

IMPALA PLATINUM (PTY) LTD



Closure Costing Report for Impala Platinum's Proposed 17 Shaft Sewage Plant, 18 Shaft Complex and New Central Sewage Plant



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Appendix A: Revised Closure Cost Estimates 2013.

LIST OF TERMS AND ABBREVIATIONS USED

| TERMS & ABBREVIATIONS | DESCRIPTION |
|---------------------------------|--|
| Care and maintenance | This involves the maintaining and corrective action as requires 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. 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 |
| DMR | Department of Mineral Resources |
| E-TEK | E-TEK Consulting |
| Impala | Impala Platinum (Rustenburg Area) |
| SLR | SLR Consulting |
| Post-closure | The period after mine closure |
| Preliminary and Generals (P&Gs) | This is a key cost item which is directly related to whether 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 de-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 charged items for the contract period |
| Reclamation | The re-instatement 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 |
| Scheduled closure | Closure that happens at the planned date and/or time horizon |
| Site relinquishment | Receipt of closure certificate and handover to third parties for on-going care and maintenance, if required |
| Un-scheduled closure | Immediate closure of a site, representing decommissioning and reclamation of the site in its present state |
| EMPR | Environmental Management Program Report |
| WRD | Waste Rock Dump |

1 INTRODUCTION AND SUMMARY

E-TEK Consulting (E-TEK), was requested by SLR Consulting (SLR) to update the current closure cost estimates for the proposed new 17 Shaft Sewage Plant, 18 Shaft Complex and Central Sewage Plant to be in line with the current scope of work. These operations will be situated within the current mining lease area of Impala Platinum (Impala) Rustenburg operations.

These closure costs were determined to form part of an authorisation process with the Department of Mineral Resources (DMR) for Impala's proposed new projects and are aligned to the DMR guideline document for new EIA/EMP applications.

This report provides the revised closure cost estimates for the scheduled (planned life of mine) closure situation as well as a forecast for the first ten years of operation.

The closure cost estimate is presented in this document according to the categories supported by the **DMR guideline**:¹ namely:

- Infrastructural aspects;
- Mining aspects;
- General surface reclamation;
- Water management;
- Post closure aspects; and
- Additional allowances.

The closure cost estimates were based on quantities taken from available plans and information supplied by SLR.

The closure cost estimates for the proposed new sewage treatment plant at 17 Shaft Complex for scheduled closure and unscheduled closure year 1 are R600 thousand and R600 thousand respectively as summarized in the table below:

| Closure Costing Summary - 17 Shaft Complex | | | | |
|--|--|-------------------|-------------------|------------------------------|
| Tasks | | Scheduled Closure | | Unscheduled Closure - Year 1 |
| 1 | Closure Aspects | | | |
| 1.1 | Infrastructural aspects | R | 519 324.63 | R 519 324.63 |
| 1.2 | Mining aspects | R | - | R - |
| 1.3 | General surface reclamation | R | - | R - |
| 1.4 | Water management | R | - | R - |
| | SUB - TOTAL 1 (for infrastructural and related structures) | R | 519 324.63 | R 519 324.63 |
| 2 | Post closure aspects | R | - | R - |
| | SUB - TOTAL 2 (for post - closure aspects) | R | - | R - |
| 3 | Additional allowances | | | |
| 3.1 | Preliminary and General | R | 31 159.48 | R 31 159.48 |
| 3.2 | Contingencies | R | 51 932.46 | R 51 932.46 |
| | SUB - TOTAL 3 (for additional allowances) | R | 83 091.94 | R 83 091.94 |
| | Grand - Total (for sub - total 1+2+3) | R | 602 416.57 | R 602 416.57 |

¹ Guideline document for the evaluation of the quantum of closure-related financial provision provided by a mine

The closure cost estimates for the proposed new 18 Shaft Complex for scheduled closure and unscheduled closure year 1 are R58.5 million and R26.8 million respectively as summarized in the table below:

| Closure Costing Summary - 18 Shaft Complex | | | |
|--|--|------------------------|------------------------------|
| Tasks | | Scheduled Closure | Unscheduled Closure - Year 1 |
| 1 | Closure Aspects | | |
| 1.1 | Infrastructural aspects | R 33 052 854.84 | R 15 241 100.30 |
| 1.2 | Mining aspects | R 10 024 923.50 | R 567 724.00 |
| 1.3 | General surface reclamation | R 5 687 200.00 | R 5 687 200.00 |
| 1.4 | Water management | R - | R - |
| | SUB - TOTAL 1 (for infrastructural and related structures) | R 48 764 978.34 | R 21 496 024.30 |
| 2 | Post closure aspects | R 1 767 480.00 | R 1 715 190.00 |
| | SUB - TOTAL 2 (for post - closure aspects) | R 1 944 228.00 | R 1 886 709.00 |
| 3 | Additional allowances | | |
| 3.1 | Preliminary and General | R 2 925 898.70 | R 1 289 761.46 |
| 3.2 | Contingencies | R 4 876 497.83 | R 2 149 602.43 |
| | SUB - TOTAL 3 (for additional allowances) | R 7 802 396.53 | R 3 439 363.89 |
| | Grand - Total (for sub - total 1+2+3) | R 58 511 602.87 | R 26 822 097.19 |

The closure cost estimates for the proposed new Central Sewage Plant for scheduled closure and unscheduled closure year 1 are R1.9 million and R1.9 million respectively as summarized in the table below:

| Closure Costing Summary - Central Sewage Plant | | | |
|--|--|-----------------------|------------------------------|
| Tasks | | Scheduled Closure | Unscheduled Closure - Year 1 |
| 1 | Closure Aspects | | |
| 1.1 | Infrastructural aspects | R 1 307 292.80 | R 1 307 292.80 |
| 1.2 | Mining aspects | R - | R - |
| 1.3 | General surface reclamation | R 303 875.00 | R 303 875.00 |
| 1.4 | Water management | R - | R - |
| | SUB - TOTAL 1 (for infrastructural and related structures) | R 1 611 167.80 | R 1 611 167.80 |
| 2 | Post closure aspects | R 95 865.00 | R 95 865.00 |
| | SUB - TOTAL 2 (for post - closure aspects) | R 105 451.50 | R 105 451.50 |
| 3 | Additional allowances | | |
| 3.1 | Preliminary and General | R 96 670.07 | R 96 670.07 |
| 3.2 | Contingencies | R 161 116.78 | R 161 116.78 |
| | SUB - TOTAL 3 (for additional allowances) | R 257 786.85 | R 257 786.85 |
| | Grand - Total (for sub - total 1+2+3) | R 1 974 406.15 | R 1 974 406.15 |

Detail costing spreadsheet is attached in Appendix A

2 CLOSURE COMPONENTS

The following components were identified for each proposed project and form part of the un-scheduled and scheduled closure costing:

- 18 Shaft Complex:
 - Administration buildings and offices;
 - Change rooms and lamp houses;
 - Stores and workshops;
 - Contractors lay down areas;
 - Wash bays;
 - Fuel handling and storage area,
 - Stockpiles;
 - Explosive magazine;
 - Run of mine (ROM) pad;
 - Haul roads;
 - Temporary access roads;
 - Temporary services (water, electricity);
 - Ventilations Shafts;
 - Main shaft and winder houses;
 - Stormwater dams and settling ponds;
 - Material handling plant;
 - Waste rock dump; and
 - Sewage treatment plant.
- 17 Shaft sewage treatment plant
- Central sewage treatment plant.

3 APPROACH TO COST DETERMINATION

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

- Sourcing and review of all relevant information received from SLR;
- Agreement that no site visit was required as construction of the shaft has not yet commenced. Furthermore, the project team has a good understanding of the general site conditions and nature of operations at Impala due to involvement in the closure costing for the whole of Impala's current Rustenburg Operations;
- Based on the review of available information, identification of infrastructure and mining-related activities that would need to be decommissioned at closure;
- Determination of the various components of demolition or rehabilitation related to each structure and/or area;
- Updating the Bill of Quantities capturing the quantities and actions relating to closure of these complexes;
- Unit rates used were obtained from E-TEK's existing data base and in consultation with demolition and earthworks contractors;
- Application of the above-mentioned unit rates and associated quantities to determine the latest closure cost estimates;
- Forecasting the first ten operational years of the increase/fluctuation in closure costs for the proposed shaft complexes; and
- A closure report to summarize the approach, assumptions and findings of the closure costing.

4 INFORMATION

Closure costing was based on the following information:

- Figure 21, Surface layout plan;
- DWG drawing 18 Shaft Complex;
- Correspondence from SLR regarding updated project information;
- Knight Piesold (July, 2009): Recommendations for waste rock dumps. Report 301 00195/01; and
- Golder closure report and costing for 2012. Report 10612628-10781-3.

5 CLOSURE CRITERIA

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

5.1 General assumptions

- The closure cost estimate is aligned to the Guideline Document for the Evaluation of the Quantum of Closure Related Financial Provision Provided by a Mine, by the DMR (January, 2004);
- 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, re- training /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 establishment costs for the contractors and hence, the allowance for preliminary and general (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;
- Closure costs have been determined for both the scheduled and un-scheduled closure situations. Specifically, scheduled closure takes place at a planned date and/or within a time horizon, in accordance with overall mine planning. Un-scheduled closure entails immediate closure of a site, representing decommissioning and reclamation of the site in its present state;
- In accordance with the DMR guideline, no cost off-sets due to possible salvage values were considered and gross reclamation costs are reported; and
- Fixed percentages for P&Gs and contingencies as per the DMR guideline have been applied.

5.2 Site specific assumptions

- As the project is still in the planning phase, no development and site disturbance has taken place;
- Allowance was made for the disposal of general demolition waste within a 30 km radius;
- No allowance were made for the removal of roads outside the shafts zone of responsibility as they could serve the surrounding community post closure;
- All steel and salvageable equipment which as a salvage value will be taken down and stored for sale to third parties. However, as per the DMR guideline the salvage value of steel has not been considered as part of the closure costing;
- Sewage treatment plants have been allowed for at each shaft area, an alternative for a central sewage treatment plant to cater for the 2 shafts combined have also been cost. As there is currently uncertainty on which option will be chosen all options have been cost so that adequate provision is available for either options;

- Impala is not the surface rights owner and surface areas are leased from the Bafokeng; and
- Local communities are situated in close proximity of mining operations.

6 CLOSURE COSTING

6.1 PROJECT SCHEDULE

The following project schedules were assumed for completion of the proposed new projects:

- 17 Shaft sewage treatment plant, Commence in Year 1 of operation and completed in Year 1 of operation;
- 18 Shaft Complex, Commence in Year 1 of operation and completed in Year 2 of operation; and
- Central Sewage treatment Plant, Commence in Year 1 of operation and completed in Year 1 of operation.

Detailed spreadsheets for the closure cost estimates for this report are included in Appendix A. The following sub-headings describe all criteria and assumptions used for closure costing.

