REHABILITATION OF ASBESTOS MINE. MOTSANE, LIMPOPO PROVINCE

BID No: MTK 12/2015

<table>
<thead>
<tr>
<th>ISSUED BY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINTEK</td>
</tr>
<tr>
<td>Block 9, Level 12, Office 91210</td>
</tr>
<tr>
<td>200 Malibongwe Drive</td>
</tr>
<tr>
<td>Strijdom Park</td>
</tr>
<tr>
<td>Randburg</td>
</tr>
</tbody>
</table>

Contact: Mr Mametsi Raphala  
Tel: +27 11 709-4387

<table>
<thead>
<tr>
<th>NAME OF TENDERER:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
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<table>
<thead>
<tr>
<th>CIDB REGISTRATION NO:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(IN CASE OF JV LIST BOTH NUMBERS)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>DEPT of LABOUR REGISTRATION NO:</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>(IN CASE OF JV LIST BOTH NUMBERS)</td>
<td></td>
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</tbody>
</table>

**FINANCIAL OFFER**

<table>
<thead>
<tr>
<th>TOTAL PRICE INCLUSIVE OF VAT: R</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>IN WORDS:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THIS TENDER CLOSES AT 12:00 ON 23 OCTOBER 2015 AND IS TO BE DEPOSITED INTO THE TENDER BOX AT THE OFFICES OF MINTEK:

200 Malibongwe Drive  
Strijdom Park  
Randburg

**NO LATE SUBMISSIONS WILL BE CONSIDERED**
REHABILITATION OF ASBESTOS MINE. MOTSANE, LIMPOPO PROVINCE

BID No: MTK 12/2015

ISSUED BY:

MINTEK
Block 9, Level 12, Office 91210
200 Malibongwe Drive
Strijdom Park
Randburg

Contact: Mr Mametsi Raphala
Tel: +27 11 709-4387

NAME OF TENDERER: __________________________________________

CIDB REGISTRATION NO: ________________________________________
(IN CASE OF JV LIST BOTH NUMBERS)

DEPT of LABOUR REGISTRATION NO: _____________________________
(IN CASE OF JV LIST BOTH NUMBERS)

TECHNICAL OFFER

THIS TENDER CLOSES AT 12:00 ON 23 OCTOBER 2015 AND IS TO BE DEPOSITED INTO THE TENDER BOX AT THE OFFICES OF MINTEK:

200 Malibongwe Drive
Strijdom Park
Randburg

NO LATE SUBMISSIONS WILL BE CONSIDERED
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<th>Heading</th>
<th>Page No.</th>
</tr>
</thead>
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</tr>
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</tr>
<tr>
<td></td>
<td>C3.2 Occupational Health and Safety Specification (including Annexures)</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>C3.3 Drawings</td>
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</tr>
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</tr>
<tr>
<td></td>
<td>C4 Site Information</td>
<td>145</td>
</tr>
</tbody>
</table>
Part T1: Tendering procedures
### T1.1 Tender Notice and Invitation to Tender

Mintek, on behalf of the Department of Mineral Resources, is in the process of rehabilitating several abandoned mines around the country. In this regard,

**Mintek** invites tenders for The Rehabilitation of asbestos mine, Motsane, Limpopo Province.

*(Tender No. MTK 12/2015)*

It is estimated that tenderers should have a CIDB contractor grading designation of 5CE or higher.

Only tenderers who are registered with the Construction Industry Development Board in an appropriate contractor grading designation as well as registered with the Department of Labour in terms of the requirements of the Asbestos Regulations 2001 are eligible to submit tenders.

Tenders are available for download from Mintek’s website [www.mintek.co.za](http://www.mintek.co.za)

Documents are also available at the offices of Mintek which is located at:

200 Malibongwe Drive  
RANDBURG  
2125

Documents may be collected during working hours after 10h00 on **28 SEPTEMBER 2015**.

Queries relating to the issue of these documents may be addressed to

**Tender Queries:**

Mr Mametsi Raphala  
Tel: +27 11 709-4387  
E-mail: mametsir@mintek.co.za

A compulsory clarification / site inspection meeting with representatives of the Employer will take place at:

Mafefe Traditional Authority Hall, Mafefe Village, Limpopo (GPS: 24°12’14” S 30°06’46” E)  
**08 OCTOBER 2015** starting punctually at 10h00.

The closing time for receipt of tenders is **12h00** on **23 OCTOBER 2015**

Telegraphic, telephonic, telex, facsimile, e-mail and late tenders will not be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.
T1.2 Tender Data

<table>
<thead>
<tr>
<th>Clause number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F.1.1</td>
<td>The employer is <strong>MINTEK</strong></td>
</tr>
<tr>
<td>F.1.2</td>
<td>The tender documents issued by the employer comprise:</td>
</tr>
<tr>
<td></td>
<td>T1.1 Tender notice and invitation to tender</td>
</tr>
<tr>
<td></td>
<td>T1.2 Tender data</td>
</tr>
<tr>
<td></td>
<td>T2.1 List of returnable documents</td>
</tr>
<tr>
<td></td>
<td>T2.2 Returnable schedules</td>
</tr>
<tr>
<td></td>
<td><strong>Part 1: Agreements and contract data</strong></td>
</tr>
<tr>
<td></td>
<td>C1.1 Form of offer and acceptance</td>
</tr>
<tr>
<td></td>
<td>C1.2 Contract data</td>
</tr>
<tr>
<td></td>
<td>C1.3 Form of Guarantee</td>
</tr>
<tr>
<td></td>
<td>C1.4 Adjudicator’s Contract</td>
</tr>
<tr>
<td></td>
<td><strong>Part 2: Pricing data</strong></td>
</tr>
<tr>
<td></td>
<td>C2.1 Pricing instructions</td>
</tr>
<tr>
<td></td>
<td>C2.2 Activity schedules / Bills of Quantities</td>
</tr>
<tr>
<td></td>
<td><strong>Part 3: Scope of work</strong></td>
</tr>
<tr>
<td></td>
<td>C3 Scope of work</td>
</tr>
<tr>
<td></td>
<td>C3.1 Technical Specification</td>
</tr>
<tr>
<td></td>
<td>C3.2 Health and Safety Specifications and requirements</td>
</tr>
<tr>
<td></td>
<td>C3.3 Drawings</td>
</tr>
<tr>
<td></td>
<td>C3.4 Schedule</td>
</tr>
<tr>
<td></td>
<td><strong>Part 4: Site information</strong></td>
</tr>
<tr>
<td></td>
<td>C4 Site information</td>
</tr>
<tr>
<td>F.1.4</td>
<td>The employer’s agent is:</td>
</tr>
<tr>
<td></td>
<td>Name: SRK Consulting (South Africa) Pty Ltd</td>
</tr>
<tr>
<td></td>
<td>Address: SRK House, 265 Oxford Rd, Illovo 2196</td>
</tr>
<tr>
<td></td>
<td>Tel: +27-(0)11 441-1111</td>
</tr>
<tr>
<td></td>
<td>Fax: +27-(0)86 555 0998</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:CDeReuck@srk.co.za">CDeReuck@srk.co.za</a></td>
</tr>
<tr>
<td>F.2.1</td>
<td>Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:</td>
</tr>
<tr>
<td></td>
<td>Only those tenderers who score a minimum score of <strong>65</strong> points in respect of the Functionality criteria will be considered.</td>
</tr>
<tr>
<td></td>
<td>The Functionality Criteria is contained in Table A at the end of Part T2.1 – Tender Data</td>
</tr>
<tr>
<td></td>
<td>The persons named in the Schedule of Key Persons of tenderers who satisfy the minimum quality criteria may be invited to an interview.</td>
</tr>
</tbody>
</table>
### F.2.7
The arrangements for a **compulsory** site inspection clarification meeting are:

**Location:** At the Mafefe Traditional Authority Hall, Mafefe Village, Limpopo  
(GPS: 24° 12' 14" S  30° 06' 46" E)
**Date:** 08 OCTOBER 2015  
**Starting time:** 10h00

Tenderers must sign the attendance register in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance register.

### F.2.13.3
Parts of each tender offer communicated on paper shall be submitted as an original, plus two copies.

### F.2.13.5
**F2.15.1**

<table>
<thead>
<tr>
<th>The employer’s address for delivery of tender offers and identification details to be shown on each tender offer package are:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location of tender box:</strong> Mintek.</td>
</tr>
</tbody>
</table>
| **Physical address:** 200 Malibongwe Drive  
RANDBURG  
2125 |
| **Identification details:** Rehabilitation of asbestos mines at Motsane, Limpopo Province.  
(Tender No. MTK 12/2015) |
| **Postal address:** Mintek  
Private Bag X 3015  
Randurg  
2125 |

A three-envelope procedure will be followed. See Note at the end of Part 2.1 – Returnable Documents.

### F.2.15
The closing time for submission of tender offers is **12h00 on 23 OCTOBER 2015**

### F.2.15
Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will **not** be accepted.

### F.2.16
The tender offer validity period is **90 days**

### F.2.18
The tenderer is to submit the priced Bills of Quantities and offer in a separate envelope together with their tenders (in another sealed envelope).

### F.2.23
The tenderer is required to submit with his tender:

1. an original valid Tax Clearance Certificate issued by the South African Revenue Services;
2. Original valid Asbestos certificate as issued by the Department of Labour
4. Valid original or certified BBBEE Rating Certificate (as provided by an authorised agency)
5. Valid letter of good standing with Department of Labour
The time and location for opening of the tender offers are:

**Time 12h05 on 23 OCTOBER 2015**

**MINTEK.**
Main Gate Security Reception
200 Malibongwe Drive
RANDBURG
2125

Evaluation of tenders in terms of Methods 1; 2; 3 and 4 of SANS 294 will be replaced by the following:

As Mintek is a 3B PFMA Institution, the procedure for the evaluation of responsive tenders is based on Part Three and Part Four of National Treasury Implementation Guide (1 December 2011) – Preferential Procurement Regulations, 2011 pertaining to the Preferential Procurement Policy Framework (PPPFA) Act, Act No 5 of 2000.

The following evaluation procedure will apply to this tender:

**Stage 1.**
Evaluation of Functionality

Bids will first be assessed on the Functionality Criteria as contained in Table A at the end of this section. **A minimum score of 65 points is required** for the tender to advance to Stage 2.

