						2022	
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 15 050,70	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	0,00	m	R 17,07	R -	R -	Construction to commence in 2023
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	0,00	m	R 17,07	R -	R -	Construction to commence in 2023
5	00-GA	A4	Y2021	Power Line	Major lines	No	5.3.2	0,00	m	R 88,75	R -	R -	Construction to commence in 2023
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	No	5.2.6	0,00	m	R 35,27	R -	R -	Construction to commence in 2024
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	Construction commenced
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	Construction commenced
9				Driekop Shaft Complex				0,00				R -	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	Construction to commence in 2023
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	Construction to commence in 2023
14	00-GA	A4	Y2021	Power Line	Major lines	No	5.3.2	3300,00	m	R 88,75	R 292 875,00	R -	Construction to commence in 2023
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 360 345,11	
Preliminaries and General Contingency						6%						R 21 620,71	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 36 034,51	
GRAND-TOTAL												R 57 655,22	
GRAND-TOTAL												R 418 000,33	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2023		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 352 300,70	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	Construction commenced.
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	No	5.2.6	0,00	m	R 35,27	R -	R -	Construction to commence in 2024
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	Construction commenced.
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 990 470,11	
Preliminaries and General Contingency						6%						R 59 428,21	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 047,01	
GRAND-TOTAL												R 1 148 945,33	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2024		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 356 180,40	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	Yes	5.2.6	110,00	m	R 35,27	R 3 879,70	R 3 879,70	Construction commenced.
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 994 349,81	
Preliminaries and General Contingency						6%						R 59 660,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 434,98	
GRAND-TOTAL												R 1 153 445,78	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2025		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 356 180,40	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	Yes	5.2.6	110,00	m	R 35,27	R 3 879,70	R 3 879,70	
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 994 349,81	
Preliminaries and General Contingency						6%						R 59 660,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 434,98	
GRAND-TOTAL												R 1 153 445,78	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2026		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 356 180,40	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	Yes	5.2.6	110,00	m	R 35,27	R 3 879,70	R 3 879,70	
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 994 349,81	
Preliminaries and General Contingency						6%						R 59 660,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 434,98	
GRAND-TOTAL												R 1 153 445,78	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2027		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 356 180,40	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	Yes	5.2.6	110,00	m	R 35,27	R 3 879,70	R 3 879,70	
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 994 349,81	
Preliminaries and General Contingency						6%						R 59 660,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 434,98	
GRAND-TOTAL												R 1 153 445,78	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2028		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 356 180,40	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	Yes	5.2.6	110,00	m	R 35,27	R 3 879,70	R 3 879,70	
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 994 349,81	
Preliminaries and General Contingency						6%						R 59 660,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 434,98	
GRAND-TOTAL												R 1 153 445,78	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2029		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 356 180,40	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	Yes	5.2.6	110,00	m	R 35,27	R 3 879,70	R 3 879,70	
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 994 349,81	
Preliminaries and General Contingency						6%						R 59 660,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 434,98	
GRAND-TOTAL												R 1 153 445,78	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2030		
1,7 LINEAR ITEMS													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex				0,00				R 356 180,40	
2				Clapham Ventilation Shaft 8									
3	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
4	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	2100,00	m	R 17,07	R 35 847,00	R -	
5	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3800,00	m	R 88,75	R 337 250,00	R 337 250,00	
6	00-GA	A7.3	Y2021	Compressed Airline	Overland HDPE pipelines on plinths (350-500mm)	Yes	5.2.6	110,00	m	R 35,27	R 3 879,70	R 3 879,70	
7	00-GA	A2	Y2022	Fencing - Around 8# & Bulk Air Cooler	Dismantling of security fencing	Yes	5.5.3	190,00	m	R 23,89	R 4 539,10	R 4 539,10	
8	00-GA	A2	Y2022	Fencing - Around Fridge Paint & Cooling Tower	Dismantling of security fencing	Yes	5.5.3	440,00	m	R 23,89	R 10 511,60	R 10 511,60	
9				Driekop Shaft Complex				0,00				R 292 875,00	
10				Driekop Ventilation Shaft 9									
12	00-GA	A3	Y2021	Pipeline - Water Supply	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	150mm HDPE Pipes laid below ground. Pipes to remain buried post closure. 50mm HDPE Pipes laid below ground for wastewater. Pipes to remain buried post closure.
13	00-GA	A3	Y2021	Pipeline - Waste Water	Overland HDPE pipelines on plinths (<200mm)	No	5.2.4	5200,00	m	R 17,07	R 88 764,00	R -	
14	00-GA	A4	Y2021	Power Line	Major lines	Yes	5.3.2	3300,00	m	R 88,75	R 292 875,00	R 292 875,00	
15				Tailings Complex				0,00				R 345 294,41	
17	00-GA	A6	Y2021	Pipeline - FRD Tailings Line	Overland steel pipelines on plinths (350-500mm)	Yes	5.2.3	3613,00	m	R 95,57	R 345 294,41	R 345 294,41	Assume the same as the other Tailings pipeline.
SUB-TOTAL 1												R 994 349,81	
Preliminaries and General Contingency						6%						R 59 660,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 99 434,98	
GRAND-TOTAL												R 1 153 445,78	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Premature Closure					2021		
1,8 WASTE DISPOSAL													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R	-
2				Clapham Ventilation Shaft 8									
			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	0,00	%	2,5%	R -	R -	
3			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	0,00	m³/km	R 39,18	R -	R -	
4				Driekop Shaft Complex								R	-
5				Driekop Ventilation Shaft 9									
6			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	0,00	%	2,5%	R -	R -	
7			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	0,00	m³/km	R 39,18	R -	R -	
8				Tailings Complex								R	-
9					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
10													
11													
SUB-TOTAL 1												R	-
Preliminaries and General Contingency												R	-
6% 10%												R	-
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	-
GRAND-TOTAL												R	-