6.2 INFRASTRUCTURAL ASPECTS

The closure criteria for the following closure cost components are the same for un-scheduled and scheduled closure:

6.2.1 Processing plants, steel structures, reinforced concrete structures, offices, workshops, residential buildings and related structures

- A nominal allowance was made for the removal of salvageable equipment;
- Provision was made for a crane to assist in the removal of salvageable equipment and demolition purposes;
- All infrastructure will be completely dismantled;
- All foundations and subsurface infrastructure will be removed 500 mm below natural ground level (NGL);
- It was assumed that all metal and steel waste will be salvaged, but no allowance was made to offset the scrap value of the steel and metal. Allowance is incorporated in the demolition rate for steel and related material to be load and hauled for a 30 km distance;
- Eskom sub-stations were excluded from these calculations and stays the responsibility of Eskom; and
- General surface rehabilitation will be implemented on footprint areas.

6.2.2 Linear items

- All overland conveyors will be removed including footings;
- All the perimeter fencing will be removed once rehabilitation in the inside perimeter is completed and signed off;
- All delivery pipelines will be removed; and
- All power lines that do not form part of Eskom's supply network will be removed.

No allowance was made for the removal of the new intended sewage pipeline located at 17 Shaft to the intended central sewage treatment plant as the pipeline is buried more than 500 mm below natural ground level.

6.2.3 Roads

- No allowance were made for the removal of roads outside the shafts zone of responsibility as they could serve the surrounding community post closure;
- It was assumed that road areas within the shaft and plant complexes will be rehabilitated as part of the general surface rehabilitation of that specific complex;

6.2.4 Waste

- A 2.5% allowance of the total demolition costs for infrastructural aspects was made for the sorting and screening of waste; and
- Additional allowance was made to load and haul demolition waste and dispose of at a licenced disposal facility within a 30 km radius.

6.3 MINING ASPECTS

The closure criteria for the following closure cost components are the same for scheduled and unscheduled closure:

6.3.1 No 18 Shaft

- Provision was made for the complete dismantling of the headgear and related infrastructure;
- Allowance was made for the dismantling of ventilation fan and cooling towers and related infrastructure; and
- Allowance was made to cap all vertical shafts according to the DMR guideline document.

6.3.2 Stormwater dams and settling ponds

- Allowance was made to remove the concrete liners and dispose of at a licensed disposal facility;
- It was assumed that the dam wall will be breached and the material will be dozed inwards to fill the dam basin;
- Allowance was made to remove a 100 mm thick layer of material from the stormwater dam basin and 300 mm thick material from the settling ponds basin. This material can be disposed of on top of the tailings dams before rehabilitation of the tailings dams commences; and
- Additional allowance was made to establish vegetation which includes soil amelioration cultivation and seeding actions with indigenous grass seed mixture.

6.3.3 Waste rock dump

- The dump will be reshaped to decrease slope angles to at least 1:3 (V:H), a 800 mm capping layer will be placed as prescribed in the Knight Piesold recommendations for waste rock dumps and vegetated; and
- It is stated that concurrent rehabilitation will take place during the operational phase, but it was assumed that a 20 m strip will require rehabilitation at any given time.

6.4 GENERALSURFACE RECLAMATION

The closure criteria for the following closure cost components are the same for scheduled and unscheduled closure:

- General
 - Rehabilitation of disturbed footprint areas;
- Closure Criteria
 - Disturbed areas will be reshaped and levelled filling all voids and making area free draining;
 - Allowance was made to rip the disturbed area to a depth of 500mm to alleviate compaction;

- Allowance was made to import 250mm topsoil from the local stockpile onto the levelled surface; and
- Additional allowance was made to establish vegetation which includes soil amelioration cultivation and seeding actions with indigenous grass seed mixture.

6.5 Water management

Not applicable, forms part of the greater Impala operation.

6.6 Post closure aspects

The closure criteria for the following closure cost components are the same for scheduled and unscheduled closure:

6.6.1 Surface water monitoring

- It has been assumed that surface water quality monitoring has to continue at a monthly frequency for at least five years post-closure; and
- Allowance was made for six monitoring points.

6.6.2 Groundwater monitoring

- It has been assumed that ground water quality monitoring has to continue at a quarterly frequency for a period of at least five years post-closure; and
- Allowance was made for eight monitoring points.

6.6.3 Reclamation monitoring

- An allowance has been included for the reclamation monitoring of both reclaimed areas and dumps for a 5 year period.

6.6.4 Care and maintenance

- Care and maintenance of the reclaimed areas and dumps, over a 5 year period, has been assumed.

6.7 Additional allowances

The closure criteria for the following closure cost components are the same for scheduled and unscheduled closure:

6.7.1 Preliminary and general

- Additional allowance of twelve per cent of the total for infrastructural and related aspects (sub-total 1 on summary costing table) has been made, which is aligned to the DMR guideline.

6.7.2 Contingencies

- Additional allowance of ten per cent of the total for infrastructure and related aspects (sub-total 1 on summary costing table), which is aligned to the DMR guidelines.

7 CONCLUSION AND WAY FORWARD

7.1 CONCLUSION

The closure costs as reflected in this report have been based on information obtained from SLR. 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 data base 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.

7.2 WAY FORWARD

Certain gaps remain to improve the accuracy of the liability for future updates, these gaps are as follows:

- A more detailed programme regarding the development of the proposed new projects. As the costing is detailed over ten years, numerous assumptions were made regarding sequencing of construction and development activities; and
- More detailed investigation or trials should be conducted to assess the cover/capping options for the WRD in order to assess the suitability of the on-site black clays as a capping material, especially at steep gradients.
- All options regarding the sewage treatment plant have been costed. Over provision is currently made so it is recommended that when a final option is chosen that the cost estimates are to be updated to address the current site situation.

8 DOCUMENT LIMITATIONS

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- i) This Document has been prepared for the particular purpose outlined in E-TEK’s proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.
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Appendix A: Revised Closure Cost Estimates 2013.

| Closure Costing - Executive Summary | | | | |
|-------------------------------------|--|-------------------|----------------------|------------------------------|
| Tasks | | Scheduled Closure | | UnScheduled Closure - Year 1 |
| 1 | Closure Aspects | | | |
| 1.1 | Infrastructural aspects | R | 34 879 472.26 | R 17 067 717.73 |
| 1.2 | Mining aspects | R | 10 024 923.50 | R 567 724.00 |
| 1.3 | General surface reclamation | R | 5 991 075.00 | R 5 991 075.00 |
| 1.4 | Water management | R | - | R - |
| | SUB - TOTAL 1 (for infrastructural and related structures) | R | 50 895 470.76 | R 23 626 516.73 |
| 2 | Post closure aspects | R | 1 863 345.00 | R 1 811 055.00 |
| | SUB - TOTAL 2 (for post - closure aspects) | R | 2 049 679.50 | R 1 992 160.50 |
| 3 | Additional allowances | | | |
| 3.1 | Preliminary and General | R | 3 053 728.25 | R 1 417 591.00 |
| 3.2 | Contingencies | R | 5 089 547.08 | R 2 362 651.67 |
| | SUB - TOTAL 3 (for additional allowances) | R | 8 143 275.32 | R 3 780 242.68 |
| | Grand - Total (for sub - total 1+2+3) | R | 61 088 425.58 | R 29 398 919.90 |

| Closure Costing Summary - 17 Shaft Complex | | | | | | | | | | | |
|---|-------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|
| Tasks | Scheduled Closure | Unscheduled Closure - Year 1 | Unscheduled Closure - Year 2 | Unscheduled Closure - Year 3 | Unscheduled Closure - Year 4 | Unscheduled Closure - Year 5 | Unscheduled Closure - Year 6 | Unscheduled Closure - Year 7 | Unscheduled Closure - Year 8 | Unscheduled Closure - Year 9 | Unscheduled Closure - Year 10 |
| 1 Closure Aspects | | | | | | | | | | | |
| 1.1 Infrastructural aspects | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 |
| 1.2 Mining aspects | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| 1.3 General surface reclamation | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| 1.4 Water management | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| SUB - TOTAL 1 (for infrastructural and related structures) | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 | R 519 324.63 |
| 2 Post closure aspects | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| SUB - TOTAL 2 (for post - closure aspects) | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| 3 Additional allowances | | | | | | | | | | | |
| 3.1 Preliminary and General | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 | R 31 159.48 |
| 3.2 Contingencies | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 | R 51 932.46 |
| SUB - TOTAL 3 (for additional allowances) | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 | R 83 091.94 |
| Grand - Total (for sub- total 1+2+3) | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 | R 602 416.57 |

| Closure Costing Summary - 18 Shaft Complex | | | | | | | | | | | |
|--|-------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|
| Tasks | Scheduled Closure | Unscheduled Closure - Year 1 | Unscheduled Closure - Year 2 | Unscheduled Closure - Year 3 | Unscheduled Closure - Year 4 | Unscheduled Closure - Year 5 | Unscheduled Closure - Year 6 | Unscheduled Closure - Year 7 | Unscheduled Closure - Year 8 | Unscheduled Closure - Year 9 | Unscheduled Closure - Year 10 |
| 1 Closure Aspects | | | | | | | | | | | |
| 1.1 Infrastructural aspects | R 33 052 854.84 | R 15 241 100.30 | R 33 052 854.84 | R 33 052 854.84 | R 33 052 854.84 | R 33 052 854.84 | R 33 052 854.84 | R 33 052 854.84 | R 33 052 854.84 | R 33 052 854.84 | R 33 052 854.84 |
| 1.2 Mining aspects | R 10 024 923.50 | R 567 724.00 | R 10 024 923.50 | R 10 024 923.50 | R 10 024 923.50 | R 10 024 923.50 | R 10 024 923.50 | R 10 024 923.50 | R 10 024 923.50 | R 10 024 923.50 | R 10 024 923.50 |
| 1.3 General surface reclamation | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 | R 5 687 200.00 |
| 1.4 Water management | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| SUB - TOTAL1 (for infrastructural and related structures) | R 48 764 978.34 | R 21 496 024.30 | R 48 764 978.34 | R 48 764 978.34 | R 48 764 978.34 | R 48 764 978.34 | R 48 764 978.34 | R 48 764 978.34 | R 48 764 978.34 | R 48 764 978.34 | R 48 764 978.34 |
| 2 Post Closure aspects | R 1 767 480.00 | R 1 715 190.00 | R 1 767 480.00 | R 1 767 480.00 | R 1 767 480.00 | R 1 767 480.00 | R 1 767 480.00 | R 1 767 480.00 | R 1 767 480.00 | R 1 767 480.00 | R 1 767 480.00 |
| SUB - TOTAL2 (for post - closure aspects) | R 1 944 228.00 | R 1 886 709.00 | R 1 944 228.00 | R 1 944 228.00 | R 1 944 228.00 | R 1 944 228.00 | R 1 944 228.00 | R 1 944 228.00 | R 1 944 228.00 | R 1 944 228.00 | R 1 944 228.00 |
| 3 Additional allowances | | | | | | | | | | | |
| 3.1 Preliminary and General | R 2 925 898.70 | R 1 269 761.46 | R 2 925 898.70 | R 2 925 898.70 | R 2 925 898.70 | R 2 925 898.70 | R 2 925 898.70 | R 2 925 898.70 | R 2 925 898.70 | R 2 925 898.70 | R 2 925 898.70 |
| 3.2 Contingencies | R 4 876 497.83 | R 2 149 602.43 | R 4 876 497.83 | R 4 876 497.83 | R 4 876 497.83 | R 4 876 497.83 | R 4 876 497.83 | R 4 876 497.83 | R 4 876 497.83 | R 4 876 497.83 | R 4 876 497.83 |
| SUB - TOTAL3 (for additional allowances) | R 7 802 396.53 | R 3 439 363.89 | R 7 802 396.53 | R 7 802 396.53 | R 7 802 396.53 | R 7 802 396.53 | R 7 802 396.53 | R 7 802 396.53 | R 7 802 396.53 | R 7 802 396.53 | R 7 802 396.53 |
| Grand - Total (for sub - total 1+2+3) | R 58 511 602.87 | R 26 922 097.19 | R 58 511 602.87 | R 58 511 602.87 | R 58 511 602.87 | R 58 511 602.87 | R 58 511 602.87 | R 58 511 602.87 | R 58 511 602.87 | R 58 511 602.87 | R 58 511 602.87 |