**Stage 2**
Evaluation in terms of the 90/10 preference points system (as prescribed in Preferential Procurement regulations 5 and 6).

The 90/10 Preference point system will apply to tenders of a Rand value in excess of R 1 million inclusive of all applicable taxes.

**Step 1: Calculation of points for price.**

The PPPFA prescribes that the lowest acceptable bid will score 90 points for price. The points for price will be calculated on a pro rata basis as per the formula below:

| Tender | Part T1.2: Tender data | 5 |
For 90/10 Preference point system.

\[
Ps = 90 \left( \frac{Pt - P_{min}}{P_{min}} \right)
\]

Where

- \(Ps\) = Points scored for comparative price of bid or offer under consideration
- \(Pt\) = Comparative price of bid or offer under consideration.
- \(P_{min}\) = Comparative price of lowest acceptable bid or offer

Points scored must be rounded off to the nearest 2 decimal places.

**Step 2: Calculation of points for B-BBEE status level of contributor**

Points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

<table>
<thead>
<tr>
<th>B-BBEE Status Level of Contributor</th>
<th>Number of points (90/10 system)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Non-compliant contributor</td>
<td>0</td>
</tr>
</tbody>
</table>

**Subcontracting**

A bidder must not be awarded the points claimed for B-BBEE status level of contribution if it is indicated in the bid documents that such a bidder intends sub-contracting more that 25% of the contract value to any other enterprise that does not qualify for at least the same number of points that the bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

A contractor is not allowed to sub-contract more than 25% of the contract value to another enterprise that does not have equal or higher B-BBEE status level, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

The points scored for price must be added to the points scored for B-BBEE status levels of contribution to obtain the bidder’s total points score out of 100.

A contract must be awarded to the bidder who scored the highest total number of points in terms of the preference points system.

In the event that two or more bids have scored equal points, the successful bid must be the one that scored the highest points for B-BBEE.

If two or more bids have equal points, including equal preference points for B-BBEE, the successful bid must be the one scoring the highest points for functionality.
In the event that two or more bids are equal in all respects, the award must be decided by the drawing of lots.

F.3.13.1 Tender offers will only be accepted if:

a) the tenderer has in his or her possession an **original valid Tax Clearance Certificate** issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations

b) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; (Lead partner’s CIDB grading 5CE or higher).

c) the tenderer is required to provide evidence that either:
   - tenderer is registered with the Department of Labour in terms of the requirement of the **Asbestos Regulations 2001**, or
   - tenderer has contracted an individual or company, who is registered with the Department of Labour in terms of the requirement of the Asbestos Regulations 2001, to provide the necessary oversight of the project, or
   - tenderer is in a joint venture arrangement with a company, who is registered with the Department of Labour in terms of the requirement of the Asbestos Regulations 2001

d) the tenderer or any of its directors is **not listed on the Register of Tender Defaulters** in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;

e) the tenderer has not:
   - abused the Employer’s Supply Chain Management System; or
   - failed to perform on any previous contract and has been given a written notice to this effect; and

f) has completed the **Compulsory Enterprise Questionnaire** and there are no conflicts of interest which may impact on the tenderer’s ability to perform the contract in the best interests of the employer or potentially compromise the tender process.

g) has completed and submitted SBD 6.2

h) **Letter of Good standing** with the Compensation Commissioner

i) **Proof of payment of the tender document fee of R 500.00**
   (Payable to: Mintek, ABSA Bank, Current account. Account number 01000041501, Branch code: 632005)

j) Site briefing **attendance certificate**

F.3.18 The number of paper copies of the signed contract to be provided by the employer is 1 (one).

The additional conditions of tender are:

1. A maximum limit of 25% of the work may be undertaken by subcontractors

2. .................................................................................................................................

3. .................................................................................................................................

Tenderers are acceptable from Joint Ventures providing such Joint Ventures meet Treasury guidelines.

Such Joint Ventures must be in existence at the time of the closing of the tender and documents such as tax clearance certificates, etc. must be submitted in the name of the Joint Venture.
## Compliance Documents

**COMPLIANCE CHECKLIST**  
(These documents MUST accompany your bid for it to be considered for technical evaluation)

<table>
<thead>
<tr>
<th>Document</th>
<th>Included?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original and Valid tax clearance certificate (no photocopies allowed)</td>
<td></td>
</tr>
<tr>
<td>Certificate of registration was asbestos contractor</td>
<td></td>
</tr>
<tr>
<td>CIDB Certificate Level 5CE or higher</td>
<td></td>
</tr>
<tr>
<td>Letter of Good Standing from the Dept of Labour</td>
<td></td>
</tr>
<tr>
<td>Signed <strong>SBD document</strong> (Declaration T2.2: 2.2 - page 23 of this document)</td>
<td></td>
</tr>
<tr>
<td>Proof of payment of tender fee</td>
<td></td>
</tr>
<tr>
<td>Site attendance certificate</td>
<td></td>
</tr>
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</table>
### TABLE A – TECHNICAL SCORING CRITERIA

<table>
<thead>
<tr>
<th>Main Criteria</th>
<th>Maximum score</th>
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<tbody>
<tr>
<td>Experience</td>
<td>20</td>
</tr>
<tr>
<td>Capacity</td>
<td>20</td>
</tr>
<tr>
<td>Safety experience</td>
<td>22</td>
</tr>
<tr>
<td>Method and programme</td>
<td>22</td>
</tr>
<tr>
<td>Regional Development</td>
<td>16</td>
</tr>
<tr>
<td><strong>TOTAL FUNCTIONALITY</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Method Evaluation</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Experience</td>
<td>Maximum score 20</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Experience in bulk earth works and civils</td>
<td>Evidence of experience and performance in bulk earth works and civils.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of relevant work indicates up to 1 - 2 projects including bulk earth works and civils.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of relevant work indicates 3 - 4 projects including bulk earth works and civils.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of relevant work indicates 5 or more projects including bulk earth works and civils for mine closure at asbestos mines in steep and remote areas.</td>
<td>5</td>
</tr>
<tr>
<td>1.2</td>
<td>Experience in working close to residential developments or structures</td>
<td>Evidence of experience in working close to residential developments or structures.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of relevant work indicates no experience in working close to residential developments or structures.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of relevant work indicates at least one project with experience in working close to residential developments or structures</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>List of relevant work indicates 2 or more projects with experience in working close to residential developments or structures</td>
<td>5</td>
</tr>
<tr>
<td>1.3</td>
<td>Experience of employees that will be dedicated to Mintek’s project</td>
<td>Experience of key personnel committed to this project (project plan) in civil works, rehabilitation projects and/or earthworks projects.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 to 2 years of experience of key people in project team with civils, rehabilitation and/or earthworks.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 to 4 years of experience of key people in project team with civils, rehabilitation and/or earthworks.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 or more years of experience amongst key team members and company commits to providing experienced site manager (civils, rehabilitation and/or earthworks) to project for full duration.</td>
<td>5</td>
</tr>
<tr>
<td>1.4</td>
<td>Experience with road building and road construction surveying</td>
<td>Experience of team or key personnel (Project Manager, Civil Engineer and Health and Safety Officer) with surveying, laying out, planning and constructing equipment access roads at steep</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Team has no experience in construction of access roads for heavy equipment into sites.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Team has little (1-2 projects) experience with constructing access roads for equipment into sites or this ability is outsourced</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Team is experienced (3 or more large projects) in survey, planning and constructing access roads for heavy machinery in difficult terrain.</td>
<td>5</td>
</tr>
<tr>
<td>No.</td>
<td>Criteria</td>
<td>Method Evaluation</td>
<td>Points</td>
</tr>
<tr>
<td>-----</td>
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<td>--------</td>
</tr>
<tr>
<td>2</td>
<td>Capacity</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>2.1</td>
<td>Infrastructure and Capacity</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>2.1.1</td>
<td>Ability to provide quantity and type of plant and equipment to be used for works</td>
<td>Inability to provide evidence of plant/ equipment procurement capability.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evidence of equipment hire company willing to provide plant/equipment not owned.</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evidence of ownership of plant/equipment.</td>
<td>10</td>
</tr>
<tr>
<td>2.2</td>
<td>Proposed Organisation structure and capability</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate: The organization chart is inadequate, the staffing plan is weak in important areas</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There is no clarity in allocation of tasks and responsibilities.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satisfactory: The organizational chart is complete and detailed, the technical level and composition of the staffing arrangements are adequate.</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good: Besides meeting the “satisfactory” rating, staff are well balanced i.e. they show good co-ordination, complimentary skills, clear and defined duties and responsibilities, and the approach to satisfying local consultants. Some members of the project team have worked together before on occasion.</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Construction-related safety experience ([complete form on page 34])</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Construction-related Safety experience</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate Safety experience in general construction or civil projects. ([Complete form on page 34])</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safety experience on 4 – 7 civil construction or mining projects. ([Complete form on page 34])</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safety experience on 8 or more larger civil construction or mining projects. ([Complete form on page 34])</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>General Approach</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>Method and programme</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>4.1.1</td>
<td>The Contractor will be evaluated on a construction programme showing clear logic and understanding.</td>
<td>Poor: The programme and / or methodology is unlikely to satisfy project objectives or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project. Programme is sequential and vulnerable to any delay. The programme includes no interim milestones. The programme provides unrealistic timelines for sub-tasks.</td>
<td>4</td>
</tr>
<tr>
<td>No.</td>
<td>Criteria</td>
<td>Method Evaluation</td>
<td>Points</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adequate: The programme and method is generic and not tailored to address the specific project objectives and methodology. The approach does not adequately deal with the critical characteristics of the project. The quality plan, manner in which risk is to be managed is too generic. Programme is largely sequential and vulnerable to any delay. The programme includes few interim milestones. The programme provides overly optimistic timelines for sub-tasks.</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good: The programme and method is specifically tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The quality plan and approach to managing risk is specifically tailored to the critical characteristics of the project. Programme includes a number of tasks completed in parallel making it less vulnerable to delay. The programme includes many interim milestones. The programme provides realistic timelines for sub-tasks.</td>
<td>12</td>
</tr>
<tr>
<td>4.2</td>
<td>Ability to timeously complete the works (resource scheduling)</td>
<td>Inadequate resource scheduling graph or Gantt Chart submitted</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource graphs shows peaks of activity that exceed the stated capability.</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource graph is realistic, balanced, aligned with the project plan and is within contractor’s abilities.</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Regional development</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>Regional development</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neither subcontractor nor main contractor are from the Limpopo Province</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub-contractor is from the province in which the project is located (Limpopo Province)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contractor (main contractor) is head-quartered in the province in which the project is located (Limpopo Province)</td>
<td>6</td>
</tr>
<tr>
<td>No.</td>
<td>Criteria</td>
<td>Method Evaluation</td>
<td>Points</td>
</tr>
<tr>
<td>-----</td>
<td>----------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>5.2</td>
<td>Inclusion of local labour and support for local businesses</td>
<td>Work programme shows commitment to support local businesses in project procurement and/or work programme shows commitment to employ locals in project work.</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work programme has little or no commitment to support local labour and/or local businesses. Less than 20% local representation on the following categories bush clearing and rock cladding.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work programme has little commitment to support local labour and/or local businesses. Between 20% and 60% local representation on the following categories bush clearing and rock cladding</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work programme shows significant commitment to employ local labour and/or support local businesses. More than 60% local representation on the following categories bush clearing and rock cladding, gabion construction or other works.</td>
<td>10</td>
</tr>
</tbody>
</table>