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2022		
1,8		WASTE DISPOSAL											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R	-
2				Clapham Ventilation Shaft 8									
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	0,00	%	2,5%	R -	R -	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	0,00	m³/km	R 39,18	R -	R -	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R	43 807,82
6				Driekop Ventilation Shaft 9									
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	1384381,40	%	2,5%	R 34 609,54	R 34 609,54	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	234,77	m³/km	R 39,18	R 9 198,29	R 9 198,29	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R	-
10												R	-
11					Not Applicable	Yes	1.1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 43 807,82	
Preliminaries and General Contingency												R 2 628,47	
6% 10%												R 4 380,78	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 7 009,25	
GRAND-TOTAL												R 50 817,08	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast				2023				
1,8		WASTE DISPOSAL												
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes	
1				Clapham Shaft Complex								R	37 985,04	
2				Clapham Ventilation Shaft 8										
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	1286985,75	%	2,5%	R 32 174,64	R	32 174,64	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	148,30	m³/km	R 39,18	R 5 810,39	R	5 810,39	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R	43 807,82	
6				Driekop Ventilation Shaft 9										
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	1384381,40	%	2,5%	R 34 609,54	R	34 609,54	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	234,77	m³/km	R 39,18	R 9 198,29	R	9 198,29	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R	-	
10												R	-	
11					Not Applicable	Yes	1,1	0,00	na	R -	R -	R	-	
SUB-TOTAL 1												R	81 792,86	
Preliminaries and General Contingency												R	4 907,57	
6% 10%												R	8 179,29	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	13 086,86	
GRAND-TOTAL												R	94 879,72	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2024			
1,8		WASTE DISPOSAL												
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes	
1				Clapham Shaft Complex								R	51 275,77	
2				Clapham Ventilation Shaft 8										
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	1480726,55	%	2,5%	R 37 018,16	R	37 018,16	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	363,90	m³/km	R 39,18	R 14 257,60	R	14 257,60	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R	54 984,12	
6				Driekop Ventilation Shaft 9										
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	1547299,80	%	2,5%	R 38 682,50	R	38 682,50	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	416,07	m³/km	R 39,18	R 16 301,62	R	16 301,62	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R	-	
10												R	-	
11					Not Applicable	Yes	1.1	0,00	na	R -	R -	R	-	
SUB-TOTAL 1												R	106 259,88	
Preliminaries and General Contingency						6%						R	6 375,59	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R	10 625,99	
GRAND-TOTAL												R	17 001,58	
GRAND-TOTAL												R	123 261,46	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast				2025				
1,8		WASTE DISPOSAL												
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes	
1				Clapham Shaft Complex								R	51 275,77	
2				Clapham Ventilation Shaft 8										
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	1480726,55	%	2,5%	R 37 018,16	R	37 018,16	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	363,90	m³/km	R 39,18	R 14 257,60	R	14 257,60	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R	54 984,12	
6				Driekop Ventilation Shaft 9										
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	1547299,80	%	2,5%	R 38 682,50	R	38 682,50	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	416,07	m³/km	R 39,18	R 16 301,62	R	16 301,62	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R	-	
10												R	-	
11					Not Applicable	Yes	1.1	0,00	na	R -	R -	R	-	
SUB-TOTAL 1												R	106 259,88	
Preliminaries and General Contingency						6%						R	6 375,59	
10%												R	10 625,99	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	17 001,58	
GRAND-TOTAL												R	123 261,46	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast				2026				
1,8		WASTE DISPOSAL												
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes	
1				Clapham Shaft Complex								R	69 467,28	
2				Clapham Ventilation Shaft 8										
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	2208387,12	%	2,5%	R 55 209,68	R	55 209,68	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	363,90	m³/km	R 39,18	R 14 257,60	R	14 257,60	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R	54 984,12	
6				Driekop Ventilation Shaft 9										
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	1547299,80	%	2,5%	R 38 682,50	R	38 682,50	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	416,07	m³/km	R 39,18	R 16 301,62	R	16 301,62	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R	-	
10												R	-	
11					Not Applicable	Yes	1.1	0,00	na	R -	R -	R	-	
SUB-TOTAL 1												R	124 451,40	
Preliminaries and General Contingency												R	7 467,08	
6% 10%												R	12 445,14	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	19 912,22	
GRAND-TOTAL												R	144 363,62	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2027			
1,8		WASTE DISPOSAL												
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes	
1				Clapham Shaft Complex								R	69 467,28	
2				Clapham Ventilation Shaft 8										
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	2208387,12	%	2,5%	R 55 209,68	R	55 209,68	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	363,90	m³/km	R 39,18	R 14 257,60	R	14 257,60	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R	54 984,12	
6				Driekop Ventilation Shaft 9										
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6.1	1547299,80	%	2,5%	R 38 682,50	R	38 682,50	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	416,07	m³/km	R 39,18	R 16 301,62	R	16 301,62	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R	-	
10												R	-	
11					Not Applicable	Yes	1.1	0,00	na	R -	R -	R	-	
SUB-TOTAL 1												R	124 451,40	
Preliminaries and General Contingency						6%						R	7 467,08	
10%												R	12 445,14	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	19 912,22	
GRAND-TOTAL												R	144 363,62	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2028		
1.8		WASTE DISPOSAL											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 69 467,28	
2				Clapham Ventilation Shaft 8									
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	2208387,12	%	2,5%	R 55 209,68	R 55 209,68	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	363,90	m³/km	R 39,18	R 14 257,60	R 14 257,60	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R 54 984,12	
6				Driekop Ventilation Shaft 9									
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	1547299,80	%	2,5%	R 38 682,50	R 38 682,50	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	416,07	m³/km	R 39,18	R 16 301,62	R 16 301,62	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R -	
10												R -	
11					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 124 451,40	
Preliminaries and General												R 7 467,08	
Contingency												R 12 445,14	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 19 912,22	
GRAND-TOTAL												R 144 363,62	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2029		
1.8		WASTE DISPOSAL											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 211 056,86	
2				Clapham Ventilation Shaft 8									
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	4358041,62	%	2,5%	R 108 951,04	R 108 951,04	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	2606,07	m³/km	R 39,18	R 102 105,82	R 102 105,82	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R 54 984,12	
6				Driekop Ventilation Shaft 9									
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	1547299,80	%	2,5%	R 38 682,50	R 38 682,50	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	416,07	m³/km	R 39,18	R 16 301,62	R 16 301,62	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R -	
10												R -	
11					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 266 040,98	
Preliminaries and General												R 15 962,46	
Contingency												R 26 604,10	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 42 566,56	
GRAND-TOTAL												R 308 607,54	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