| Closure Costing Summary - Central Sewage Plant | | | | | | | | | | | |
|---|-------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|
| Tasks | Scheduled Closure | Unscheduled Closure - Year 1 | Unscheduled Closure - Year 2 | Unscheduled Closure - Year 3 | Unscheduled Closure - Year 4 | Unscheduled Closure - Year 5 | Unscheduled Closure - Year 6 | Unscheduled Closure - Year 7 | Unscheduled Closure - Year 8 | Unscheduled Closure - Year 9 | Unscheduled Closure - Year 10 |
| 1 Closure Aspects | | | | | | | | | | | |
| 1.1 Infrastructure aspects | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 | R 1 307 292.80 |
| 1.2 Mining aspects | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| 1.3 General surface reclamation | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 | R 303 875.00 |
| 1.4 Water management | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - | R - |
| SUB - TOTAL 1 (for infrastructural and related structures) | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 | R 1 611 167.80 |
| 2 Post closure aspects | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 | R 95 865.00 |
| SUB - TOTAL 2 (for post - closure aspects) | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 | R 105 451.50 |
| 3 Additional allowances (for post - closure aspects) | | | | | | | | | | | |
| 3.1 Preliminary and General | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 | R 96 670.07 |
| 3.2 Contingencies | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 | R 161 116.78 |
| SUB - TOTAL 3 (for additional allowances) | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 | R 257 786.85 |
| Grand - Total (for sub - total 1+2+3) | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 | R 1 974 406.15 |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - <i>Scheduled</i> | | | | | |
|------------------------------------|----|---|----------------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - <i>Year 1</i> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | Only certain infrastructure developed |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolition waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | | Closure Costs - Year 2 | | | | |
|------------------------------------|----|---|----------------|------------------------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - Year 3 | | | | | |
|------------------------------------|----|---|------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - <i>Year 4</i> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - Year 5 | | | | | |
|------------------------------------|----|---|------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - Year 6 | | | | | |
|------------------------------------|----|---|------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - Year 7 | | | | | |
|------------------------------------|----|---|------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - Year 8 | | | | | |
|------------------------------------|----|---|------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - Year 9 | | | | | |
|------------------------------------|----|---|------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolitioning waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 17 Shaft Complex | | | Closure Costs - Year 10 | | | | | |
|------------------------------------|----|---|-------------------------|-------|--------------|--------------|--------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Sewage treatment plant | | | | | | |
| 8 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 9 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 10 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 11 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 12 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 13 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 14 | | Sub - Total for demolitioning of plant and related structures | | | | | R 391 965.00 | |
| 15 | | Demolitioning of all structural structures | | | | | | |
| 16 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 17 | | Sub - Total for demolitioning of all structural structures | | | | | R - | |
| 18 | | Demolitioning of workshops and stores | | | | | | |
| 19 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 20 | | Sub - Total for demolitioning of workshops and stores | | | | | R - | |
| 21 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 22 | | Booster pump station | 3.2.1 | m² | 25.00 | R 480.00 | R 12 000.00 | Normal single story building |
| 23 | | Inspection manholes | 3.1.1 | m² | 140.00 | R 295.00 | R 41 300.00 | Assume every 50m a manhole |
| 24 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 53 300.00 | |
| 25 | | Removal of all surface related finishes | | | | | | |
| 26 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 27 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 28 | | Removal of all linear items | | | | | | |
| 29 | | PVC sewage delivery pipeline | 1.1 | na | 0.00 | R - | R - | Will remain buried post closure |
| 30 | | Sub - Total for removal of all linear items | | | | | R - | |
| 31 | | Rehabilitation of roads | | | | | | |
| 32 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 33 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 34 | | Disposal of demolition waste | | | | | | |
| 35 | | Sorting and screening of demolition waste | 6.1 | % | R 445 265.00 | 2.5% | R 11 131.63 | 2.50% |
| 36 | | Disposal of demolition waste | 9.6.7 | m²/km | 368.00 | R 171.00 | R 62 928.00 | Allowance was made for a 30km radius |
| 37 | | Sub - Total for disposal of demolition waste | | | | | R 74 059.63 | |
| 38 | | Sub - Total for infrastructural aspects | | | | | R 519 324.63 | |
| 39 | | | | | | | | |
| 40 | | Mining Aspects | | | | | | |
| 41 | | Open pit reclamation including final voids and ramps | | | | | | |
| 42 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 43 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 44 | | Sealing of shafts and inclines | | | | | | |
| 45 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 46 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 47 | | Rehabilitation of overburden and spoils | | | | | | |
| 48 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 49 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 50 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 51 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 52 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 53 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 54 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 55 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 56 | | Reclamation of subsided areas | | | | | | |
| 57 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 58 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 59 | | Sub - Total for Mining aspects | | | | | R - | |
| 60 | | | | | | | | |
| 61 | | General Surface Reclamation | | | | | | |
| 62 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | Assumed within the greater 17 Shaft area |
| 63 | | Sub - Total for General Surface Reclamation | | | | | R - | |
| 64 | | | | | | | | |
| 65 | | Water Management | | | | | | |
| 66 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 67 | | Sub - Total for Water Management | | | | | R - | |
| 68 | | | | | | | | |
| 69 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 519 324.63 | |
| 70 | | Post - closure aspects | | | | | | |
| 71 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 72 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 73 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 0.00 | R 2 430.00 | R - | Assumed included as part of 17 Shaft |
| 74 | | Care and maintenance of reclaimed areas | 12.4 | ha | 0.00 | R 15 000.00 | R - | Assumed included as part of 17 Shaft |
| 75 | | Sub - Total for Post closure aspects | | | | | R - | |
| 76 | | Contingencies for post closure aspects | 1.2 | sum | R - | 10% | R - | Assumed 10 percent for post closure aspects |
| 77 | | Sub - Total for Contingencies for post closure aspects | | | | | R - | |
| 78 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R - | |
| 79 | | Additional allowances | | | | | | |
| 80 | | Preliminary and General | 1.2 | sum | R 519 324.63 | 6% | R 31 159.48 | Assume 6 percent of sub - total 1 |
| 81 | | Contingencies | 1.2 | sum | R 519 324.63 | 10% | R 51 932.46 | Assume 10 percent of sub - total 1 |
| 82 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 83 091.94 | |
| 83 | | Grand - Total (for sub - total 1+2+3) | | | | | R 602 416.57 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - <i>Scheduled</i> | | | | |
|------------------------------------|----|---|----------------|----------------------------------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m³ | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m³ | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m² | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - <i>Scheduled</i> | | | | |
|------------------------------------|----|--|----------------|----------------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <i>Scheduled</i> | | | | | |
|------------------------------------|----|---|----------------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill voik |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill voik |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - Year 1 | | | | | |
|------------------------------------|----|---|------------------------|-------|----------|--------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 250 000.00 | R 250 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 250 000.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | Only certain infrastructure developed |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 9 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m² | 0.00 | R 610.00 | R - | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 14 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 18 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 22 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 0.00 | R 295.00 | R - | |
| 29 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 37 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 4.4 | m² | 1820.00 | R 215.00 | R 391 300.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 0.00 | R 610.00 | R - | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 50 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 0.00 | R 640.00 | R - | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 537 565.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | Only certain infrastructure developed |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 0.00 | R 1 350.00 | R - | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 0.00 | R 55.00 | R - | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 61 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 0.00 | R 30.00 | R - | |
| 63 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 66 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 0.00 | R 135.00 | R - | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 0.00 | R 400.00 | R - | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 0.00 | R 400.00 | R - | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 2 129 355.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | Only certain infrastructure developed |
| 75 | | Oil store | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 79 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 0.00 | R 30.00 | R - | |
| 81 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 84 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 0.00 | R 30.00 | R - | |
| 86 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 89 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 0.00 | R 30.00 | R - | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 1 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 94 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 0.00 | R 30.00 | R - | |
| 96 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 99 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 0.00 | R 23.00 | R - | |
| 103 | | Structural steel | 2.3.1 | m² | 0.00 | R 135.00 | R - | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 0.00 | R 215.00 | R - | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R - | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | Only certain infrastructure developed |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 0.00 | R 295.00 | R - | Normal single story building |
| 128 | | Transformer bays | | | 0.00 | | | |
| 129 | | Brickwork | 3.5 | m² | 0.00 | R 30.00 | R - | |
| 130 | | Structural concrete | 4.3 | m² | 0.00 | R 400.00 | R - | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 350 755.00 | |
| 134 | | Removal of all surface related finishes | | | | | | Only certain infrastructure developed |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 0.00 | R 400.00 | R - | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 546 150.00 | |
| 140 | | Removal of all linear items | | | | | | Only certain infrastructure developed |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 0.00 | R 27.00 | R - | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 0.00 | R 48.00 | R - | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 410 767.00 | |
| 146 | | Rehabilitation of roads | | | | | | Only certain infrastructure developed |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 12 166 732.00 | 2.5% | R 304 168.30 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 074 368.30 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 15 241 100.30 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 0.00 | R 2 573 324.00 | R - | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 0.00 | R 2 132 000.00 | R - | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 0.00 | R 1 719 458.00 | R - | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 0.00 | R 1 719 458.00 | R - | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - Year 1 | | | | | | |
|------------------------------------|----|---|------------------------|-------|-----------------|--------------|-----------------|---|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes | |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance | |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void | |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining | |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep | |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated | |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 0.00 | R 20.00 | R - | Assume 250mm thick | |
| 189 | | Reshape WRD | 9.1.1 | m³ | 0.00 | R 13.50 | R - | Cut to fill action assumed 20m high at 87.5m³/per meter | |
| 190 | | Import capping layers | 9.6.1 | m³ | 0.00 | R 26.00 | R - | Assumed 1km haul distance | |
| 191 | | Establish vegetation | 10.4.2 | ha | 0.00 | R 19 250.00 | R - | | |
| 192 | | Settling ponds | | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 0.00 | R 20.00 | R - | Assumed 300mm thick contaminated sediment | |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 0.00 | R 73.00 | R - | Dispose of at tailings dump assumed 10km haul distance | |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.00 | R 55 250.00 | R - | Shape and level surface to make free draining | |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.00 | R 9 400.00 | R - | Rip 500mm deep | |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.00 | R 88 400.00 | R - | Assumed from local stockpile | |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.00 | R 13 800.00 | R - | | |
| 199 | | Hot and Cool Well | | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 0.00 | R 20.00 | R - | Assumed 300mm thick contaminated sediment | |
| 201 | | Remove water storage tanks | 1.2 | sum | 0.00 | R 50 000.00 | R - | Nominal allowance | |
| 202 | | Remove HDPE liner | 6.4 | m² | 0.00 | R 6.50 | R - | Assumed dam is lined with a HDPE line | |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 0.00 | R 20.00 | R - | Assume 250mm thick on 50 percent of dam basin | |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 0.00 | R 73.00 | R - | Dispose of at tailings dump assumed 10km haul distance | |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 0.00 | R 220.00 | R - | Doze walls to inside to fill void | |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.00 | R 55 250.00 | R - | Shape and level surface to make free draining | |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.00 | R 9 400.00 | R - | Rip 500mm deep | |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.00 | R 13 800.00 | R - | | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | | |
| 210 | | Reclamation of subsided areas | | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | | |
| 213 | | Sub - Total for Mining aspects | | | | | R 567 724.00 | | |
| 214 | | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | | |
| 216 | | Topsoil stockpile | | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep | |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area | |
| 219 | | Infrastructural areas | | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining | |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep | |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile | |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | | |
| 225 | | | | | | | | | |
| 226 | | Water Management | | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | | |
| 228 | | Sub - Total for Water Management | | | | | R - | | |
| 229 | | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 21 496 024.30 | | |
| 231 | | Post - closure aspects | | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure | |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure | |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 49.00 | R 2 430.00 | R 119 070.00 | Allowed for 5 years post closure | |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 49.00 | R 15 000.00 | R 735 000.00 | Allowed for 5 years post closure | |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 715 190.00 | | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 715 190.00 | 10% | R 171 519.00 | Assumed 10 percent for post closure aspects | |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 171 519.00 | | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 886 709.00 | | |
| 240 | | Additional allowances | | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 21 496 024.30 | 6% | R 1 289 761.46 | Assume 6 percent of sub - total 1 | |
| 242 | | Contingencies | 1.2 | sum | R 21 496 024.30 | 10% | R 2 149 602.43 | Assume 10 percent of sub - total 1 | |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 3 439 363.89 | | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 26 822 097.19 | | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <u>Year 2</u> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m² | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 2 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <i>Year 2</i> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill void |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <u>Year 3</u> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m² | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 3 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - Year 3 | | | | | |
|------------------------------------|----|---|------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill voik |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill voik |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <i>Year 4</i> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m³ | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m³ | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 4 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - Year 4 | | | | | |
|------------------------------------|----|---|------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill voik |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill voik |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <u>Year 5</u> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m² | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m² | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 5 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - Year 5 | | | | | |
|------------------------------------|----|---|------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill void |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <u>Year 6</u> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m³ | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m³ | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 6 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - Year 6 | | | | | |
|------------------------------------|----|---|------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill void |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <u>Year 7</u> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m² | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 7 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - <u>Year 7</u> | | | | |
|------------------------------------|----|---|----------------|-------------------------------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill void |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <u>Year 8</u> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m³ | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m³ | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m² | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 8 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 8 | | | | |
|------------------------------------|----|---|----------------|------------------------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill voik |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill voik |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <u>Year 9</u> | | | | | |
|------------------------------------|----|---|-------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m² | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m² | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 9 | | | | |
|------------------------------------|----|--|----------------|------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - Year 9 | | | | | |
|------------------------------------|----|---|------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill void |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <i>Year 10</i> | | | | | |
|------------------------------------|----|---|--------------------------------|-------|----------|----------------|----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 20.00 | R 6 534.00 | R 130 680.00 | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R 2 500 000.00 | R 2 500 000.00 | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R 2 630 680.00 | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Compressor house | | | | | | |
| 8 | | Sheeting | 2.1 | m² | 1628.00 | R 23.00 | R 37 444.00 | |
| 9 | | Structural steel | 2.3.1 | m² | 963.00 | R 135.00 | R 130 005.00 | Assume 80kg of steel per square meter |
| 10 | | Structural concrete | 4.4 | m² | 963.00 | R 215.00 | R 207 045.00 | Remove concrete floor, foundations and bases |
| 11 | | Concrete plinths | 4.2 | m³ | 380.00 | R 610.00 | R 231 800.00 | Assume concrete is 400mm thick |
| 12 | | Winder House | | | | | | |
| 13 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 14 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 15 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 16 | | Rock Winder House | | | | | | |
| 17 | | Sheeting | 2.1 | m² | 3862.00 | R 23.00 | R 88 826.00 | |
| 18 | | Structural steel | 2.3.1 | m² | 1932.00 | R 135.00 | R 260 820.00 | Assume 80kg of steel per square meter |
| 19 | | Structural concrete | 4.4 | m² | 1932.00 | R 215.00 | R 415 380.00 | Remove concrete floor, foundations and bases |
| 20 | | Emergency winder | | | | | | |
| 21 | | Sheeting | 2.1 | m² | 753.00 | R 23.00 | R 17 319.00 | |
| 22 | | Structural steel | 2.3.1 | m² | 249.00 | R 135.00 | R 33 615.00 | Assume 80kg of steel per square meter |
| 23 | | Structural concrete | 4.4 | m² | 249.00 | R 215.00 | R 53 535.00 | Remove concrete floor, foundations and bases |
| 24 | | Vent Shaft | | | | | | |
| 25 | | Structural steel | 2.3.1 | m² | 1908.00 | R 135.00 | R 257 580.00 | Assume 80kg of steel per square meter |
| 26 | | Structural concrete | 4.4 | m² | 1908.00 | R 215.00 | R 410 220.00 | Remove concrete floor, foundations and bases |
| 27 | | Fridge Shaft | | | | | | |
| 28 | | Ice thermal store | 3.1.1 | m² | 781.00 | R 295.00 | R 230 395.00 | |
| 29 | | Structural steel | 2.3.1 | m² | 218.00 | R 135.00 | R 29 430.00 | Assume 80kg of steel per square meter |
| 30 | | Structural concrete | 4.4 | m² | 218.00 | R 215.00 | R 46 870.00 | Remove concrete floor, foundations and bases |
| 31 | | BAC Shaft | | | | | | |
| 32 | | Plant room | 3.1.1 | m² | 1167.00 | R 295.00 | R 344 265.00 | Normal single story building |
| 33 | | Structural steel | 2.3.1 | m² | 697.00 | R 135.00 | R 94 095.00 | Assume 80kg of steel per square meter |
| 34 | | Structural concrete | 4.4 | m² | 1000.00 | R 215.00 | R 215 000.00 | Remove concrete floor, foundations and bases |
| 35 | | Cooling towers | | | | | | |
| 36 | | Sheeting | 2.1 | m² | 1771.00 | R 23.00 | R 40 733.00 | |
| 37 | | Structural steel | 2.3.1 | m² | 1001.00 | R 135.00 | R 135 135.00 | Assume 80kg of steel per square meter |
| 38 | | Structural concrete | 4.4 | m² | 1001.00 | R 215.00 | R 215 215.00 | Remove concrete floor, foundations and bases |
| 39 | | Sewage treatment plant | | | | | | |
| 40 | | Office | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 41 | | Sludge drying beds | 4.3 | m³ | 79.00 | R 400.00 | R 31 600.00 | Assume concrete is 250mm thick |
| 42 | | Storage tanks | 2.4.2 | no | 3.00 | R 26 650.00 | R 79 950.00 | |
| 43 | | Storage tanks | 2.4.1 | no | 2.00 | R 10 600.00 | R 21 200.00 | |
| 44 | | Structural steel | 2.3.1 | m² | 28.00 | R 135.00 | R 3 780.00 | Assume 80kg of steel per square meter |
| 45 | | Concrete hardstand | 8.4 | m² | 1820.00 | R 135.00 | R 245 700.00 | Remove concrete hardstand with min. reinforcing |
| 46 | | Material transfer towers | | | | | | |
| 47 | | Office | 3.1.1 | m² | 27.00 | R 295.00 | R 7 965.00 | Normal single story building |
| 48 | | Structural concrete (silo) | 4.2 | m³ | 206.00 | R 610.00 | R 125 660.00 | Assume concrete is 350mm thick, silos is 10m high |
| 49 | | Sheeting | 2.1 | m² | 106.00 | R 23.00 | R 2 438.00 | |
| 50 | | Structural steel | 2.3.1 | m² | 106.00 | R 135.00 | R 14 310.00 | Assume 80kg of steel per square meter |
| 51 | | Structural concrete | 4.4 | m² | 106.00 | R 215.00 | R 22 790.00 | Remove concrete floor, foundations and bases |
| 52 | | Suspended conveyors | 5.1.5 | m | 400.00 | R 640.00 | R 256 000.00 | Heavy conveyors |
| 53 | | Sub - Total for demolitioning of plant and related structures | | | | | R 5 080 881.00 | |
| 54 | | Demolitioning of all structural structures | | | | | | |
| 55 | | Headgear | | | | | | |
| 56 | | Structural steel | 2.2 | t | 1900.00 | R 1 350.00 | R 2 565 000.00 | |
| 57 | | Structural concrete | 4.2 | m³ | 285.00 | R 610.00 | R 173 850.00 | Mass reinforced concrete |
| 58 | | Carports | 2.6.1 | m² | 17943.00 | R 55.00 | R 986 865.00 | Assumed IBR sheeting |
| 59 | | Winches | | | | | | |
| 60 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 61 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 62 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 63 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 64 | | Explosives offloading bay | | | | | | |
| 65 | | Sheeting | 2.1 | m² | 679.00 | R 23.00 | R 15 617.00 | |
| 66 | | Structural steel | 2.3.1 | m² | 277.00 | R 135.00 | R 37 395.00 | Assume 80kg of steel per square meter |
| 67 | | Structural concrete | 4.4 | m² | 277.00 | R 215.00 | R 59 555.00 | Remove concrete floor, foundations and bases |
| 68 | | Concrete silt traps | 4.3 | m³ | 318.00 | R 400.00 | R 127 200.00 | Assume concrete is 200mm thick |
| 69 | | Concrete stormwater trench | 8.4 | m² | 13543.00 | R 135.00 | R 1 828 305.00 | Thin concrete with minimal reinforcing |
| 70 | | Backfill plant | 8.4 | m² | 5758.00 | R 135.00 | R 777 330.00 | Thin concrete with minimal reinforcing |
| 71 | | Storage bins | 4.3 | m³ | 456.00 | R 400.00 | R 182 400.00 | Assume concrete is 250mm thick |
| 72 | | Explosives incinerator | 4.3 | m³ | 36.00 | R 400.00 | R 14 400.00 | Assume concrete is 250mm thick |
| 73 | | Sub - Total for demolitioning of all structural structures | | | | | R 7 111 475.00 | |
| 74 | | Demolitioning of workshops and stores | | | | | | |
| 75 | | Oil store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 76 | | Chemical store | 3.1.1 | m² | 407.00 | R 295.00 | R 120 065.00 | Normal single story building |
| 77 | | Cement/ Shotcrete Material store | | | | | | |
| 78 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 79 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 80 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 81 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 82 | | Brick Store | | | | | | |
| 83 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 84 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 85 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 86 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 87 | | Piping Store | | | | | | |
| 88 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 89 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 90 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |

| Closure Costing - 18 Shaft Complex | | | | Closure Costs - Year 10 | | | | |
|------------------------------------|----|--|----------------|-------------------------|-----------------|----------------|------------------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 91 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 92 | | Ventilation Duct Store | | | | | | |
| 93 | | Sheeting | 2.1 | m² | 1286.00 | R 23.00 | R 29 578.00 | |
| 94 | | Structural steel | 2.3.1 | m² | 894.00 | R 135.00 | R 120 690.00 | Assume 80kg of steel per square meter |
| 95 | | Brick wall | 3.5 | m² | 36.00 | R 30.00 | R 1 080.00 | |
| 96 | | Structural concrete | 4.4 | m² | 894.00 | R 215.00 | R 192 210.00 | Remove concrete floor, foundations and bases |
| 97 | | Fan Store | | | | | | |
| 98 | | Sheeting | 2.1 | m² | 777.00 | R 23.00 | R 17 871.00 | |
| 99 | | Structural steel | 2.3.1 | m² | 409.00 | R 135.00 | R 55 215.00 | Assume 80kg of steel per square meter |
| 100 | | Structural concrete | 4.4 | m² | 409.00 | R 215.00 | R 87 935.00 | Remove concrete floor, foundations and bases |
| 101 | | Locomotive store and wash bay | | | | | | |
| 102 | | Sheeting | 2.1 | m² | 1655.00 | R 23.00 | R 38 065.00 | |
| 103 | | Structural steel | 2.3.1 | m² | 907.00 | R 135.00 | R 122 445.00 | Assume 80kg of steel per square meter |
| 104 | | Structural concrete | 4.4 | m² | 907.00 | R 215.00 | R 195 005.00 | Remove concrete floor, foundations and bases |
| 105 | | Sub - Total for demolishing of workshops and stores | | | | | R 2 130 898.00 | |
| 106 | | Demolition of permanent brick structures and temporary structures | | | | | | |
| 107 | | Guardhouse | 3.1.1 | m² | 166.00 | R 295.00 | R 48 970.00 | Normal single story building |
| 108 | | Office 1 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 109 | | Office 2 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 110 | | Office 3 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 111 | | Office 4 | 3.1.1 | m² | 516.00 | R 295.00 | R 152 220.00 | Normal single story building |
| 112 | | Change House 1 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 113 | | Change House 2 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 114 | | Change House 3 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 115 | | Change House 4 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 116 | | Change House 5 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 117 | | Change House 6 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 118 | | Change House 7 | 3.1.1 | m² | 686.00 | R 295.00 | R 202 370.00 | Normal single story building |
| 119 | | Shelter | 3.1.1 | m² | 132.00 | R 295.00 | R 38 940.00 | Normal single story building |
| 120 | | First Aid Room | 3.1.1 | m² | 111.00 | R 295.00 | R 32 745.00 | Normal single story building |
| 121 | | Lamp House | 3.1.1 | m² | 745.00 | R 295.00 | R 219 775.00 | Normal single story building |
| 122 | | Crush | 3.1.1 | m² | 451.00 | R 295.00 | R 133 045.00 | Normal single story building |
| 123 | | Control Room | 3.1.1 | m² | 141.00 | R 295.00 | R 41 595.00 | Normal single story building |
| 124 | | Main Substation | 3.1.1 | m² | 601.00 | R 295.00 | R 177 295.00 | Normal single story building |
| 125 | | Substation 1 | 3.1.1 | m² | 91.00 | R 295.00 | R 26 845.00 | Normal single story building |
| 126 | | Substation 2 | 3.1.1 | m² | 162.00 | R 295.00 | R 47 790.00 | Normal single story building |
| 127 | | Outside ablution block | 3.1.1 | m² | 26.50 | R 295.00 | R 7 817.50 | Normal single story building |
| 128 | | Transformer bays | | | | | | |
| 129 | | Brickwork | 3.5 | m² | 23.00 | R 30.00 | R 690.00 | |
| 130 | | Structural concrete | 4.3 | m² | 27.00 | R 400.00 | R 10 800.00 | Remove concrete plinths and footings |
| 131 | | Stormwater pump house | 3.1.1 | m² | 33.00 | R 295.00 | R 9 735.00 | Normal single story building |
| 132 | | Construction offices | 3.1.1 | m² | 990.00 | R 295.00 | R 292 050.00 | Normal single story building |
| 133 | | Sub - Total for demolishing of permanent brick structures and temporary structures | | | | | R 3 113 562.50 | |
| 134 | | Removal of all surface related finishes | | | | | | |
| 135 | | Remove concrete liner from stormwater dam 1 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 136 | | Remove concrete liner from stormwater dam 2 | 4.3 | m² | 1650.00 | R 400.00 | R 660 000.00 | Assume concrete is 150mm thick |
| 137 | | Remove concrete liner from settling pond | 4.3 | m² | 975.00 | R 400.00 | R 390 000.00 | Assume concrete is 150mm thick |
| 138 | | Concrete Hardstands | 8.4 | m² | 16490.00 | R 135.00 | R 2 226 150.00 | Assume hole of mining terrain |
| 139 | | Sub - Total for removal of all surface related finishes | | | | | R 3 936 150.00 | |
| 140 | | Removal of all linear items | | | | | | |
| 141 | | Remove overland steel pipelines (<200mm) | 5.2.1 | m | 2500.00 | R 27.00 | R 67 500.00 | Assumed 2500m |
| 142 | | Remove overland steel pipelines (200-350mm) | 5.2.2 | m | 2500.00 | R 48.00 | R 120 000.00 | Assumed 2500m |
| 143 | | Remove railway lines | 5.4.2 | m | 5518.00 | R 215.00 | R 1 186 370.00 | |
| 144 | | Remove security fencing | 5.5.3 | m | 8311.00 | R 27.00 | R 224 397.00 | |
| 145 | | Sub - Total for removal of all linear items | | | | | R 1 598 267.00 | |
| 146 | | Rehabilitation of roads | | | | | | |
| 147 | | Remove minor gravel road | 8.3 | m² | 11707.00 | R 4.00 | R 46 828.00 | |
| 148 | | Remove tar road and surfaces | 8.1 | m² | 51444.00 | R 48.00 | R 2 469 312.00 | Assume all internal roads and carport area has tar surface |
| 149 | | Remove concrete roads | 4.3 | m² | 3565.00 | R 400.00 | R 1 426 000.00 | Assume concrete is 250mm thick |
| 150 | | Sub - Total for rehabilitation of roads | | | | | R 3 942 140.00 | |
| 151 | | Disposal of demolition waste | | | | | | |
| 152 | | Sorting and screening of demolition waste | 6.1 | % | R 29 544 053.50 | 2.5% | R 738 601.34 | 2.50% |
| 153 | | Disposal of demolition waste | 9.6.7 | m³/km | 16200.00 | R 171.00 | R 2 770 200.00 | Allowance was made for a 30km radius |
| 154 | | Sub - Total for disposal of demolition waste | | | | | R 3 508 801.34 | |
| 155 | | Sub - Total for infrastructural aspects | | | | | R 33 052 854.84 | |
| 156 | | | | | | | | |
| 157 | | Mining Aspects | | | | | | |
| 158 | | Open pit reclamation including final voids and ramps | | | | | | |
| 159 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 160 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 161 | | Sealing of shafts and inclines | | | | | | |
| 162 | | Seal Main Shaft | 7.1.15 | sum | 1.00 | R 2 573 324.00 | R 2 573 324.00 | 10m Shaft Diameter |
| 163 | | Seal Vent Shaft | 7.1.13 | sum | 1.00 | R 2 132 000.00 | R 2 132 000.00 | 9m Shaft Diameter |
| 164 | | Seal Fridge Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 165 | | Seal BAC Shaft | 7.1.10 | sum | 1.00 | R 1 719 458.00 | R 1 719 458.00 | 7.5m Shaft Diameter |
| 166 | | Sub - Total for sealing of shafts and inclines | | | | | R 8 144 240.00 | |
| 167 | | Rehabilitation of overburden and spoils | | | | | | |
| 168 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 169 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 170 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 171 | | Stormwater dam 1 | | | | | | |
| 172 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |
| 173 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 174 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 175 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 176 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 177 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 178 | | Stormwater dam 2 | | | | | | |
| 179 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 1119.00 | R 20.00 | R 22 380.00 | Assumed 100mm thick contaminated sediment |