**TOTAL FUNCTIONALITY**

Experience + Capacity + Safety experience + Method and Programme + Regional Development | 100

Bidders who score less than 65% for the technical evaluation will not be considered for preferential evaluation.

**Preferential Evaluation**

<table>
<thead>
<tr>
<th>Evaluation criteria</th>
<th>Final weighted scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points for cost (Price)</td>
<td>90</td>
</tr>
<tr>
<td>Points for Black Economic Empowerment</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL SCORE</td>
<td>100</td>
</tr>
</tbody>
</table>

*Mintek reserves the right to cancel this tender, to make no award at all, and/or to consider the equitable distribution of tendered work amongst qualifying bidders.*
Part T2: Returnable Documents
# T2.1 List of Returnable Documents

The tenderer must complete / provide the following returnable documents:

## 1. Returnable Schedules required for tender evaluation purposes
   1.1. Schedule of proposed subcontractors
   1.2. Schedule of plant and equipment
   1.3. Anticipated construction programme
   1.4. Cash flow prediction
   1.5. Selection of preferred format of security to be provided by the Contractor

## 2. Other documents required for tender evaluation purposes
   2.1. Tax Clearance Certificate
   2.2. Compulsory Enterprise Questionnaire
   2.3. SBD 6.2. Local Content
   2.4. CIDB Registration and Grading Certificate (for JV please note requirements as clause F 2.1 on Page 3 of this document)
   2.5. Letter of intent from Financial Institution that the necessary financial guarantees will be provided.
   2.6. Certificate of Authorisation for Signatory
   2.7. Method Statements (including company organogram and key personnel list with CV’s)
   2.8. Certificate of BBBEE rating from a recognized rating agency. (Based on Ratings Gazetted October 2013).
   2.9. Formalised Agreement between partners to a Joint Venture (if applicable) and corresponding Tax Clearance Certificate and BBBEE Rating, both in the name of the Joint Venture
   2.10. Company CV including summary of recently completed projects with contactable references, list of current projects and list of current disputes
   2.11. Original valid Asbestos Certificate as issued by the Department of Labour (if this function is subcontracted, a copy of the agreement)
   2.12. Certificate of good standing with The Compensation Commissioner
   2.13. Evidence of pre-existing relationship with equipment hire company (where applicable)
   2.14. Evidence of ownership of plant/ equipment (where applicable)
   2.15. Evidence that the Tenderer is sufficiently financially stable to undertake the contract

## 3. Returnable Schedules that will be incorporated into the contract
   3.1. Schedule of labour costs for dayworks
   3.2. Schedule of plant and equipment standing time and daywork rates
   3.3. Record of Addenda to Tender Documents
   3.4. Record of OHS officer experience

## 4. Other documents that will be incorporated into the contract
   4.1. Site inspection certificate

## 5. C1.1 Form of Offer and acceptance *

## 6. C1.2 Contract Data (Part 2)

## 7. C2.2 Bills of Quantities (fully priced) *

**CONTENTS OF THREE TENDER ENVELOPES**

1. Envelope is to contain compliance documents such as those listed under Part T 1.2 – Tender Data - Item F2.23 AND marked “Tender Compliance”
2. All other returnable documents must be included in a separate tender envelope marked “Technical Offer”.

3. Items marked thus * are to be included in tender envelope marked “Financial Offer”.
T2.2 Returnable Schedules
### T2.2: 1.1 - Schedule of Proposed Subcontractors

We notify you that it is our intention to employ the following Subcontractors for work in this contract. If we are awarded a contract we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

<table>
<thead>
<tr>
<th></th>
<th>Name and address of proposed Subcontractor</th>
<th>Nature and extent of work</th>
<th>Previous experience with Subcontractor</th>
<th>Percentage of Contract Sum to be under-taken by Sub-contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
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<tr>
<td>3.</td>
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<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signed ...........................................................................  Date ..........................................................................

Name ...........................................................................  Position ...........................................................................

Tenderer ...........................................................................
T2.2: 1.2 - Schedule of Plant and Equipment

The following are lists of major items of relevant equipment that I/we presently own or lease and will have available for this contract or will acquire or hire for this contract if my/our tender is accepted.

(a) Details of major equipment that is owned by and immediately available for this contract.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description, size, capacity, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attach additional pages if more space is required.

(b) Details of major equipment that will be hired, or acquired for this contract if my/our tender is acceptable.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description, size, capacity, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attach additional pages if more space is required.
Evidence of pre-existing relationship with equipment hire company (where applicable) or of ownership of plant/equipment (where applicable) must be provided with the tender.

Back-up plan in the event of breakdowns, etc. for both owned and hired plant and equipment must be provided.

Signed

Date

Name

Position

Tenderer
T2.2: 1.3 - CONSTRUCTION PROGRAMME

The contractor is to submit his construction programme in the form of a bar chart highlighting the critical path with his tender including the following:

- Interim milestones (NOTE: The project plan must be broken down to at least level 2 of the WBS)
- Site mobilization period from Commencement Date, equipment mobilization and Site Access Date
- Programme is to be reflective of method being adopted
- Resource allocation against tasks
- Intended Commencement of the Works Date (as distinguished from the Commencement of Contract Date as defined in the General Conditions of Contract): 10 November 2015 which is subject to the submission of documentation required from the Contractor and the subsequent issue of the Engineer’s instruction to proceed, all in terms of Clause 5.3 of the General Conditions of Contract. (See also C 1.2 – Contract Data for GCC 2010 – Clause 5.3.2 on page 41 of this document)
- Practical completion date: 08 April 2016

Signed  Date  
Name  Position  
Tenderer
T2.2: 1.4 - CASH FLOW PREDICTION

My/Our anticipated monthly cash flow based on my/our proposed price and the completion dates is given below.

<table>
<thead>
<tr>
<th>MONTH</th>
<th>RANDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Contractor will be required to provide updates of the above information on request from the Engineer.

The Contractor should note that his cash flow prediction shall in no way affect the terms of payment as stated elsewhere in this Enquiry Document.

Signed  Date

Name  Position

Tenderer
**T2.2: 1.5 – SELECTION OF PREFERRED SECURITY FORMAT**

Clause 6.2.1: The security to be provided by the Contractor shall be one of the following:

<table>
<thead>
<tr>
<th>Type of Security</th>
<th>Contractor’s Choice. Indicate “Yes” or “No”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash deposit of 7.5% of the Contract Sum</td>
<td>Contractor’s Choice. Indicate “Yes” or “No”</td>
</tr>
<tr>
<td>Performance guarantee of 10% of the Contract Sum</td>
<td>Contractor’s Choice. Indicate “Yes” or “No”</td>
</tr>
<tr>
<td>Retention of 15% per Certificate value to a maximum of 10% of the Contract Price</td>
<td>Contractor’s Choice. Indicate “Yes” or “No”</td>
</tr>
<tr>
<td>Cash deposit of 5% of the Contract Sum plus retention of 15% of Certificate value up to a maximum of 7.5% of the Contract Price</td>
<td>Contractor’s Choice. Indicate “Yes” or “No”</td>
</tr>
<tr>
<td>Performance guarantee of 7.5% of the Contract Sum plus retention of 15% of Certificate value up to a maximum of 7.5% of the Contract Price</td>
<td>Contractor’s Choice. Indicate “Yes” or “No”</td>
</tr>
</tbody>
</table>

Signed

__________________________ Date ________________________________

Name ___________________________ Position ________________________________

Tenderer ____________________________________________________________________
**T2.2: 2.2 - Compulsory Enterprise Questionnaire**

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

| Section 1: Name of enterprise: | ........................................................... |
| Section 2: VAT registration number: | ........................................................... |
| Section 3a: CIDB registration number: | ........................................................... |
| Section 3b: Dept. of Labour registration number: | ........................................................... |

### Section 4: Particulars of sole proprietors and partners in partnerships

<table>
<thead>
<tr>
<th>Name*</th>
<th>Identity number*</th>
<th>Personal income tax number*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

### Section 5: Particulars of companies and close corporations

| Company registration number | ........................................................... |
| Close corporation number | ........................................................... |
| Tax reference number | ........................................................... |

### Section 6: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

If any of the above boxes are marked, disclose the following:

<table>
<thead>
<tr>
<th>Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder</th>
<th>Name of institution, public office, board or organ of state and position held</th>
<th>Status of service (tick appropriate column)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Current</td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

*insert separate page if necessary
**Section 7: Record of spouses, children and parents in the service of the state**

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

<table>
<thead>
<tr>
<th>Name of spouse, child or parent</th>
<th>Name of institution, public office, board or organ of state and position held</th>
<th>Status of service (tick appropriate column)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Current</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Insert separate page if necessary*
The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;

ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;

iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and

iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

Enterprise name
SBD 6.2

DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2011, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

1.1. Preferential Procurement Regulations, 2011 (Regulation 9) makes provision for the promotion of local production and content.