INFRASTRUCTURAL ASPECTS						Closure Forecast					2030		
1.8		WASTE DISPOSAL											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 211 056,86	
2				Clapham Ventilation Shaft 8									
3			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	4358041,62	%	2,5%	R 108 951,04	R 108 951,04	2.5% of total demolition cost.
4			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	2606,07	m³/km	R 39,18	R 102 105,82	R 102 105,82	2km for load and haul of total inert waste and to be dumped into shaft.
5				Driekop Shaft Complex								R 54 984,12	
6				Driekop Ventilation Shaft 9									
7			Y2021	Sorting & Screening of Waste	Sorting and screening of waste	Yes	6,1	1547299,80	%	2,5%	R 38 682,50	R 38 682,50	2.5% of total demolition cost.
8			Y2021	Disposal of Waste	Load and haul for 2km distance	Yes	9.6.3	416,07	m³/km	R 39,18	R 16 301,62	R 16 301,62	2km for load and haul of total inert waste and to be dumped into shaft.
9				Tailings Complex								R -	
10												R -	
11					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 266 040,98	
Preliminaries and General												R 15 962,46	
Contingency												R 26 604,10	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 42 566,56	
GRAND-TOTAL												R 308 607,54	

Marula Platinum
Ventilation Shaft 8 & 9 - EMPr Amendment

SUMMARY - GENERAL ASPECTS												
5	GENERAL CLOSURE COMPONENTS & CRITERIA		Premature Closure	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast	Closure Forecast
ID	COMPONENT	CLOSURE CRITERIA	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
5,1	GENERAL SURFACES	Infrastructural footprints: i. Shape and level area ii. Fill voids and make the area free draining iii. Rip 500mm deep iv. Import 250mm topsoil from the local stockpile onto the levelled surface v. Ameliorate and vegetate	R -	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 721 389,55	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40	R 1 394 937,40
5,2	POST CLOSURE MONITORING AND MAINTENANCE	Surface water monitoring: i. Allowance was made for 4 monitoring points Groundwater monitoring: i. Allowance was made for a period of 40 years post closure with a quarterly sampling frequency ii. Allowance was made for 8 monitoring points Biomonitoring: i. Allowance was made for 4 monitoring points Air Quality monitoring: i. Allowance was made for 4 monitoring points	R -	R 12 989,06	R 12 989,06	R 12 989,06	R 27 712,69	R 27 753,03	R 27 753,03	R 27 753,03	R 27 753,03	R 12 989,06
5,3	SPECIALIST STUDIES	Not Applicable	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
SUB-TOTAL 1			R -	R 1 407 926,46	R 1 407 926,46	R 1 407 926,46	R 1 749 102,24	R 1 422 690,43	R 1 422 690,43	R 1 422 690,43	R 1 422 690,43	R 1 407 926,46