| Closure Costing - 18 Shaft Complex | | | Closure Costs - <i>Year 10</i> | | | | | |
|------------------------------------|----|---|--------------------------------|-------|-----------------|--------------|-----------------|---|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 180 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 1119.00 | R 73.00 | R 81 687.00 | Dispose of at tailings dump assumed 10km haul distance |
| 181 | | Breach dam wall and reshape | 10.1.5 | m | 425.00 | R 220.00 | R 93 500.00 | Doze walls to inside to fill void |
| 182 | | Shape and level dam surface | 10.1.1 | ha | 1.10 | R 55 250.00 | R 60 775.00 | Shape and level surface to make free draining |
| 183 | | Rip to alleviate compaction | 9.5.1 | ha | 1.10 | R 9 400.00 | R 10 340.00 | Rip 500mm deep |
| 184 | | Establish vegetation | 10.4.1 | ha | 1.10 | R 13 800.00 | R 15 180.00 | |
| 185 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R 567 724.00 | |
| 186 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 187 | | Waste Rock dump | | | | | | Assumed 20m strip would not have been rehabilitated |
| 188 | | Strip topsoil and stockpile for movement of toe | 9.2 | m³ | 1717.00 | R 20.00 | R 34 340.00 | Assume 250mm thick |
| 189 | | Reshape WRD | 9.1.1 | m³ | 29925.00 | R 13.50 | R 403 987.50 | Cut to fill action assumed 20m high at 87.5m³/per meter |
| 190 | | Import capping layers | 9.6.1 | m³ | 10880.00 | R 26.00 | R 282 880.00 | Assumed 1km haul distance |
| 191 | | Establish vegetation | 10.4.2 | ha | 1.36 | R 19 250.00 | R 26 180.00 | |
| 192 | | Settling ponds | | | | | | |
| 193 | | Remove contaminated sediment | 9.2 | m³ | 1969.00 | R 20.00 | R 39 380.00 | Assumed 300mm thick contaminated sediment |
| 194 | | Load and haul contaminated sediment | 9.6.8 | m³/km | 1969.00 | R 73.00 | R 143 737.00 | Dispose of at tailings dump assumed 10km haul distance |
| 195 | | Shape and level dam surface | 10.1.1 | ha | 0.65 | R 55 250.00 | R 35 912.50 | Shape and level surface to make free draining |
| 196 | | Rip to alleviate compaction | 9.5.1 | ha | 0.65 | R 9 400.00 | R 6 110.00 | Rip 500mm deep |
| 197 | | Import 250mm topsoil | 10.2.1 | ha | 0.65 | R 88 400.00 | R 57 460.00 | Assumed from local stockpile |
| 198 | | Establish vegetation | 10.4.1 | ha | 0.65 | R 13 800.00 | R 8 970.00 | |
| 199 | | Hot and Cool Well | | | | | | |
| 200 | | Excavate contaminated sediment from dam basin and stockpile | 9.2 | m³ | 644.00 | R 20.00 | R 12 880.00 | Assumed 300mm thick contaminated sediment |
| 201 | | Remove water storage tanks | 1.2 | sum | 2.00 | R 50 000.00 | R 100 000.00 | Nominal allowance |
| 202 | | Remove HDPE liner | 6.4 | m² | 2149.00 | R 6.50 | R 13 968.50 | Assumed dam is lined with a HDPE line |
| 203 | | Excavate contaminated soil from dam basin and stockpile | 9.2 | m³ | 268.00 | R 20.00 | R 5 360.00 | Assume 250mm thick on 50 percent of dam basin |
| 204 | | Load and haul contaminated soil and sediment | 9.6.8 | m³/km | 912.00 | R 73.00 | R 66 576.00 | Dispose of at tailings dump assumed 10km haul distance |
| 205 | | Breach dam wall and reshape | 10.1.5 | m | 185.00 | R 220.00 | R 40 700.00 | Doze walls to inside to fill void |
| 206 | | Shape and level dam surface | 10.1.1 | ha | 0.44 | R 55 250.00 | R 24 310.00 | Shape and level surface to make free draining |
| 207 | | Rip to alleviate compaction | 9.5.1 | ha | 0.44 | R 9 400.00 | R 4 136.00 | Rip 500mm deep |
| 208 | | Establish vegetation | 10.4.1 | ha | 0.44 | R 13 800.00 | R 6 072.00 | |
| 209 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R 1 312 959.50 | |
| 210 | | Reclamation of subsided areas | | | | | | |
| 211 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 212 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 213 | | Sub - Total for Mining aspects | | | | | R 10 024 923.50 | |
| 214 | | | | | | | | |
| 215 | | General Surface Reclamation | | | | | | |
| 216 | | Topsoil stockpile | | | | | | |
| 217 | | Rip to alleviate compaction | 9.5.1 | ha | 15.00 | R 9 400.00 | R 141 000.00 | Rip 500mm deep |
| 218 | | Establish vegetation | 10.4.1 | ha | 15.00 | R 13 800.00 | R 207 000.00 | Establish vegetation on stockpile footprint area |
| 219 | | Infrastructural areas | | | | | | |
| 220 | | Shape and level surface | 10.1.1 | ha | 32.00 | R 55 250.00 | R 1 768 000.00 | Shape and level surface to make free draining |
| 221 | | Rip to alleviate compaction | 9.5.1 | ha | 32.00 | R 9 400.00 | R 300 800.00 | Rip 500mm deep |
| 222 | | Import 250mm topsoil | 10.2.1 | ha | 32.00 | R 88 400.00 | R 2 828 800.00 | Assumed from local stockpile |
| 223 | | Establish vegetation | 10.4.1 | ha | 32.00 | R 13 800.00 | R 441 600.00 | |
| 224 | | Sub - Total for General Surface Reclamation | | | | | R 5 687 200.00 | |
| 225 | | | | | | | | |
| 226 | | Water Management | | | | | | |
| 227 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 228 | | Sub - Total for Water Management | | | | | R - | |
| 229 | | | | | | | | |
| 230 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 48 764 978.34 | |
| 231 | | Post - closure aspects | | | | | | |
| 232 | | Surface water quality monitoring | 12.1 | yr | 5.00 | R 119 232.00 | R 596 160.00 | Assume a 5 year period post closure |
| 233 | | Groundwater quality monitoring | 12.2 | yr | 5.00 | R 52 992.00 | R 264 960.00 | Assume a 5 year period post closure |
| 234 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 52.00 | R 2 430.00 | R 126 360.00 | Allowed for 5 years post closure |
| 235 | | Care and maintenance of reclaimed areas | 12.4 | ha | 52.00 | R 15 000.00 | R 780 000.00 | Allowed for 5 years post closure |
| 236 | | Sub - Total for Post closure aspects | | | | | R 1 767 480.00 | |
| 237 | | Contingencies for post closure aspects | 1.2 | sum | R 1 767 480.00 | 10% | R 176 748.00 | Assumed 10 percent for post closure aspects |
| 238 | | Sub - Total for Contingencies for post closure aspects | | | | | R 176 748.00 | |
| 239 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 1 944 228.00 | |
| 240 | | Additional allowances | | | | | | |
| 241 | | Preliminary and General | 1.2 | sum | R 48 764 978.34 | 6% | R 2 925 898.70 | Assume 6 percent of sub - total 1 |
| 242 | | Contingencies | 1.2 | sum | R 48 764 978.34 | 10% | R 4 876 497.83 | Assume 10 percent of sub - total 1 |
| 243 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 7 802 396.53 | |
| 244 | | Grand - Total (for sub - total 1+2+3) | | | | | R 58 511 602.87 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - <i>Scheduled</i> | | | | | |
|--|----|---|----------------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint areas | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 1 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint areas | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 2 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint area: | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 3 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint area: | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 4 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint area: | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 5 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint area: | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - <i>Year 6</i> | | | | | |
|--|----|---|-------------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint areas | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 7 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint area: | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 8 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint area: | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - Year 9 | | | | | |
|--|----|---|------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint areas | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Closure Costing - Central Sewage Plant | | | Closure Costs - <i>Year 10</i> | | | | | |
|--|----|---|--------------------------------|-------|----------------|--------------|----------------|--|
| Item nr | ID | Task | Unit Rate Code | Unit | Quantity | Rate | Amount | Notes |
| 1 | | Infrastructural Aspects | | | | | | |
| 2 | | Nominal allowances | | | | | | |
| 3 | | Crane | 11.2 | p/day | 0.00 | R 6 534.00 | R - | To assist with demolition and salvage purposes |
| 4 | | Allowance for the removal of salvageable equipment | 1.2 | sum | 1.00 | R - | R - | Nominal allowance |
| 5 | | Sub - Total for Nominal allowances | | | | | R - | |
| 6 | | Demolitioning of plant and related structures | | | | | | |
| 7 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 8 | | Sub - Total for demolitioning of plant and related structures | | | | | R - | |
| 9 | | Demolitioning of all structural structures | | | | | | |
| 10 | | Dosing syphon box | | | | | | |
| 11 | | Structural steelwork | 2.2 | t | 3.42 | R 1 350.00 | R 4 617.00 | |
| 12 | | Tip area | | | | | | |
| 13 | | Structural Concrete | 4.2 | m³ | 1400.00 | R 610.00 | R 854 000.00 | |
| 14 | | Sub - Total for demolitioning of all structural structures | | | | | R 858 617.00 | |
| 15 | | Demolitioning of workshops and stores | | | | | | |
| 16 | | Workshop and store | 3.1.1 | m² | 41.00 | R 295.00 | R 12 095.00 | Single story brick building |
| 17 | | Sub - Total for demolitioning of workshops and stores | | | | | R 12 095.00 | |
| 18 | | Demolitioning of permanent brick structures and temporary structures | | | | | | |
| 19 | | Operators building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 20 | | Office and store | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 21 | | Pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 22 | | Filter building | 3.1.1 | m² | 50.00 | R 295.00 | R 14 750.00 | Single story brick building |
| 23 | | Effluent pump station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 24 | | Sub-station | 3.2.1 | m² | 50.00 | R 480.00 | R 24 000.00 | Single story brick building |
| 25 | | Sub - Total for demolitioning of permanent brick structures and temporary structures | | | | | R 116 250.00 | |
| 26 | | Removal of all surface related finishes | | | | | | |
| 27 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 28 | | Sub - Total for removal of all surface related finishes | | | | | R - | |
| 29 | | Removal of all linear items | | | | | | |
| 30 | | Security fencing | 5.5.3 | m | 970.00 | R 27.00 | R 26 190.00 | |
| 31 | | Sub - Total for removal of all linear items | | | | | R 26 190.00 | |
| 32 | | Rehabilitation of roads | | | | | | |
| 33 | | Not applicable | 1.1 | na | 0.00 | R - | R - | |
| 34 | | Sub - Total for rehabilitation of roads | | | | | R - | |
| 35 | | Disposal of demolition waste | | | | | | |
| 36 | | Sorting and screening of demolition waste | 6.1 | % | R 1 013 152.00 | 2.5% | R 25 328.80 | 2.50% |
| 37 | | Disposal of demolition waste | 9.6.7 | m³/km | 1572.00 | R 171.00 | R 268 812.00 | Allowance was made for a 30km radius |
| 38 | | Sub - Total for disposal of demolition waste | | | | | R 294 140.80 | |
| 39 | | Sub - Total for infrastructural aspects | | | | | R 1 307 292.80 | |
| 40 | | | | | | | | |
| 41 | | Mining Aspects | | | | | | |
| 42 | | Open pit reclamation including final voids and ramps | | | | | | |
| 43 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 44 | | Sub - Total open pit reclamation including final voids and ramps | | | | | R - | |
| 45 | | Sealing of shafts and inclines | | | | | | |
| 46 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 47 | | Sub - Total for sealing of shafts and inclines | | | | | R - | |
| 48 | | Rehabilitation of overburden and spoils | | | | | | |
| 49 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 50 | | Sub - Total for rehabilitation of overburden and spoils | | | | | R - | |
| 51 | | Rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | | |
| 52 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 53 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (non polluting potential) | | | | | R - | |
| 54 | | Rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | | |
| 55 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 56 | | Sub - Total for rehabilitation of processing waste deposits and evaporation ponds (polluting potential) | | | | | R - | |
| 57 | | Reclamation of subsided areas | | | | | | |
| 58 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 59 | | Sub - Total for reclamation of subsided areas | | | | | R - | |
| 60 | | Sub - Total for Mining aspects | | | | | R - | |
| 61 | | | | | | | | |
| 62 | | General Surface Reclamation | | | | | | |
| 63 | | General shaping and levelling of infrastructural area | 10.1.1 | ha | 5.50 | R 55 250.00 | R 303 875.00 | |
| 64 | | Import topsoil on footprint area | 9.6.1 | m³ | 6875.00 | R 26.00 | R 178 750.00 | Assume 250mm on 50% of footprint |
| 65 | | Rip to alleviate compactor | 9.5.1 | ha | 5.50 | R 9 400.00 | R 51 700.00 | Rip 500mm deep |
| 66 | | Re-establish vegetator | 10.4.1 | ha | 5.50 | R 13 800.00 | R 75 900.00 | |
| 67 | | Sub - Total for General Surface Reclamation | | | | | R 303 875.00 | |
| 68 | | | | | | | | |
| 69 | | Water Management | | | | | | |
| 70 | | Not Applicable | 1.1 | na | 0.00 | R - | R - | |
| 71 | | Sub - Total for Water Management | | | | | R - | |
| 72 | | | | | | | | |
| 73 | | SUB - TOTAL 1 (for infrastructural and related structures) | | | | | R 1 611 167.80 | |
| 74 | | Post - closure aspects | | | | | | |
| 75 | | Surface water quality monitoring | 12.1 | yr | 0.00 | R 119 232.00 | R - | Assumed included as part of 17 Shaft |
| 76 | | Groundwater quality monitoring | 12.2 | yr | 0.00 | R 52 992.00 | R - | Assumed included as part of 17 Shaft |
| 77 | | Reclamation monitoring on reclaimed areas | 12.3 | ha | 5.50 | R 2 430.00 | R 13 365.00 | Assumed included as part of 17 Shaft |
| 78 | | Care and maintenance of reclaimed areas | 12.4 | ha | 5.50 | R 15 000.00 | R 82 500.00 | Assumed included as part of 17 Shaft |
| 79 | | Sub - Total for Post closure aspects | | | | | R 95 865.00 | |
| 80 | | Contingencies for post closure aspects | 1.2 | sum | R 95 865.00 | 10% | R 9 586.50 | Assumed 10 percent for post closure aspects |
| 81 | | Sub - Total for Contingencies for post closure aspects | | | | | R 9 586.50 | |
| 82 | | SUB - TOTAL 2 (for post - closure aspects) | | | | | R 105 451.50 | |
| 83 | | Additional allowances | | | | | | |
| 84 | | Preliminary and General | 1.2 | sum | R 1 611 167.80 | 6% | R 96 670.07 | Assume 6 percent of sub - total 1 |
| 85 | | Contingencies | 1.2 | sum | R 1 611 167.80 | 10% | R 161 116.78 | Assume 10 percent of sub - total 1 |
| 86 | | SUB - TOTAL 3 (for additional allowances) | | | | | R 257 786.85 | |
| 87 | | Grand - Total (for sub - total 1+2+3) | | | | | R 1 974 406.15 | |