1.2. Regulation 9.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

1.3. Where necessary, for bids referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.

1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

\[ LC = \left(1 - \frac{x}{y}\right) \times 100 \]

Where

\( x \) is the imported content in Rand
\( y \) is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of \( x \) must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

2. Definitions

2.1. “bid” includes written price quotations, advertised competitive bids or proposals;

2.2. “bid price” price offered by the bidder, excluding value added tax (VAT);

2.3. “contract” means the agreement that results from the acceptance of a bid by an organ of state;

2.4. “designated sector” means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;

2.5. “duly sign” means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).

2.6. “imported content” means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour or intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;

2.7. “local content” means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;

2.8. “stipulated minimum threshold” means that portion of local production and content as determined by the Department of Trade and Industry; and

2.9. “sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.

3. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

<table>
<thead>
<tr>
<th>Description of services, works or goods</th>
<th>Stipulated minimum threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>
4. Does any portion of the services, works or goods offered have any imported content?  
(Tick applicable box)

| YES | NO |
---|---|

4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on [www.reservebank.co.za](http://www.reservebank.co.za)

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

<table>
<thead>
<tr>
<th>Currency</th>
<th>Rates of exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Dollar</td>
<td></td>
</tr>
<tr>
<td>Pound Sterling</td>
<td></td>
</tr>
<tr>
<td>Euro</td>
<td></td>
</tr>
<tr>
<td>Yen</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

NB: Bidders must submit proof of the SARB rate(s) of exchange used.

5. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

**LOCAL CONTENT DECLARATION**
(REFER TO ANNEX B OF SATS 1286:2011)

**LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

IN RESPECT OF BID NO. ...........................................................................................................................

ISSUED BY: (Procurement Authority / Name of Institution):
..................................................................................................................................................

NB

1. The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

2. Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on [http://www.thdti.gov.za/industrial_development/ip.jsp](http://www.thdti.gov.za/industrial_development/ip.jsp). Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.
I, the undersigned, ……………………………………………………………………………. (full names),
do hereby declare, in my capacity as ………………………………………………………………...
of …………………………………………………………………………………………………(name of bidder entity), the
following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that:

   (i) the goods/services/works to be delivered in terms of the above-specified bid comply
       with the minimum local content requirements as specified in the bid, and as measured
       in terms of SATS 1286:2011; and

(c) The local content percentage (%) indicated below has been calculated using the formula
    given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above
    and the information contained in Declaration D and E which has been consolidated in
    Declaration C:

    | Bid price, excluding VAT (y) | R |
    |--------------------------------|---|
    | Imported content (x), as calculated in terms of SATS 1286:2011 | R |
    | Stipulated minimum threshold for local content (paragraph 3 above) |   |
    | Local content %, as calculated in terms of SATS 1286:2011 |   |

If the bid is for more than one product, the local content percentages for each product
contained in Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given
in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and
the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / Institution has the right to request that the local
    content be verified in terms of the requirements of SATS 1286:2011.

(e) I understand that the awarding of the bid is dependent on the accuracy of the information
    furnished in this application. I also understand that the submission of incorrect data, or data
    that are not verifiable as described in SATS 1286:2011, may result in the Procurement
    Authority / Institution imposing any or all of the remedies as provided for in Regulation 13 of
    the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy
    Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: __________________________ DATE: ___________
WITNESS No. 1 __________________________ DATE: ___________
WITNESS No. 2 __________________________ DATE: ___________
T2.2: 2.6 – METHOD STATEMENT

The contractor is to submit with his Tender a Method Statement.

This is to include the following:

- Method statement on construction activities
- Method statement on Temporary Access Works including construction, maintenance and rehabilitation
- Method statement on health and safety protocols and procedures, with specific regard to asbestos
- Method statement for transporting asbestos containing material (including a traffic management plan)
- Method statement for dust control when excavation, transporting and depositing asbestos-bearing material
- Method statement for protection of existing services
- Company organogram
- List of Key Personnel
- CV’s of Key personnel
- Quarry and Borrow pit opening, maintenance and rehabilitation method statement
- Potable water supply
- Construction camp method
- Batch plant set up and rehabilitation method
- Wayleave application
- Plant maintenance methodology

Signed                                                                 Date

Name  Position

Tenderer
T2.2: 3.1 – Schedule of labour costs for dayworks *(Refer to GCC Clause 6.5.1)*

**LABOUR**

The rates for labour indicated below shall be the total cost to the Company, and shall include for all the Contractors’ profits, overheads, wages, accommodation, travelling, subsistence and other costs relative to the employment by the Contractor of the personnel detailed, and for hand and portable electric or pneumatic tools and consumables normal to the trade of the respective personnel, but will exclude indirect supervision as same are deemed to be included under the costs relating to the Conditions of Contract, i.e. non-productive supervisors are deemed to be included in the rate.

The application and use of these rates shall be at the sole discretion and subject to the prior approval of the Engineer.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Category</th>
<th>Rate per Hour in Rands</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Normal</td>
</tr>
</tbody>
</table>

Attach additional pages if more space is required.

Signed

Date

Name

Position

Tenderer
**T2.2: 3.2 – Schedule of plant and equipment standing time and daywork rates**  
*(Refer to GCC Clause 6.5.1)*

The Contractor must list hereunder all the items of major plant which he guarantees will be provided on site in perfect working order to complete the work.

The lists of items of plant shall provide the Contractor’s warranty of ownership of such plant unless specifically endorsed in this Schedule to the contrary as “hired” or “hire purchase plant”.

**NOTES:**

1. No payment in respect of standing time shall be paid for items of plant not listed below.
2. The hourly daywork rate for use of the item of plant listed shall include all operating costs, profit and overheads together with wages or operator, etc.
3. This schedule must be accurately completed. Phrases such as “adequate plant will be provided” will not be accepted.

<table>
<thead>
<tr>
<th>DESCRIPTION OF PLANT</th>
<th>STANDING TIME Rate Per Hour</th>
<th>DAYWORK Rate Per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attach additional pages if more space is required.

Date

Signed

Name

Position

Tenderer
**T2.2: 3.3 - Record of Addenda to tender documents**

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

<table>
<thead>
<tr>
<th>Date</th>
<th>Title or Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
</tr>
</tbody>
</table>

Attach additional pages if more space is required.

Signed ______________________________ Date ______________________________

Name ______________________________ Position ______________________________

Tenderer
Schedule of relevant experience of the Occupational Health and Safety Officer to be appointed by the contractor and who will be on site. (“Site safety officer”)

(Note that only experience related to mining, rehabilitation, civil or construction projects need to be listed here)

<table>
<thead>
<tr>
<th>Reference page in bid document</th>
<th>Period in role</th>
<th>Role on project</th>
<th>Description of project</th>
<th>Location of project</th>
<th>Size of project (value)</th>
<th>Date</th>
</tr>
</thead>
</table>
Part C1: Agreements and Contract Data
### C1.1 Form of Offer and Acceptance

**Offer**
The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

**Rehabilitation of asbestos mine, Motsane, Limpopo Province.**

The Tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto as listed in the returnable schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

**THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS**

- .........................................................................................................................Rand (in words);

- R .........................................................................................................................(in figures)

This offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

**For the Tenderer**

Signature 
.................................................................................................................................

Name 
.................................................................................................................................

Capacity 
.................................................................................................................................

Name and address of organization 
.................................................................................................................................
.................................................................................................................................

Signature and name of witness

Signature 
.................................................................................................................................

Name 
.................................................................................................................................

Date ........................................
Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the Tenderer’s Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer’s Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract, are contained in:
- Part C1 Agreements and Contract Data, (which includes this Agreement)
- Part C2 Pricing Data
- Part C3 Scope of Work.
- Part C4 Site information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

For the Employer

Signature

Name

Capacity

Name and address of organization
### Schedule of Deviations

**Notes:**

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A Tenderer’s covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here,
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties become an obligation of the contract shall also be recorded here,
4. Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.
It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

<table>
<thead>
<tr>
<th>For the Tenderer</th>
<th>For the Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
</tr>
<tr>
<td>Name and Address of organisation</td>
<td>Name and Address of organisation</td>
</tr>
<tr>
<td>Witness Signature</td>
<td></td>
</tr>
<tr>
<td>Witness Name</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>
Confirmation of Receipt

The tenderer (now Contractor), identified in the Offer Part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement of one fully completed original copy of this Agreement, including the Schedule of Variations (if any) today:

The: ________________________________________________________________ (day)

Of: _______________________________________________________________ (month) 2015

At: ________________________________________________________________ (place)

For the Contractor:

Signature ________________________________________________________________

Name ________________________________________________________________

Capacity ________________________________________________________________

Witness:

Signature ________________________________________________________________

Name ________________________________________________________________

Capacity ________________________________________________________________
C 1.2 - Contract Data for GCC 2010

The General Conditions of Contract for Construction Works (2010) published by the South African Institution of Civil Engineering, are applicable to this contract.

Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel 011-805 5947)

CONTRACT DATA FOR: Rehabilitation of asbestos mine. Motsane, Limpopo Province.

Part 1: Contract Data completed by the Employer

Clause 1.1.1.13: The Defects Liability Period is: 12 Months

Clause 1.1.1.14: The time for achieving Practical Completion is: 5 Months

Clause 1.1.1.15: The Employer is: MINTEK

Clause 1.1.1.26: The Pricing Strategy is: Quantity Remeasureable Contract on tendered rates

Clause 1.2.1.23: The address of the Employer is:

Physical:
200 Malibongwe Drive
RANDBURG
2125

Postal
Private Bag X 3015
Randburg
2125

e-mail address: mametsir@Mintek.co.za

Fax No: +27 11 709 4102

Telephone +27 11 709 4387

Clause 5.3.1: The documentation required before commencement of Works execution is:

- Health and Safety Plan (Refer to Clause 4.3)
- Initial Programme (Refer to Clause 5.6)
- Security (Refer to Clause 6.2)
- Insurance (Refer to Clause 8.6)
- Quality Management Plan

Clause 5.3.2: The time to submit the documentation required before commencement with Works execution is 7 (seven) days.
Clause 5.8.1: The non-working days are: Sundays

The special non-working days are:
- Year-end break (21 December 2015 to 04 January 2016)
- Good Friday

Clause 5.13.1: The Penalty for failing to complete the works is: 0.25% of the Contract Sum per working day.