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Premature Closure						2021		
5,1		GENERAL SURFACES												
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes	
1				Clapham Shaft Complex									R	-
2				Clapham Ventilation Shaft 8										
3	00-GA	A2	Y2021	General Surface Reclamation										
4				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	-	
5				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -	-	
6				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -	-	
7				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -	-	
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area										
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	-	
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -	-	
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -	-	
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -	-	
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area										
14				Liner	Removal of single HDPE liner	No	6.4	0,00	m²	R 10,24	R -	R -	-	
19														
20				Driekop Shaft Complex									R	-
21				Driekop Ventilation Shaft 9										
22	00-GA	A1	Y2021	General Surface Reclamation										
23				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	-	
24				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -	-	
25				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -	-	
26				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -	-	
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area										
28				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	-	
29				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -	-	
30				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -	-	
31				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -	-	
32														
33				Tailings Complex									R	-
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	-	
SUB-TOTAL 1												R	-	
Preliminaries and General Contingency 6%												R	-	
10%												R	-	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	-	
GRAND-TOTAL												R	-	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2022			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
Clapham Shaft Complex												R	1 350 217,93		
Clapham Ventilation Shaft 8															
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Construction to commence in 2023		
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -			
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability. Class 3 waste assume facility is lined with HDPE liner		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00			
19	Driekop Shaft Complex												R	44 719,47	
21	Driekop Ventilation Shaft 9														
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Construction to commence in 2023		
28				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -			
29				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
30				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
31				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
32	Tailings Complex												R	-	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 394 937,40		
Preliminaries and General Contingency						6%						R	83 696,24		
						10%						R	139 493,74		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	223 189,98		
GRAND-TOTAL												R	1 618 127,39		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2023			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
Clapham Shaft Complex												R	1 350 217,93		
Clapham Ventilation Shaft 8															
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Area of disturbance for the establishment of water supply pipelines = 1,30Ha		
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	Construction to commence in 2023		
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability.		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00	Class 3 waste assume facility is lined with HDPE liner		
19															
20	Driekop Shaft Complex												R	44 719,47	
21	Driekop Ventilation Shaft 9														
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Construction to commence in 2023		
28				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,00	ha	R 62 669,86	R -	R -			
29				Transport	Load and haul for 3km distance	Yes	9.6.4	0,00	m³/km	R 46,89	R -	R -			
30				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,00	ha	R 14 659,31	R -	R -			
31				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,00	ha	R 15 658,65	R -	R -			
32															
33	Tailings Complex												R	-	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 394 937,40		
Preliminaries and General Contingency						6%						R	83 696,24		
						10%						R	139 493,74		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	223 189,98		
GRAND-TOTAL												R	1 618 127,39		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2024			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
Clapham Shaft Complex												R	1 350 217,93		
Clapham Ventilation Shaft 8															
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Area of disturbance for the establishment of water supply pipelines = 1,30Ha		
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	Construction to be completed in 2024		
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability.		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00	Class 3 waste assume facility is lined with HDPE liner		
19															
20	Driekop Shaft Complex												R	44 719,47	
21	Driekop Ventilation Shaft 9														