| Rates Table - 2013 | | | | | |
|--------------------|--|----------|-------------|-------|--|
| Unit Rate Code | Costing Items | Currency | Unit Rates | Unit | Notes |
| 1 | Nominal cost and time related items | | | | |
| 1.1 | Not Applicable | Rands | R - | na | |
| 1.2 | Sum | Rands | R - | sum | |
| 1.3 | Rate | Rands | R - | unit | |
| 1.4 | Percentage | Rands | 0.00% | % | |
| 2 | Steel and related structures | | | | |
| 2.1 | Cladding / Sheet piling | Rands | R 23.00 | m² | |
| 2.2 | Structural steelwork | Rands | R 1 350.00 | t | |
| 2.3 | Super structures | | | | |
| 2.3.1 | Light plant structures | Rands | R 135.00 | m² | up to 100kg of steel per square meter |
| 2.3.2 | Medium plant structures | Rands | R 607.00 | m² | up to 450kg of steel per square meter |
| 2.3.3 | Medium / Heavy plant structures | Rands | R 1 350.00 | m² | up to 1000kg of steel per square meter |
| 2.3.4 | Heavy plant structures | Rands | R 2 025.00 | m² | up to 1500kg of steel per square meter |
| 2.4 | Steel tanks with rubber lining | | | | |
| 2.4.1 | 0-5m | Rands | R 10 600.00 | no | diameter |
| 2.4.2 | 5-10m | Rands | R 26 650.00 | no | diameter |
| 2.4.3 | 10-15m | Rands | R 37 300.00 | no | diameter |
| 2.4.4 | 15-20m | Rands | R 53 300.00 | no | diameter |
| 2.4.5 | 20-30m | Rands | R 69 300.00 | no | diameter |
| 2.5 | Single steel tanks | Rands | R 5 300.00 | no | small enclosed steel tanks |
| 2.6 | Carports | | | | |
| 2.6.1 | Carports with IBR covering | Rands | R 55.00 | m² | excludes paving |
| 2.6.2 | Carports with Shade net covering | Rands | R 35.00 | m² | excludes paving |
| 3 | Buildings and related structures | | | | |
| 3.1 | Brick buildings | | | | |
| 3.1.1 | Single storey building | Rands | R 295.00 | m² | includes soft strip, excludes disposal of waste |
| 3.1.2 | Double storey building | Rands | R 500.00 | m² | includes soft strip, excludes disposal of waste |
| 3.1.3 | Three storey building | Rands | R 650.00 | m² | includes soft strip, excludes disposal of waste |
| 3.2 | Substations, pump stations and strong rooms | | | | |
| 3.2.1 | Single storey building | Rands | R 480.00 | m² | includes soft strip, excludes disposal of waste |
| 3.2.2 | Double storey or double volume building | Rands | R 690.00 | m² | includes soft strip, excludes disposal of waste |
| 3.3 | Prefabricated or temporary buildings | Rands | R 140.00 | m² | |
| 3.4 | 110mm Brick wall | Rands | R 15.00 | m² | |
| 3.5 | 230mm Brick wall | Rands | R 30.00 | m² | |
| 3.6 | Workshops and shed type structures | | | | |
| 3.6.1 | 0m – 5m high | Rands | R 160.00 | m² | |
| 3.6.2 | 5m – 10m high | Rands | R 190.00 | m² | |
| 3.6.3 | 10m – 15m high | Rands | R 250.00 | m² | |
| 3.6.4 | 15m – 20m high | Rands | R 310.00 | m² | |
| 4 | Concrete | | | | |
| 4.1 | Heavy concrete, thickness greater than 750mm | Rands | R 1 280.00 | m³ | bulk and heavy reinforced concrete |
| 4.2 | Medium concrete, thickness between 250 and 750mm | Rands | R 610.00 | m³ | Heavy reinforced concrete |
| 4.3 | Light concrete, thickness less than 250mm | Rands | R 400.00 | m³ | reinforced concrete |
| 4.4 | Floors, bases and foundations after removal of superstructure | Rands | R 215.00 | m² | 250mm floors with 500mm bases on 30% of the area |
| 4.5 | Heavy duty floors, bases and foundations after removal of superstructure | Rands | R 590.00 | m² | 400mm floors with 800mm bases on 30% of the area |
| 4.6 | Strip footings | Rands | R 135.00 | m | |
| 4.7 | Column footings | Rands | R 280.00 | no | |
| 5 | Linear items | | | | |
| 5.1 | Conveyors | | | | |
| 5.1.1 | Overland conveyor - light, no cladding | Rands | R 215.00 | m | |
| 5.1.2 | Overland conveyor - medium | Rands | R 265.00 | m | |
| 5.1.3 | Overland conveyor - heavy | Rands | R 320.00 | m | |
| 5.1.4 | Suspended conveyor - light to medium | Rands | R 535.00 | m | |
| 5.1.5 | Suspended conveyor - heavy with cladding | Rands | R 640.00 | m | |
| 5.2 | Pipelines | | | | |
| 5.2.1 | Overland steel pipelines on plinths (<200mm) | Rands | R 27.00 | m | 5m plinth spacing, includes disposal of waste @ 10km |
| 5.2.2 | Overland steel pipelines on plinths (200-350mm) | Rands | R 48.00 | m | 5m plinth spacing, includes disposal of waste @ 10km |
| 5.2.3 | Overland steel pipelines on plinths (350-500mm) | Rands | R 64.00 | m | 5m plinth spacing, includes disposal of waste @ 10km |
| 5.2.4 | Overland HDPE pipelines on plinths (<200mm) | Rands | R 13.00 | m | |
| 5.2.5 | Overland HDPE pipelines on plinths (200-350mm) | Rands | R 18.00 | m | |
| 5.2.6 | Overland HDPE pipelines on plinths (350-500mm) | Rands | R 24.00 | m | |
| 5.2.7 | Concrete stormwater pipelines (<750mm) | Rands | R 85.00 | m | |
| 5.2.8 | Concrete stormwater pipelines (<1000mm) | Rands | R 95.00 | m | |
| 5.2.9 | Concrete stormwater pipelines (<1500mm) | Rands | R 105.00 | m | |
| 5.3 | Overland power lines | | | | |
| 5.3.1 | Minor lines | Rands | R 27.00 | m | |
| 5.3.2 | Major lines | Rands | R 55.00 | m | |
| 5.4 | Railway lines | | | | |
| 5.4.1 | Electrified | Rands | R 295.00 | m | excludes ballast and rehab |
| 5.4.2 | Non - electrified | Rands | R 215.00 | m | excludes ballast and rehab |
| 5.5 | Fencing | | | | |
| 5.5.1 | Erect security fencing | Rands | R 133.00 | m | |
| 5.5.2 | Erect stock fencing | Rands | R 27.00 | m | |
| 5.5.3 | Dismantling of security fencing | Rands | R 27.00 | m | |
| 5.5.4 | Dismantling of stock fencing | Rands | R 8.00 | m | |
| 5.5.5 | Dismantling of steel palisade fencing | Rands | R 58.00 | m | |
| 5.5.6 | Dismantling of concrete palisade fencing | Rands | R 120.00 | m | |
| 6 | Waste | | | | |
| 6.1 | Sorting and screening of waste | Rands | | 2.5 | % |
| 6.2 | Disposal of waste | | | | |
| 6.2.1 | Disposal of inert demolition waste | Rands | R 28.00 | m³/km | 1km load and haul |
| 6.2.2 | Disposal of hazardous waste | Rands | R 805.00 | m³ | excludes transport |
| 6.3 | Decontamination of equipment | | | | |
| 6.3.1 | Decontamination of equipment - small projects | Rands | | 5 | % of overall dismantling of steel structures |
| 6.3.2 | Decontamination of equipment - large projects | Rands | | 2.5 | % of overall dismantling of steel structures |
| 6.4 | Removal and disposal of single HDPE liner | Rands | R 6.50 | m² | |