Clause 5.16.3: The latent defect period is: 3 years

Clause 6.10.1.5: The percentage advance on materials not yet built into the Permanent Works is: 80%

Clause 8.6.1.1.2: The value of Plant and Materials supplied by the Employer to be included in the insurance sum is: Nil

Clause 8.6.1.1.3: The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is: 25% of the Contract Sum

Clause 8.6.1.3: The limit of liability for liability insurance is: R 5 000 000.00

Clause 10.5.3: The number of Adjudication Board Members to be appointed is: 1 (one)

OPTIONAL DATA

Clause 6.8.2: The value of payment certificates is NOT adjustable by a Contract Price Adjustment Factor. (Price to be a remeasurable fixed price, i.e. Quantities are re-measurable while tendered rates are fixed for the duration of the Contract).
Part 2: Contract Data provided by the Contractors

Clause 1.1.1.9: The name of the Contractor is:

Clause 1.2.1.2: The address of the Contractor is:

- Physical:
- Postal:

E-mail address:

Fax:

Postal:

Clause 6.2.1: The security to be provided by the Contractor shall be one of the following:

<table>
<thead>
<tr>
<th>Type of Security</th>
<th>Contractor’s Choice. Indicate “Yes” or “No”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash deposit of 7.5% of the Contract Sum</td>
<td></td>
</tr>
<tr>
<td>Performance guarantee of 10% of the Contract Sum</td>
<td></td>
</tr>
<tr>
<td>Retention of 15% per Certificate value to a maximum of 10% of the Contract Price</td>
<td></td>
</tr>
<tr>
<td>Cash deposit of 5% of the Contract Sum plus retention of 15% of Certificate value up to a maximum of 7.5% of the Contract Price</td>
<td></td>
</tr>
<tr>
<td>Performance guarantee of 7.5% of the Contract Sum plus retention of 15% of Certificate value up to a maximum of 7.5% of the Contract Price</td>
<td></td>
</tr>
</tbody>
</table>

Clause 6.5.1.2.3: The percentage allowance to cover overhead charges is: ___ %
The variations to the General Conditions of Contract are:

Clause 5.14.8 is added as follows:

No Certificate of Completion will be issued to the contractor unless an entry medical certificate and a corresponding exit medical certificate is issued for each employee and subcontractor employee employed on the site.

Clause 6.11 – Variations exceeding 15%

This clause is to be omitted in its entirety, however the Contractor is to expect variations to the Contract.

Clause 10.5.1: Delete clause and replace with: A single adjudicator shall be appointed by the President of SAICE on application of MINTEK.

Clause 10.5.2 Delete clause and replace with: Disputes shall be referred to ad-hoc adjudication

Clause 10.7.1: The non-appealable final determination of disputes shall be by Arbitration. Arbitration will be conducted in terms of the AFSA expedited rules for arbitration as most recently published at the time of Commencement of the Works. In any proceedings, the parties may each be represented by a single practicing attorney or advocate.

The additional Conditions of Contract are:

- No person who is not medically cleared to perform asbestos related work is permitted to be employed on this Site of Works.
C1.3 - Form of Guarantee


PRO-FORMA

PERFORMANCE GUARANTEE
PRO FORMA

PERFORMANCE GUARANTEE

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .................................................................

Physical address: .................................................................

"Employer" means: .................................................................

"Contractor" means: .................................................................

"Engineer" means: .................................................................

"Works" means: .................................................................

"Site" means: .................................................................

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive of tax of R .................................................................

Amount in words: .................................................................

"Guaranteed Sum" means: The maximum aggregate amount of R .................................................................

Amount in words: .................................................................

"Expiry Date" means: .................................................................

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

1. The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.

2. The Guarantor’s period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the
Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3. The Guarantor hereby acknowledges that:

3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

3.2 its obligation under this Performance Guarantee is restricted to the payment of money.

4. Subject to the Guarantor’s maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor’s physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5. Subject to the Guarantor’s maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor’s physical address calling up this Performance Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor’s default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor’s maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer’s bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate’s Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate’s Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate’s Court.

Signed at ____________________________________________________________

Data ..............................................................................................................

Guarantor’s signatory (1) ..............................................................................

Capacity ......................................................................................................

Guarantor’s signatory (2) ..............................................................................
<table>
<thead>
<tr>
<th>Capacity</th>
<th>Witness signatory (1)</th>
<th>Witness signatory (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C1.4 – ADJUDICATION BOARD MEMBER AGREEMENT


PRO-FORMA

ADJUDICATION BOARD MEMBER AGREEMENT

PRO FORMA

ADJUDICATION BOARD MEMBER AGREEMENT

Please note that words in italics within brackets are items which should be stated.

This Agreement is entered into between:
Adjudication Board Member: (Name, physical address, postal address, e-mail address, fax number, telephone number and mobile number).
Contractor: (Name, physical address, postal address, e-mail address, fax number, telephone number and mobile number).
Employer: (Name, physical address, postal address, e-mail address, fax number, telephone number and mobile number).
The Contractor and the Employer will hereinafter be collectively referred to as the Parties.

The Parties entered into a Contract for (name of project) which provides that a dispute under or in connection with the General Conditions of Contract for Construction Works, Second Edition, 2010, must be referred to (ad-hoc adjudication/standing adjudication).

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

1. The Adjudication Board Member accepts to perform his duties in accordance with the terms of the Contract, the General Conditions of Contract for Construction Works Adjudication Board Rules and this Agreement.
2. The Adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Engineer for the duration of the Adjudication Board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The Parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties.
under the Contract. No Party may call the Adjudication Board Member as a witness in any such subsequent proceedings.

6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.

7. The Adjudication Board Member shall be paid in respect of time spent upon or in connection with the adjudication including time spent traveling:
   a. A monthly retainer of (amount) for (number) of months, and/or
   b. A daily fee of (amount) based on a (number) hour day, and/or
   c. A hourly fee of (amount), and/or
   d. A non-recurrent appointment fee of (amount) which shall be accounted for in the final sums payable.

8. The Adjudication Board Member's expenses incurred in adjudication work shall be reimbursed at cost.

   Upon submission of an invoice for fees and expenses to the Parties, the (Contractor/Employer*) shall pay the full amount within 28 days of receipt of the invoice and he shall be reimbursed by the other party by half the amount so that the fees and expenses are borne equally by the Parties. Late payment of such invoice shall attract interest at prime plus 3 % points compounded monthly at the prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature: ..............................................
Contractor's name: ..............................................
Place: .........................................................
Date: ......................................................

Employer's signature: ..............................................
Employer's name: ..............................................
Place: .........................................................
Date: ......................................................

Adjudication Board Member's signature: ..............................................
Adjudication Board Member's name: ..............................................
Place: .........................................................
Date: ......................................................

* Delete the inapplicable party:
Part C2: Pricing Data
C2.1 Pricing Instructions

1. GENERALLY

1.1 General Notes

This Preamble to the Schedules of Provisional Quantities is included to assist the Contractor in its pricing of the various items within the Schedules and its understanding of the principles of measurement contained therein.

Notwithstanding the content of the Schedules of Provisional Quantities, the Contractor’s attention is referred to all other parts of these Contract Documents and the Drawings and Specifications which accompany these Contract Documents, all of which are to be read in conjunction with the Schedules of Provisional Quantities.

In the event of there being any contradiction or ambiguity between the Schedules of Provisional Quantities and any other part of this Contract Document, then the Schedules of Provisional Quantities will take precedence only in so far as unit rates and prices are contained, the quantities have been assessed from the information available at time of tender and shall be revised to the actual works as required on site.

The Contractor in executing the Works or in ordering any Contractor’s Equipment or in ordering any Plant shall not be guided by or work to any descriptions, dimensions or quantities as set forth in the Schedules of Provisional Quantities but shall be guided by and work to the specifications and the detail drawings supplied for the Works and by the instructions of the Engineer and measurements taken and agreed on site.

Nothing appearing in the specification or bill of quantities shall limit the obligations and liabilities of the contractor under the conditions of contract to provide the full extent of the works as described by the scope of work, specifications, drawings and bill of quantities.

1.2 Rates and Prices

Items against which a rate or price has not been entered are deemed to be covered by other rates or prices in the Schedules of Provisional Quantities. Items which are required to have been inserted in the Schedules of Provisional Quantities by the Contractor, and which have not been duly inserted, are deemed to be covered by other rates or prices in the Schedules of Provisional Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.

The rates and prices in the Schedules of Provisional Quantities shall fully reflect the Contractor’s proposed method of working as separately identified in detail elsewhere in these Documents.

All rates and prices, unless otherwise stated, include for duty, taxes and all other obligations arising from the Conditions of Contract, but specifically exclude Value Added Tax.

Value Added Tax is to be calculated and inserted in the appropriate place on the Final Summary page.

The rates and prices inserted in the Schedule of Provisional Quantities are deemed to be the full inclusive value of the work as described under the several items including all costs and expenses which may be required in, and for the speedy, efficient and safe execution of the work described together with all general risks, liabilities and obligations set forth or implied in these Contract Documents.
Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

The rates and prices are deemed to include (unless otherwise specifically stated in the Schedules of Provisional Quantities or herein) but shall not be limited to the following:

a) Fitting and fixing of Plant and Equipment in position and all necessary maintenance
b) Provision and use of Contractor’s and/or supplied equipment
c) The provision of all consumables
d) Overhead charges and profit
e) Overtime working necessary to complete the Works within the time for completion
f) Payments to Labour in respect of time worked and all other payments and costs relating to labour of any denomination
g) Stoppage for inspection purposes by the Engineer or other authorised Company Personnel
h) Protecting all existing services
i) Extension of all temporary services of every kind as required to facilitate the progress of the Works
j) Transportation, erection and subsequent removal of all temporary supports, working platforms, scaffolding and associated works necessary for the safe execution of the Works
k) Transporting to site and positioning on site of all necessary plant and equipment
l) Removal and disposal of Contractor’s Equipment off site
m) Maintenance of roadways and all temporary equipment used and/or installed by the Contractor

The sum total of the various rates or prices when applied to those items contained within the Schedules of Provisional Quantities which have been quantified (in accordance with the measurement rules hereinafter described), excluding rate only items if any, shall be fully representative of the total cost of executing the Works in accordance with the Contract Documents and accompanying drawings and specifications.

Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items

An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes, however should the tenderer group items into a lump sum, the payment for each item will be at a proportion of the lump sum applicable and such proportion shall be determined and applied at the discretion of the Engineer.
1.4 Work Classification

The Classification of Work and respective Cost Codings contained within the Schedules of Provisional Quantities shall not be deemed indicative of or interpreted as governing method of work or operational activity but have been devised solely for the purpose of analysing cost into clear and separately identifiable elements principally for the Employers internal Cost Control Procedures, evaluation of variations and the settlement of other claims that may arise during the contract or settlement of the final account.

1.5 Item Description

Item descriptions are in general written “short” and reference should be made in all cases to the other parts of these Documents and the accompanying drawings and specifications as applicable for the full intent and meaning of particular items.

The quantities given in the item description must be regarded as indicative of the amount of work to be carried out but the Contractor has made reference to the drawing and specifications when determining the value of such items.

Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the SABS 1200 Standardised Specifications.

1.6 Units of Measurement

Measurement and payment shall be in accordance with the relevant provisions of clause 8 of each of the SABS 1200 Standardised Specifications for Civil Engineering Construction referred to in the Scope of Work. The Preliminary and General items shall be measured in accordance with the provisions of SABS 1200-A, General

The units of measurement described in the Bills of Quantities are metric units. The following Units of Measurement and abbreviations shall be used in these Bills of Quantities:

- % = percent
- h = hour
- ha = hectare
- kg = kilogram
- kl = kilolitre
- km = kilometre
- km-pass = kilometre-pass
- kPa = kilopascal
- kW = kilowatt
- l = litre
- m = metre
- mm = millimetre
- m² = square metre
- m²-pass = square metre-pass
- m³ = cubic metre
- m³-km = cubic metre-kilometre
- MN = meganewton
- MN.m = meganewton-metre
- MPa = megapascal
- No. = number
1.7 Measurement Rules Generally

Notwithstanding any general or local custom, the methods and units of measurement are those reflected in the Schedules of Provisional Quantities.

The quantities shall be computed net from the Drawings or other Technical Information, unless otherwise directed, and no allowance shall be made for waste. Each measurement shall be taken to the nearest whole centimetre. Fractions of a centimetre less than half shall be disregarded and all other fractions shall be regarded as whole centimetres. This rule shall not apply to any dimensions stated in descriptions.

The items and quantities stated within the Schedules of Provisional Quantities have been measured as accurately as information available at the time of preparation of the Schedules allowed. The work described and/or the quantities may vary as modification, change and extra Works are inevitable to varying degree.

In the event of modifications, changes or extra Works, the items of Works so affected shall be re-measured in accordance with the rules hereinafter and reimbursed at the applicable rate or price inserted at the time of the tender submission within the Schedules of Provisional Quantities.

The quantities set out in these Bills of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bills of Quantities.

Reasonable compensation will be received where no pay item appears in respect of work required in the Bills of Quantities in terms of the Contract and which is not covered in any other pay item.

2.0 PRELIMINARY AND GENERAL ITEMS

The Unit of Measurement shall be “sum”, “item”, “hour”, “week” or “month”.

The Contractor is deemed to have included within this Work Classification for the costs of his General Obligations, Site Services and Facilities, Temporary Works and Testing.

Provision has been made within this Work Classification for the Contractor to separately include for Fixed Charge and Time Related Items, as he deems appropriate.

Contractual Requirements - shall cover the provision of Insurance, Bonds and the like as required by the Conditions of Contract.

Specified Requirements - shall cover all work other than the Permanent Works which is expressly stated in Contract to be carried out by the Contractor and which the nature and extent is expressly stated in the Contract but shall exclude any permanent work.
**Fixed Charges** - for Site Establishment and relating to the Conditions of Contract shall include for any re-establishment costs on the site and for removal. This total amount shall not be variable and will be paid to the Contractor in full irrespective of the value of the completed contract.

**Value Related Items** - shall not be measured and are deemed to have been included elsewhere in the Contractor’s rates.

**Time Related Costs** - shall not be amended unless, in the opinion of the Engineer, the requirements of the programme be amended in such a way as to affect the periods listed for the various items priced for and included in the schedules contained in this Document.
C2.2 Bill of Quantities
<table>
<thead>
<tr>
<th>No</th>
<th>Pay Reference</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
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<tr>
<td></td>
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<td>PRELIMINARY AND GENERAL</td>
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<td>8.3</td>
<td>FIXED CHARGE ITEMS AND VALUE RELATED ITEMS</td>
<td>Contractual requirements</td>
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<td>8.3.1</td>
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<td>Note: Refer to the right insurance clauses in your Standard Conditions of Contract</td>
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<td></td>
<td>Note: Refer to the right clauses in your Project Specification/Scope of Works/ Works information/Site information</td>
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<td>Carried Forward</td>
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<td>Sum</td>
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<td>Compressed air for the works</td>
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<td>Location of camp and depot</td>
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<td>Source of materials, location of spoil and stockpile area and hauling</td>
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<td>Temporary offices, sheds, etc</td>
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<td>34</td>
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<td>Safety signage as per Occupational, Health and Safety Act</td>
<td>Sum</td>
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### 8.3.3 Features requiring special attention

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<td>Safety (all aspects of safety to comply with Occupational Health and Safety Specification)</td>
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<td>37</td>
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<td>Provision of decontamination installation, wash bays and the like for specific safety requirements for working in an Asbestos area.</td>
<td>Sum</td>
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<td>38</td>
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<td>Existing works</td>
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<td>Existing services and structures</td>
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<td>41</td>
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<td>Flood, seepage, stormwater, and free water</td>
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<td>42</td>
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<td>As-built survey on completion of the works by suitably qualified land surveyor</td>
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Carried Forward
### 8.3.3 Other particulars

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<td>Publications, advertising, photographs</td>
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<td>46</td>
<td></td>
<td>Testing authority and quality assurance</td>
<td>Sum</td>
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<td>47</td>
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<td>Explosives for blasting</td>
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<td>Liquid fuels and lubricants</td>
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<td>Public or private road crossing</td>
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<td>Supply and erect Employer's sign size 2459mm wide x 1817mm high as per Drawing No 466527-34-01-4002-11 Rev A including additional text as required</td>
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### 8.3.3 Other fixed charge items

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<td>Allow for project briefing with the Engineer</td>
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<td>1</td>
<td></td>
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### 8.3.4 Removal of site establishment

<table>
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<tr>
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<th>Unit</th>
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<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td></td>
<td>Removal of site establishment on completion</td>
<td>Sum</td>
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**FUND CHARGE ITEMS AND VALUE RELATED ITEMS**

<table>
<thead>
<tr>
<th></th>
<th>TOTAL CARRIED TO SUMMARY</th>
</tr>
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<tbody>
<tr>
<td>Brought forward</td>
<td></td>
</tr>
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</table>
### PRELIMINARY AND GENERAL

#### 8.4 TIME CHARGE ITEMS

8.4.1 Contractual requirements

*Note: Refer to the right insurance clauses in your Standard Conditions of Contract*

<table>
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<tr>
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<tbody>
<tr>
<td></td>
<td>SANS 1200 A</td>
<td>Insurance as per Clause 8.6 and Contract Data</td>
<td>month</td>
<td>-</td>
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</tr>
<tr>
<td>1</td>
<td></td>
<td>Construction programme as per clause T2.2: 1.3 (Returnable schedule)</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Performance security (Clause 6.2.1)</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Profit</td>
<td>month</td>
<td>-</td>
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8.4.2 Operation and Maintenance of Facilities on Site, for duration of Construction, except where otherwise stated

8.4.2.1 Facilities for Engineer

<table>
<thead>
<tr>
<th>No</th>
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<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>a) Offices</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>b) Telephone</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>c) Name boards</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>d) Survey assistants and materials</td>
<td>month</td>
<td>-</td>
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8.4.2.2 Facilities for Contractor

<table>
<thead>
<tr>
<th>No</th>
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<th>Amount</th>
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<tr>
<td>10</td>
<td>Offices and storage sheds</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Workshops</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>Living accommodation</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>Ablution and latrine facilities</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14</td>
<td>Tools and equipment</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>15</td>
<td>Potable water (for drinking and personal hygiene)</td>
<td>month</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>Borehole water (for ablation facilities)</td>
<td>month</td>
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Carried Forward
<table>
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<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Brought forward</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>Construction water (Provided by the Contractor. To be collected, stored</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and dispensed by the Contractor.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>Electricity supplies</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>Communications</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>Dealing with water</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>Access</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>Plant (only specifically identified plant)</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>On-going compliance with Occupational Health and Safety Specification</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>including additional requirements for working in an Asbestos environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.4.3</td>
<td></td>
<td><strong>Supervision for duration of construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.4.4</td>
<td></td>
<td><strong>Company and head office overheads for the duration of the contract</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.4.5</td>
<td></td>
<td><strong>Other Time-related Obligations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>Quality control plan</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>Allow for liaison with local community leadership for the co-ordination</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and employment of local persons for casual labour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td>Setting out / survey monitoring of the works by suitably qualified land</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>surveyor</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8.5</td>
<td></td>
<td><strong>SUMS STATED PROVISIONALLY BY THE ENGINEER</strong></td>
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<td>8.6</td>
<td></td>
<td><strong>PRIME COST ITEMS</strong></td>
<td></td>
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<td>8.7</td>
<td></td>
<td><strong>DAYWORK</strong></td>
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Contract
Part C2.2: Bills of Quantities 64
### CONSTRUCTION OF REHABILITATION MEASURES AT MOTSANE, LIMPOPO PROVINCE

<table>
<thead>
<tr>
<th>No</th>
<th>Pay Reference</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Brought forward</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.8</td>
<td></td>
<td><strong>TEMPORARY WORKS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.8.1</td>
<td></td>
<td><strong>Main access Road to works</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.8.2</td>
<td></td>
<td><strong>Dealing with traffic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.8.3</td>
<td></td>
<td><strong>Protection of .......... Structure until construction in vicinity is complete</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8.8.4</td>
<td></td>
<td><strong>Existing Services</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Protect existing underground and overhead services for the duration of the contract, including repairing any damage occasioned during construction activity</td>
<td>month</td>
<td>5</td>
<td></td>
<td></td>
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<tr>
<td>8.8.5</td>
<td></td>
<td><strong>Cost of survey in terms of the land Survey Act</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8.8.6</td>
<td></td>
<td><strong>Special water control in terms of project Specifications</strong></td>
<td></td>
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</tbody>
</table>

### TIME CHARGE ITEMS

| TOTAL CARRIED TO SUMMARY |        |        |        |        |
## TEMPORARY WORKS

NOTE: Due to the local topographical and vegetation challenges of the site, access to the dispersed work areas contained in these Bills of Quantities is difficult.