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Area of disturbance for the establishment of water supply pipelines = 1,30Ha		
28				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,00	ha	R 62 669,86	R -	R -	Construction to be completed in 2024		
29				Transport	Load and haul for 3km distance	Yes	9.6.4	0,00	m³/km	R 46,89	R -	R -			
30				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,00	ha	R 14 659,31	R -	R -			
31				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,00	ha	R 15 658,65	R -	R -			
32															
33	Tailings Complex												R	-	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 394 937,40		
Preliminaries and General Contingency						6%						R	83 696,24		
						10%						R	139 493,74		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	223 189,98		
GRAND-TOTAL												R	1 618 127,39		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2025			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
1				Clapham Shaft Complex									R	1 582 759,19	
2				Clapham Ventilation Shaft 8											
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Area of disturbance for the establishment of water supply pipelines = 1,30Ha		
9				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,65	ha	R 62 669,86	R 40 735,41	R 40 735,41	Assume 50% of footprint		
10				Transport	Load and haul for 3km distance	Yes	9.6.4	3250,00	m³/km	R 46,89	R 152 392,50	R 152 392,50	250mm thick layer from local stockpiles		
11				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,30	ha	R 14 659,31	R 19 057,10	R 19 057,10	500 mm Deep ripping		
12				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,30	ha	R 15 658,65	R 20 356,25	R 20 356,25	Includes soil amelioration, cultivation and seeding actions		
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability.		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00	Class 3 waste assume facility is lined with HDPE liner		
19				Driekop Shaft Complex									R	138 630,36	
20				Driekop Ventilation Shaft 9											
21				Driekop Ventilation Shaft 9											
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Area of disturbance for the establishment of water supply pipelines = 1,30Ha		
28				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,26	ha	R 62 669,86	R 16 450,84	R 16 450,84	Assume 50% of footprint		
29				Transport	Load and haul for 3km distance	Yes	9.6.4	1312,50	m³/km	R 46,89	R 61 543,13	R 61 543,13	250mm thick layer from local stockpiles		
30				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,53	ha	R 14 659,31	R 7 696,14	R 7 696,14	500 mm Deep ripping		
31				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,53	ha	R 15 658,65	R 8 220,79	R 8 220,79	Includes soil amelioration, cultivation and seeding actions		
32				Tailings Complex									R	-	
33				Tailings Complex											
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 721 389,55		
Preliminaries and General Contingency						6%						R	103 283,37		
Contingency						10%						R	172 138,96		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	275 422,33		
GRAND-TOTAL												R	1 996 811,88		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2026			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
Clapham Shaft Complex												R	1 350 217,93		
Clapham Ventilation Shaft 8															
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -			
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability. Class 3 waste assume facility is lined with HDPE liner		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00			
19	Driekop Shaft Complex												R	44 719,47	
21	Driekop Ventilation Shaft 9														
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
28				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -			
29				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
30				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
31				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
32	Tailings Complex												R	-	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 394 937,40		
Preliminaries and General Contingency						6%						R	83 696,24		
						10%						R	139 493,74		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	223 189,98		
GRAND-TOTAL												R	1 618 127,39		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2027			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
Clapham Shaft Complex												R	1 350 217,93		
Clapham Ventilation Shaft 8															
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -			
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability. Class 3 waste assume facility is lined with HDPE liner		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00			
19	Driekop Shaft Complex												R	44 719,47	
21	Driekop Ventilation Shaft 9														
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
28				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	Surface rehabilitation completed in 2025		
29				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
30				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
31				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
32	Tailings Complex												R	-	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 394 937,40		
Preliminaries and General Contingency						6%						R	83 696,24		
						10%						R	139 493,74		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	223 189,98		
GRAND-TOTAL												R	1 618 127,39		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2028	
5,1 GENERAL SURFACES													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 1 350 217,93	