| Rates Table - 2013 | | | | | |
|--------------------|--|----------|----------------|-------|--|
| Unit Rate Code | Costing Items | Currency | Unit Rates | Unit | Notes |
| 7 | Shaft and portals | | | | |
| 7.1 | Shafts | | | | |
| 7.1.1 | Sealing of vertical shaft | Rands | R 714 220.00 | sum | 3m diameter |
| 7.1.2 | Sealing of vertical shaft | Rands | R 810 160.00 | sum | 3.5m diameter |
| 7.1.3 | Sealing of vertical shaft | Rands | R 986 050.00 | sum | 4m diameter |
| 7.1.4 | Sealing of vertical shaft | Rands | R 1 087 320.00 | sum | 4.5m diameter |
| 7.1.5 | Sealing of vertical shaft | Rands | R 1 332 500.00 | sum | 5m diameter |
| 7.1.6 | Sealing of vertical shaft | Rands | R 1 375 140.00 | sum | 5.5m diameter |
| 7.1.7 | Sealing of vertical shaft | Rands | R 1 410 500.00 | sum | 6.0m diameter |
| 7.1.8 | Sealing of vertical shaft | Rands | R 1 492 400.00 | sum | 6.5m diameter |
| 7.1.9 | Sealing of vertical shaft | Rands | R 1 599 000.00 | sum | 7m diameter |
| 7.1.10 | Sealing of vertical shaft | Rands | R 1 719 458.00 | sum | 7.5m diameter |
| 7.1.11 | Sealing of vertical shaft | Rands | R 1 838 850.00 | sum | 8m diameter |
| 7.1.12 | Sealing of vertical shaft | Rands | R 1 982 760.00 | sum | 8.5m diameter |
| 7.1.13 | Sealing of vertical shaft | Rands | R 2 132 000.00 | sum | 9m diameter |
| 7.1.14 | Sealing of vertical shaft | Rands | R 2 281 240.00 | sum | 9.5m diameter |
| 7.1.15 | Sealing of vertical shaft | Rands | R 2 573 324.00 | sum | 10m diameter |
| 7.1.16 | Sealing of vertical shaft | Rands | R 2 665 000.00 | sum | 11m diameter |
| 7.2 | Backfill incline shaft portal | Rands | R 31 980.00 | sum | |
| 7.3 | Plug outlet and seal penstock of tailings dam | Rands | R 213 200.00 | sum | assume 100 000m³ backfilled with waste rock <1km haul distance, excl topsoil |
| 7.4 | Plug surface holing's | Rands | R 200 000.00 | sum | |
| 7.5 | Seal incline shaft | Rands | R 159 900.00 | sum | |
| 8 | Roads, hardstands and paving | | | | |
| 8.1 | Remove tar roads with 600mm layer works | Rands | R 48.00 | m² | layer works buried in trench next to road or 10km load and haul, but excludes disposal of tar |
| 8.2 | Major gravel roads with engineered surfaces | Rands | R 21.00 | m² | layer works buried next to road or 10km load and haul |
| 8.3 | Minor gravel roads and tracks | Rands | R 4.00 | m² | minor gravel roads and tracks (no layer works) - ripped, profiled and vegetated |
| 8.4 | Concrete slab or concrete liners | Rands | R 135.00 | m² | thin concrete with minimal reinforcing |
| 8.5 | Removal of gunited embankments | Rands | R 80.00 | m² | excludes disposal |
| 8.6 | Removal of brick paving & stone pitching | Rands | R 38.00 | m² | |
| 9 | Earthworks | | | | |
| 9.1 | Dozing | | | | |
| 9.1.1 | Dozing to profile dumps (60m max) | Rands | R 13.50 | m³ | cut to fill including final profiling |
| 9.1.2 | Bulk dozing of material (60m max) | Rands | R 11.00 | m³ | bulk dozing, no profiling |
| 9.2 | Excavation | Rands | R 20.00 | m³ | |
| 9.3 | Backfilling | | | | |
| 9.3.1 | Backfilling of final void | Rands | R 15.50 | m³ | large volumes: 50% dozing & 50% load and haul |
| 9.3.2 | Backfilling of final void | Rands | R 27.00 | m³ | large volumes : 5km haul distance for bulk material |
| 9.4 | Compacting | Rands | R 3.50 | m² | in layers of 250mm |
| 9.5 | Ripping | | | | |
| 9.5.1 | Ripping of areas to alleviate compaction | Rands | R 9 400.00 | ha | 500mm deep ripping |
| 9.5.2 | Deep ripping | Rands | R 13 800.00 | ha | 1000mm deep ripping |
| 9.6 | Transport | | | | |
| 9.6.1 | Load and haul | Rands | R 26.00 | m³ | |
| 9.6.2 | Extra over rates for hauling outside free haul distance | Rands | R 5.00 | m³/km | |
| 9.6.3 | Load and haul for 2km distance | Rands | R 31.00 | m³/km | |
| 9.6.4 | Load and haul for 3km distance | Rands | R 36.00 | m³/km | |
| 9.6.5 | Load and haul for 4km distance | Rands | R 41.00 | m³/km | |
| 9.6.6 | Load and haul for 5km distance | Rands | R 46.00 | m³/km | |
| 9.6.7 | Load and haul for 30km distance | Rands | R 171.00 | m³/km | |
| 9.6.8 | Load and haul for 10km distance | Rands | R 73.00 | m³/km | |
| 10 | Reclamation on disturbed areas | | | | |
| 10.1 | Profiling - dozer work | | | | |
| 10.1.1 | Shaping, leveling of infrastructural footprint areas (500mm) | Rands | R 55 250.00 | ha | includes stockpiling of material, backfilling of excavations in cut to fill operation and final profiling @av 500mm over footprint |
| 10.1.2 | Shaping, leveling of infrastructural footprint areas (750mm) | Rands | R 82 875.00 | ha | includes stockpiling of material, backfilling of excavations in cut to fill operation and final profiling @av 750mm over footprint |
| 10.1.3 | Reshaping, profiling of dumps (general) | Rands | R 110 500.00 | ha | |
| 10.1.4 | Profiling of disturbed areas (general) | Rands | R 939 250.00 | ha | minimal dozing to make area free draining |
| 10.1.5 | Breach dam wall & reshape 1:5 | Rands | R 220.00 | m | approx. 5m high @ 1:5 |
| 10.2 | Import clean / removing contaminated soil | | | | |
| 10.2.1 | Import cover material and spread (250m) | Rands | R 88 400.00 | ha | 2500m³ over 1km average @ R32/m³ |
| 10.2.2 | Remove contaminated soil to 250mm average depth | Rands | R 127 000.00 | ha | assume 4km haul distance |
| 10.3 | Capping / impermeable cover | | | | |
| 10.3.1 | Install 2mm HDPE liner | Rands | R 94.00 | m² | |
| 10.4 | Establish vegetation | | | | |
| 10.4.1 | Establishment of vegetation (general) | Rands | R 13 800.00 | ha | includes soil amelioration, cultivation and seeding actions |
| 10.4.2 | Establishment of vegetation on WRD and tailings dams | Rands | R 19 250.00 | ha | general on flat surfaces |
| 10.4.3 | Establish vegetation on backfilled pit areas | Rands | R 4 400.00 | ha | general in topsoil layer on sloped areas |
| 10.4.4 | Rip and establish vegetation on stockpile footprint areas and haul roads | Rands | R 5 500.00 | ha | |
| 11 | Plant and machinery | | | | |
| 11.1 | Crane 25 ton | Rands | R 3 960.00 | p/day | excludes site establishment |
| 11.2 | Crane 50 ton | Rands | R 6 534.00 | p/day | excludes site establishment |
| 11.3 | Crane 100 ton | Rands | R 15 290.00 | p/day | excludes site establishment |
| 11.4 | Tib | Rands | R 1 710.00 | p/day | excludes site establishment |
| 11.5 | Excavator (20ton) | Rands | R 2 979.00 | p/day | excludes site establishment |
| 11.6 | Pecker (20ton) | Rands | R 4 860.00 | p/day | excludes site establishment |
| 11.7 | Grader | Rands | R 4 149.00 | p/day | excludes site establishment |
| 11.8 | Patfoot roller | Rands | R 1 845.00 | p/day | excludes site establishment |
| 11.9 | Smooth roller | Rands | R 1 782.00 | p/day | excludes site establishment |
| 11.10 | Articulated dumper 20 ton | Rands | R 3 276.00 | p/day | excludes site establishment |
| 11.11 | 8 cube tipper | Rands | R 2 286.00 | p/day | excludes site establishment |