The contractor is to design, construct and maintain during construction any necessary temporary works which he deems necessary and appropriate to execute the works; and on completion remove these temporary works and rehabilitate any area affected by these temporary works to its original condition.

NOTE: The value of these temporary works will be disbursed pro-rata by the value of construction works certified in each payment certificate relative to the contract value of the construction works to a maximum of 100% of Item 1 below.

NOTE: For dayworks and standing time rates see Returnable Schedule T2.2, 3.1 and 3.2

### Temporary works

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
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<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
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<tr>
<td>1</td>
<td>Temporary works</td>
<td>Sum</td>
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**TOTAL CARRIED TO SUMMARY**
### SITE CLEARANCE

**NOTE:** All works in these Bills of Quantities are remeasurable

**NOTE:** For dayworks and standing time rates see Returnable Schedule T2.2, 3.1 and 3.2

<table>
<thead>
<tr>
<th>No</th>
<th>Pay Reference</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
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<tbody>
<tr>
<td>1</td>
<td>SANS 1200 C</td>
<td>Clear and grub</td>
<td>m²</td>
<td>8 364</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Motsane 3 - Dump 1</td>
<td>m²</td>
<td>113</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Dump 2</td>
<td>m²</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Dump 3</td>
<td>m²</td>
<td>75</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Dump 4</td>
<td>m²</td>
<td>150</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Motsane 3 - Dump 5</td>
<td>m²</td>
<td>216</td>
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<td></td>
<td>Motsane 3 - Dump 6</td>
<td>m²</td>
<td>50</td>
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<td></td>
<td>Motsane 3 - Dump 7</td>
<td>m²</td>
<td>550</td>
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<td></td>
<td></td>
<td>Motsane 3 - Dump 8</td>
<td>m²</td>
<td>500</td>
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<td></td>
<td>Motsane 3 - Dump 9</td>
<td>m²</td>
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<td>Motsane 3 - Dump 10</td>
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<td>Motsane 3 - Dump 11</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Dump 12</td>
<td>m²</td>
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<td></td>
<td>Motsane 3 - Dump 13</td>
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<td>Motsane 3 - Dump 14</td>
<td>m²</td>
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<td>Motsane 3 - Dump 15</td>
<td>m²</td>
<td>300</td>
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<td>Motsane 3 - Dump 16</td>
<td>m²</td>
<td>640</td>
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<td>Motsane 3 - Works 1</td>
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<td></td>
<td>Motsane 3 - Works 2</td>
<td>m²</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Adit 1</td>
<td>m²</td>
<td>177</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Adit 2</td>
<td>m²</td>
<td>177</td>
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<tr>
<td></td>
<td></td>
<td>Motsane 3 - Adit 3</td>
<td>m²</td>
<td>177</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Motsane 3 - Adit 4</td>
<td>m²</td>
<td>177</td>
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<td></td>
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<td></td>
<td></td>
<td>Motsane 3 - Adit 5</td>
<td>m²</td>
<td>177</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Adit 6</td>
<td>m²</td>
<td>177</td>
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<td></td>
<td></td>
<td>Motsane 3 - Adit 7</td>
<td>m²</td>
<td>177</td>
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<tr>
<td></td>
<td></td>
<td>Motsane 3 - Adit 8</td>
<td>m²</td>
<td>177</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - Adit 9</td>
<td>m²</td>
<td>177</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>Motsane 3 - Shaft</td>
<td>m²</td>
<td>177</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motsane 3 - additional dumps in polygon</td>
<td>m²</td>
<td>1 000</td>
<td></td>
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<tr>
<td>2</td>
<td>PSC 8.2.1</td>
<td>Clear site to laydown area and remove debris and shrubs which will prohibit works, with the strict exclusion of trees which will be required to remain in position</td>
<td>m²</td>
<td>1 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>8.2.2</td>
<td>Remove trees over 1 m and up to and incuding 2 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area Motsane 1</td>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area Motsane 2</td>
<td>No</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Area Motsane 3</td>
<td>No</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>8.2.5</td>
<td>Take down existing fences</td>
<td></td>
<td></td>
<td>Rate only</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>8.2.9</td>
<td>Transport materials and debris to specified sites and dump</td>
<td></td>
<td></td>
<td>Rate only</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>8.2.9</td>
<td>Extra over transporting of debris and shrubs etc cleared on site for hauling in excess of 5 km free haul</td>
<td>m³.km</td>
<td>4 682</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## EARTHWORKS

**NOTE:** All works in these Bills of Quantities are remeasurable

**NOTE:** For dayworks and standing time rates see Returnable Schedule T2.2, 3.1 and 3.2

### 8.3.1 Site preparation

<table>
<thead>
<tr>
<th>No</th>
<th>Pay Reference</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PSD 8.3.1 (1)</td>
<td>Rip and re-compact insitu material to 150mm depth to 93% Mod AASHTO density to laydown areas</td>
<td>m²</td>
<td>1 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>PSD 8.3.1 (1)</td>
<td>Rip and re-compact insitu material to 150mm depth to 93% Mod AASHTO density to gabion wall footing area</td>
<td>m²</td>
<td>130</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Add & shaft closures**

**Area A gabion wall**

<table>
<thead>
<tr>
<th>No</th>
<th>Pay Reference</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>PSD 8.3.1 (2)</td>
<td>Maintain lay down area and perform daily dust suppression to contractor’s methods</td>
<td>m²</td>
<td>1 000</td>
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<td>4</td>
<td>PSD 8.3.1 (2)</td>
<td>Dust suppression to contaminated areas including the addition of surfactant as per Environmental Specification</td>
<td>m²</td>
<td>8 364</td>
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### Dust Suppression

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<td>PSD 8.3.1 (2)</td>
<td>Dust suppression to uncontaminated areas</td>
<td>m²</td>
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**Area A**

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<td>PSD 8.3.1 (2)</td>
<td>Dust suppression to uncontaminated areas</td>
<td>m²</td>
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**Carried Forward**
### CONSTRUCTION OF REHABILITATION MEASURES AT MOTSANE, LIMPOPO PROVINCE

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<td>6</td>
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<td><strong>8.3.2 Bulk earthworks</strong></td>
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<td>NOTE: Excavations to be done in complete adherence to Health &amp; Safety structures in place.</td>
<td></td>
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<tr>
<td></td>
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<td>Earthworks:</td>
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<tr>
<td></td>
<td></td>
<td>8.3.2 Excavate in asbestos containing spoil heaps/ dumps on site and deposit in consolidated asbestos deposit area A in 300mm thick layer and compact to 90 % Mod AASHTO and shape to align with surrounding natural ground levels (Maximum angle of inclination to be less than 18 degrees)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>.toast over the use of shovels, etc.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Earthworks by hand (without the use of shovels, etc.)</td>
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<td></td>
<td></td>
<td>PSD 8.3.2a (1) Visually identify asbestos containing material and collect by hand</td>
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<tr>
<td></td>
<td></td>
<td>without the use of shovels, etc. in rocky areas and place in existing nearby adits or on dump material to be rehabilitated</td>
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<tr>
<td></td>
<td></td>
<td>Cut to fill</td>
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<tr>
<td></td>
<td></td>
<td>Cut to fill and compact in 300mm thick layers to 93 % Mod AASHTO and shape to align with surrounding natural ground levels (Maximum angle of inclination to be less than 18 degrees)</td>
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**Carried Forward**
<table>
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<td>Restricted earthworks</td>
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<td>NOTE: Excavations to be done in complete adherence to Health &amp; Safety structures in place.</td>
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<td>Excavate in all materials for gabion boxes</td>
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<td>Motsane 3 - Adit 7</td>
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<td>Motsane 3 - Adit 8</td>
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<td>Import materials from commercial sources to be located by the Contractor. (All imported material to be approved by the Engineer prior to importation).</td>
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<td>8.3.4-a</td>
<td>Well-graded clean G4 material (nominal size 37.5mm per COLTO Specification - March 1998) in 150mm thick layers laid over asbestos containing material to relocation and consolidated asbestos deposit areas and compacted to 93 % MOD AASHTO</td>
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<td>Motsane 3 - Dump 4</td>
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<td>Motsane 3 - Works 2</td>
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Contract
Part C2.2: Bills of Quantities 70
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<tbody>
<tr>
<td>13</td>
<td>8.3.4.a</td>
<td>Nominal 90mm diameter rock only in 150 mm thick layer filling placed and compacted to 93 % MOD AASHTO over 300mm subsurface layer (subsurface layer elsewhere measured)</td>
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<td>100 mm to 250 mm Diameter quarried rock material to fill gabion boxes</td>
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<td>193</td>
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<td>Adit and shaft closures</td>
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<td>Area A gabion wall</td>
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### Topsoil

**PSD 8.3.10 (1)**  
Filling with selected, screened and well-graded clean material obtained from stockpile of excavated material or elsewhere on site from areas as agreed by the Engineer  
(Rates under this heading shall include for uplifting material, sorting and screening to the required grade, thoroughly mixing and transporting within a free haul distance of 5km to point of use, depositing, spreading and consolidating as described)