2				Clapham Ventilation Shaft 8									
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -	
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -	
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -	
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability. Class 3 waste assume facility is lined with HDPE liner
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00	
19				Driekop Shaft Complex								R 44 719,47	
20				Driekop Ventilation Shaft 9									
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025
28				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	Surface rehabilitation completed in 2025
29				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -	
30				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -	
31				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -	
32				Tailings Complex								R -	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 1 394 937,40	
Preliminaries and General Contingency						6%						R 83 696,24	
10%												R 139 493,74	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 223 189,98	
GRAND-TOTAL												R 1 618 127,39	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2029			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
Clapham Shaft Complex												R	1 350 217,93		
Clapham Ventilation Shaft 8															
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -			
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability. Class 3 waste assume facility is lined with HDPE liner		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00			
19	Driekop Shaft Complex												R	44 719,47	
21	Driekop Ventilation Shaft 9														
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
28				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	Surface rehabilitation completed in 2025		
29				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
30				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
31				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
32	Tailings Complex												R	-	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 394 937,40		
Preliminaries and General Contingency						6%						R	83 696,24		
						10%						R	139 493,74		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	223 189,98		
GRAND-TOTAL												R	1 618 127,39		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2030			
5,1 GENERAL SURFACES															
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes		
Clapham Shaft Complex												R	1 350 217,93		
Clapham Ventilation Shaft 8															
3	00-GA	A2	Y2021	General Surface Reclamation									1,36ha needs to be rehabilitated.		
4				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,68	ha	R 62 669,86	R 42 615,50	R 42 615,50	Assume 50% of footprint		
5				Transport	Load and haul for 3km distance	Yes	9.6.4	3400,00	m³/km	R 46,89	R 159 426,00	R 159 426,00	250mm thick layer from local stockpiles		
6				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	1,36	ha	R 14 659,31	R 19 936,66	R 19 936,66	500 mm Deep ripping		
7				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	1,36	ha	R 15 658,65	R 21 295,76	R 21 295,76	Includes soil amelioration, cultivation and seeding actions		
8	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
9				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -			
10				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
11				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
12				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
13	00-GA	A4	Y2021	Low Grade ROM Stockpile - Reclamation of disturbed area									General Surface Reclamation already included in the current liability. Class 3 waste assume facility is lined with HDPE liner		
14				Liner	Removal of single HDPE liner	Yes	6.4	108100,00	m²	R 10,24	R 1 106 944,00	R 1 106 944,00			
19	Driekop Shaft Complex												R	44 719,47	
20	Driekop Ventilation Shaft 9														
22	00-GA	A1	Y2021	General Surface Reclamation									0,25ha needs to be rehabilitated.		
23				Dozing	Shaping, levelling of footprint areas (500mm)	Yes	10.1.1	0,13	ha	R 62 669,86	R 7 833,73	R 7 833,73	Assume 50% of footprint		
24				Transport	Load and haul for 3km distance	Yes	9.6.4	625,00	m³/km	R 46,89	R 29 306,25	R 29 306,25	250mm thick layer from local stockpiles		
25				Ripping	Ripping of areas to alleviate compaction	Yes	9.5.1	0,25	ha	R 14 659,31	R 3 664,83	R 3 664,83	500 mm Deep ripping		
26				Establish vegetation	Establishment of vegetation (general)	Yes	10.4.1	0,25	ha	R 15 658,65	R 3 914,66	R 3 914,66	Includes soil amelioration, cultivation and seeding actions		
27	00-GA	A3	Y2021	Water Supply Pipelines - Reclamation of disturbed area									Surface rehabilitation completed in 2025		
28				Dozing	Shaping, levelling of footprint areas (500mm)	No	10.1.1	0,00	ha	R 62 669,86	R -	R -	Surface rehabilitation completed in 2025		
29				Transport	Load and haul for 3km distance	No	9.6.4	0,00	m³/km	R 46,89	R -	R -			
30				Ripping	Ripping of areas to alleviate compaction	No	9.5.1	0,00	ha	R 14 659,31	R -	R -			
31				Establish vegetation	Establishment of vegetation (general)	No	10.4.1	0,00	ha	R 15 658,65	R -	R -			
32	Tailings Complex												R	-	
34					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -			
SUB-TOTAL 1												R	1 394 937,40		
Preliminaries and General Contingency						6%						R	83 696,24		
						10%						R	139 493,74		
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R	223 189,98		
GRAND-TOTAL												R	1 618 127,39		