| Rates Table - 2013 | | | | | | |
|--------------------|---|----------|-------|--------------|------|---|
| Unit Rate Code | Costing Items | Currency | | Unit Rates | Unit | Notes |
| 12 | Post closure aspects | | | | | |
| 12.1 | Surface water | : | Rands | R 119 232.00 | yr | 6 monitoring points on a monthly basis |
| 12.2 | Groundwater | : | Rands | R 52 992.00 | yr | 8 monitoring points on a quarterly basis |
| 12.3 | Reclamation monitoring | : | Rands | R 2 430.00 | ha | 5 years |
| 12.4 | Care and maintenance | : | Rands | R 15 000.00 | ha | 5 years |
| 13 | Specialists Work | | | | | |
| 13.1 | Specialist, soil and groundwater study | : | Rands | R - | sum | Nominal allowance, not for large and complex and integrated sites |
| 13.2 | Basic Assessment with Public Participation | : | Rands | R - | sum | Nominal allowance, not for large and complex and integrated sites |
| 13.3 | Integrated Water and Waste Management Plan (IWWMP) and Water Use License Application (WULA) | : | Rands | R - | sum | Nominal allowance, not for large and complex and integrated sites |
| 13.4 | Waste License Application | : | Rands | R - | sum | Nominal allowance, not for large and complex and integrated sites |
| 14 | Water Treatment Cost | | | | | |
| 14.1 | Cleaning of Stormwater system | : | Rands | R - | sum | Nominal allowance |
| 14.2 | Cleaning of Oily and Chemical Sewer system | : | Rands | R - | sum | Nominal allowance |
| 14.3 | xxxxxxx | : | Rands | R - | m³ | |
| 14.4 | yyyyyyy | : | Rands | R - | m³ | |
| 14.5 | zzzzzzz | : | Rands | R - | m³ | |
| 15 | Boreholes | | | | | |
| 15.1 | Drilling of borehole | : | Rands | R 33 000.00 | sum | Nominal allowance |
| 15.2 | Equipping of borehole (Pump, electrical and piping) | : | Rands | R 55 000.00 | sum | Nominal allowance |
| 16 | Other | | | | | |
| 16.1 | Unspecified | : | Rands | R - | sum | |
| 16.2 | Unspecified | : | Rands | R - | sum | |
| 16.3 | Unspecified | : | Rands | R - | sum | |