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Premature Closure					2021		
5,2		POST CLOSURE MONITORING AND MAINTENANCE											
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R -	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,00	ha	R 8 067,74	R -	R -	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R -	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,00	ha	R 8 067,74	R -	R -	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R -	
Preliminaries and General Contingency						0%						R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R -	
GRAND-TOTAL												R -	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2022	
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 10 972,13	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	1,36	ha	R 8 067,74	R 10 972,13	R 10 972,13	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 2 016,94	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,25	ha	R 8 067,74	R 2 016,94	R 2 016,94	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 12 989,06	
Preliminaries and General Contingency						0%						R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 1 298,91	
GRAND-TOTAL												R 14 287,97	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2023	
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 10 972,13	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	1,36	ha	R 8 067,74	R 10 972,13	R 10 972,13	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 2 016,94	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,25	ha	R 8 067,74	R 2 016,94	R 2 016,94	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 12 989,06	
Preliminaries and General Contingency												R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 1 298,91	
GRAND-TOTAL												R 14 287,97	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast						2024	
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 10 972,13	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	1,36	ha	R 8 067,74	R 10 972,13	R 10 972,13	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 2 016,94	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,25	ha	R 8 067,74	R 2 016,94	R 2 016,94	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 12 989,06	
Preliminaries and General Contingency						0%						R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 1 298,91	
GRAND-TOTAL												R 14 287,97	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast					2025		
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 21 460,19	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	2,66	ha	R 8 067,74	R 21 460,19	R 21 460,19	5 years care and maintenance. Reclamation of disturbed area of Water Supply Pipelines included.
4													
5				Driekop Shaft Complex								R 6 252,50	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,78	ha	R 8 067,74	R 6 252,50	R 6 252,50	5 years care and maintenance. Reclamation of disturbed area of Water Supply Pipelines included.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 27 712,69	
Preliminaries and General Contingency						0%						R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 2 771,27	
GRAND-TOTAL												R 30 483,96	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast					2026		
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 21 460,19	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	2,66	ha	R 8 067,74	R 21 460,19	R 21 460,19	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 6 292,84	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,78	ha	R 8 067,74	R 6 292,84	R 6 292,84	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 27 753,03	
Preliminaries and General Contingency						0%						R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 2 775,30	
GRAND-TOTAL												R 30 528,33	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast					2027		
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 21 460,19	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	2,66	ha	R 8 067,74	R 21 460,19	R 21 460,19	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 6 292,84	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,78	ha	R 8 067,74	R 6 292,84	R 6 292,84	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 27 753,03	
Preliminaries and General Contingency												R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 2 775,30	
GRAND-TOTAL												R 30 528,33	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast					2028		
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 21 460,19	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	2,66	ha	R 8 067,74	R 21 460,19	R 21 460,19	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 6 292,84	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,78	ha	R 8 067,74	R 6 292,84	R 6 292,84	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 27 753,03	
Preliminaries and General Contingency						0%						R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)						10%						R 2 775,30	
GRAND-TOTAL												R 30 528,33	

Marula Platinum

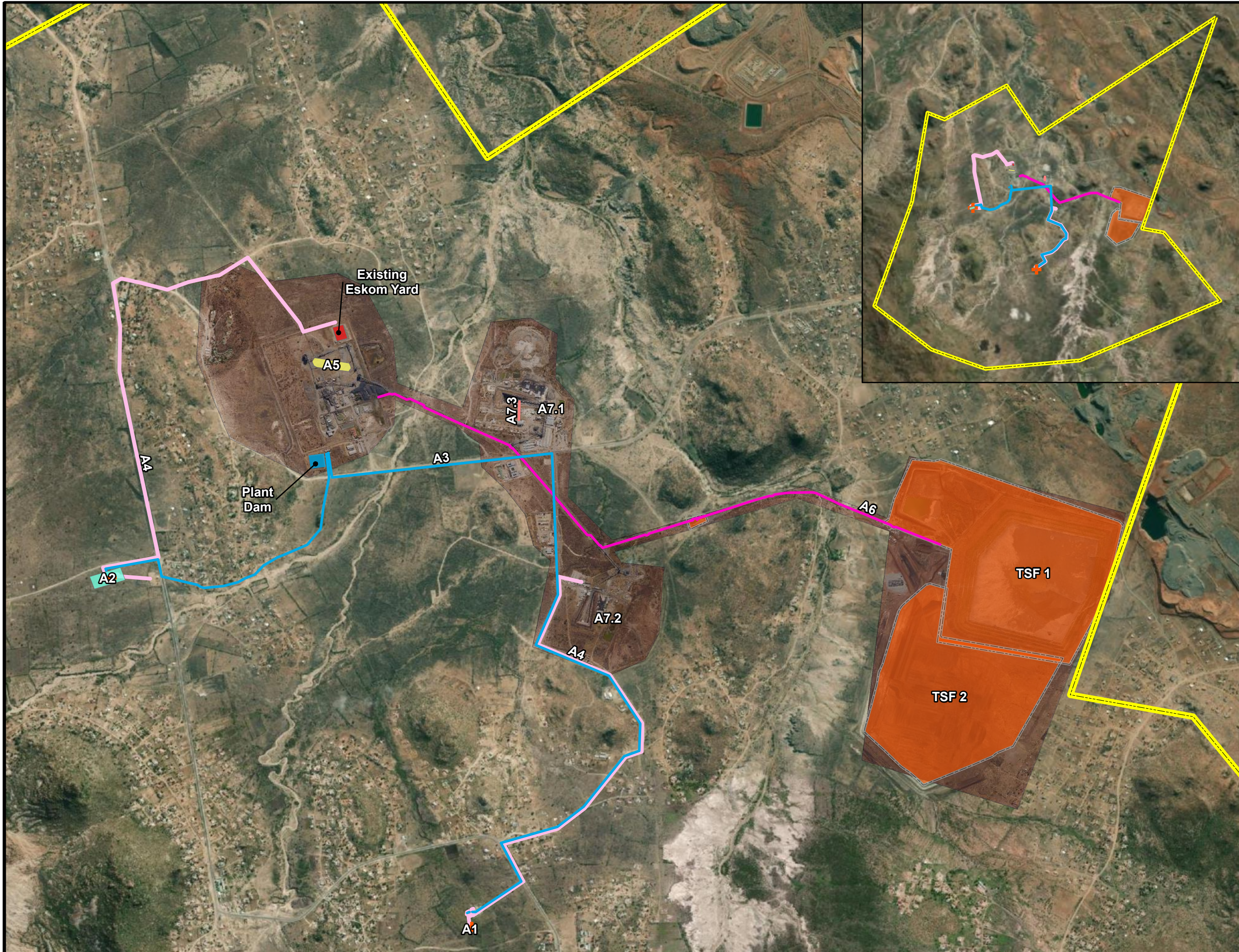
Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast					2029		
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 21 460,19	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	2,66	ha	R 8 067,74	R 21 460,19	R 21 460,19	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 6 292,84	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,78	ha	R 8 067,74	R 6 292,84	R 6 292,84	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 27 753,03	
Preliminaries and General Contingency												R -	
0% 10%												R 2 775,30	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 2 775,30	
GRAND-TOTAL												R 30 528,33	

Marula Platinum

Ventilation Shaft 8 & 9 - EMPr Amendment

GENERAL ASPECTS						Closure Forecast					2030		
5,2 POST CLOSURE MONITORING AND MAINTENANCE													
Line No	Reference Map	GEO Reference	Year Captured	COST COMPONENT	Description	LIABLE	Rate Code	QUANTITY	Unit	Unit Rate	Unit Total	LIABLE VALUE	Notes
1				Clapham Shaft Complex								R 10 972,13	
2				Clapham Ventilation Shaft 8									
3			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	1,36	ha	R 8 067,74	R 10 972,13	R 10 972,13	5 years care and maintenance.
4													
5				Driekop Shaft Complex								R 2 016,94	
6				Driekop Ventilation Shaft 9									
7			Y2021	General Surface Monitoring	Care and maintenance	Yes	12.2.1	0,25	ha	R 8 067,74	R 2 016,94	R 2 016,94	5 years care and maintenance.
8													
9				Tailings Complex								R -	
10					Not Applicable	Yes	1,1	0,00	na	R -	R -	R -	
SUB-TOTAL 1												R 12 989,06	
Preliminaries and General Contingency												R -	
SUB-TOTAL 2 (P&G's AND CONTINGENCIES)												R 1 298,91	
GRAND-TOTAL												R 14 287,97	



- Legend**
- Mine Boundary
 - Tailings Facility
- Description**
- A1 Proposed Ventilation Shaft (Driekop)
 - A2 Proposed Ventilation Shaft (Clapham)
 - A3 Proposed Water Pipelines
 - A4 Proposed Powerlines
 - A5 Proposed ROM Stockpile
 - A6 Proposed TSF Pipeline
 - A7.1 Proposed Clapham Change House
 - A7.2 Proposed Driekop Change House
 - A7.3 Proposed Compressed Airline Upgrade



Coordinate System: WGS 1984 UTM Zone 35S
 Projection: Transverse Mercator
 Datum: WGS 1984
 Central Meridian: 27
 Units: Meter
 Date: November 2021

0 145 290 580 870 1,160 Meters



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CONTRACT :	MARULA PLATINUM
PROJECT DESCRIPTION :	VENTILATION SHAFTS
PROJECT NO :	PN100460
DRAWING NO :	00 - GENERAL ARRANGEMENT

SCALE:	N/A
ORIGINAL MAP SIZE:	A3