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<td>PSD 8.3.10 (1)</td>
<td>Well-graded clean material with 60% of particles larger than 2.0mm and smaller than 250mm and 40% particles larger than 0.075mm and smaller than 2.0mm deposit in nominal 300 mm thick layer over asbestos containing material to relocation and consolidated asbestos deposit area and compacted to 93 % MOD AASHTO</td>
<td>m³</td>
</tr>
<tr>
<td>17</td>
<td>PSD 8.3.10 (1)</td>
<td>Nominal 90mm diameter rock only in 150 mm thick layer filling placed and compacted to 93 % MOD AASHTO over 300mm subsurface layer (subsurface layer elsewhere measured)</td>
<td>m³</td>
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<td>PSD 8.3.10 (2)</td>
<td>Selected and graded rock filling obtained on site from stockpile of excavated material or elsewhere on site from areas as agreed by the Engineer (Rates under this heading shall include for uplifting material, sorting and screening to the required grade, thoroughly mixing and transporting to point of use ready for placing)</td>
<td>m³</td>
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<tr>
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**TOTAL CARRIED TO SUMMARY**
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<td>NOTE: All works in these Bills of Quantities are remeasurable</td>
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<td>NOTE: For dayworks and standing time rates see Returnable Schedule T2.2, 3.1 and 3.2</td>
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<td>NOTE TO CONTRACTOR - THE ITEMS FOR PLANT INCLUDED IN THE BILLS OF QUANTITIES ARE SUBJECT TO REMOVAL FROM SCOPE OF WORKS ON DISCRETION FROM CLIENT</td>
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<td>1</td>
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<td>Provide, erect and commission on site</td>
<td>Sum</td>
<td>Rate only</td>
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<td>PSG 2</td>
<td>Operate and maintain batching plant to produce concrete for all concrete works</td>
<td>Sum</td>
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<td>PSG 3</td>
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<td>PSG 4</td>
<td>Dismantle, remove from site and clean up</td>
<td>Sum</td>
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Carried Forward
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<td><strong>MANUFACTURE (OR SUPPLY) AND ERECT PRECAST ELEMENTS</strong></td>
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<td>10MPa grout (Thickness)</td>
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<td>23</td>
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<td>10MPa grout into openings between concrete/ brickwork and shaft rock</td>
<td>m²</td>
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**CONCRETE (Small Works)**

TOTAL CARRIED TO SUMMARY
**CONSTRUCTION OF REHABILITATION MEASURES AT MOTSANE, LIMPOPO PROVINCE**

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<td>8.2.1</td>
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<td>Surface preparation for bedding of gabions</td>
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<td>1</td>
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<td>Cavities filled with approved excavated material or rock to an average thickness of 50mm and compacted to 93% Mod AASHTO</td>
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<td>Motsane 3 - Adit 9</td>
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<td>The following in Gabions formed with hot dipped galvanised (275mg/m²) PVC coated (4mm - SANS 1580) hexagonal double twist 3.0mm wire mesh type 60 with 0.06mm tolerance (to SANS 675) filled with selected rock and tied into adjoining gabions. (Supply of dump rock and topsoil elsewhere measured)</td>
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<td>Gabion with baskets to following size in adit closures</td>
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<td>Gabion with basket size 1000mm long x 1000mm wide x 1000mm high in closing up adits</td>
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<td>Gabion with basket size 1000mm long x 1000mm wide x 1000mm high</td>
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<td>Gabion with basket size 2000mm long x 500mm wide x 500mm high</td>
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Carried Forward
## CONSTRUCTION OF REHABILITATION MEASURES AT MOTSANE, LIMPOPO PROVINCE

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<td>Ground anchors</td>
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<td>PSDK 1.1</td>
<td>25 mm Diameter ground anchor 300 mm x 700 mm long (Shape code 37)</td>
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<td>9</td>
<td>PSDK 2.2</td>
<td>1000mm Long soil nail with 150 mm x 150 mm x 12 mm thick plate</td>
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<td>A4 Geotextile layer placed alongside face of gabion boxes</td>
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<td>11</td>
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<td>A6 Geotextile layer placed alongside face of gabion boxes</td>
<td>m²</td>
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**GABIONS AND PITCHING**

TOTAL CARRIED TO SUMMARY

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**Notes:**
- The following in Reno Mattress's formed with hot dipped galvanised (275mg/m²) PVC coated (4mm - SANS 1580) hexagonal double twist 3.2mm wire mesh type 60 with 0.08mm tolerance (to SANS 675) filled with selected rock and tied into adjoing gabions. (Supply of dump rock and topsoil elsewhere measured).
- Reno mattres with baskets to following size to relocation and consolidated asbestos deposit area.
- PSDK 1 Ground anchors:
  - PSDK 1.1 25 mm Diameter ground anchor 300 mm x 700 mm long (Shape code 37) No 70
  - PSDK 2.2 1000mm Long soil nail with 150 mm x 150 mm x 12 mm thick plate No Rate only

**Materials:**
- **Grades:**
  - Grade 555 / 700 Steel threaded soil nail complete with bearing plate, dome headed washer and nut in ground anchorages driven into and fixed with grout to material which includes hard rock or artificial hard material and other end inserted into bottom of gabion as filling proceeds.
- **Materials:**
  - 25 mm Diameter ground anchor 300 mm x 700 mm long (Shape code 37)
  - 1000mm Long soil nail with 150 mm x 150 mm x 12 mm thick plate
  - A4 Geotextile layer placed alongside face of gabion boxes
  - A6 Geotextile layer placed alongside face of gabion boxes
### PROVISIONAL SUMS

**NOTE:** All works in these Bills of Quantities are remeasurable

**NOTE:** For dayworks and standing time rates see Returnable Schedule T2.2, 3.1 and 3.2

#### SIGNAGE

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### PROVISIONAL SUMS TOTAL CARRIED TO SUMMARY
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SUB-TOTAL (ex VAT)

VAT (14%)

TOTAL MOTSANE CLOSURE including VAT - (Carried to Form of Tender)
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<td>PSC 8.2.1</td>
<td>Clear and grub in Ha</td>
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<td>PSC 8.2.1</td>
<td>Clear and grub in Ha</td>
<td>Specific instruction not to disturb or remove trees in m²</td>
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<td><strong>EARTHWORKS</strong></td>
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<td>PSD 8.3.1 (1)</td>
<td>Clear and strip site</td>
<td>Rip and recompact as a separate action</td>
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<td>PSD 8.3.1 (2)</td>
<td>Clear and strip site</td>
<td>Dust suppression as a separate action</td>
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<td>PSD 8.3.2.a (1)</td>
<td>Bulk earthworks and deposed of on site</td>
<td>Removal of selected material by hand measured in m²</td>
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<td>8.3.10 (1)</td>
<td>Topsoiling</td>
<td>Selected cover material obtained on site, screened, mixed to specification, placed and compacted measured in m³</td>
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<td>PSG 1-4</td>
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Part C3: Scope of work
Part C3: Scope of Work

MOTSANE REHABILITATION

C3.1. DESCRIPTION OF WORKS

C.3.1.1. OBJECTIVES:
The primary objective of this project is to protect the communities of the outlying areas of Motsane, Limpopo Province, from the residual hazards of asbestos mining. This includes exposure to airborne asbestos fibres from processed and semi-processed asbestos material and asbestos-bearing waste rock as well as the safety hazard posed by abandoned adits and decline shafts.

C.3.1.2. OVERVIEW OF THE WORKS:
Remedial measures shall be implemented to contain and prevent the resurfacing of asbestos fibres and prevent access to adits and decline shafts.

The contract comprises of the permanent closure of all open shafts/adits. Other remediation measures include the relocation of asbestos bearing waste rock and residue deposits to areas identified for consolidation, construction of gabion basket walls as a measure of retention, toe protection, and rock cladding to these consolidated deposits and ancillary works.

Cover and erosion protection measures shall be constructed to protect the facility from the effects of weathering. The construction of minor temporary works to facilitate construction which are to be rehabilitated following completion of the project may also be required, however this particular aspect is left to the sole discretion of the Contractor.

C3.1.3. EXTENT OF THE WORKS:
The following list briefly outlines the scope of works (to be read in conjunction with the relevant technical specifications and drawings) and is subject to alteration at the discretion of the Employer and/or the Engineer at any time:

1. Supply and conduct adequate dust suppression at all relevant areas during all phases of construction to inhibit the actuation of airborne asbestos fibre as per the Environmental Specification.

2. If required by the Contractor, design and construct temporary access to the site and the rehabilitation of the temporary access upon project completion. The Contractor shall be responsible for professional investigations (if required), design, construction, integrity, safety and approval of these structures/works. The Contractor shall provide the Engineer with designs approved by ECSA registered professional engineers.

3. Provide adequate signage to create awareness of construction activities as well as indicating the presence of heavy machinery.

4. Removal of asbestos bearing discard material as specified on the drawings and disposed of and/or relocated to a consolidated residue deposit.
5. Closure of open adits and decline shafts include:
   a. Clear, grub and preparation of entrance to adits and decline shafts for construction works.
   b. Gabion placement to follow the following methodology:
      i. Place first gabion basket layer;
      ii. Backfill behind basket as much as possible until the top of basket level is reached;
      iii. Lay wire mesh (same specification as gabion baskets) over backfilled material to overlap basket
      iv. Place next wall layer and repeat until entrance is completely closed.

6. Construction of consolidated residue deposits includes:
   a. Excavation of material.
   b. Cut and fill, shaping, re-grading, surface preparation and compacting as specified on the construction drawing at indicated areas in preparation for the consolidated residue deposit.
   c. Consolidation of asbestos containing discard material as specified on the construction drawings.
   d. Installation of uncontaminated material capped with rock cladding as a cover to the rehabilitated areas as per details indicated on the construction drawings.
   e. Installation of gabion wall along toe of consolidation area as indicated on the construction drawings.

7. Ancillary activities including:
   a. Permits:
      1. Obtain all relevant construction permits that may be required.
   b. Health and Safety
      1. Implement all requirements detailed in the Health and Safety Specification and the Environmental Specification supplied.
   c. “As built” survey of remediated areas and/or areas as specified/instructed by the Engineer to be carried out.

8. Fulfil all obligations required by the Contractor under the contract and comply with all relevant laws, regulations and statutory requirements.

The Employer and Engineer reserve the right to amend, make additions to and/or remove items from the above mentioned extent of works at any time before and during the contract period.

C3.1.4. LOCATION OF WORKS:
The site area is indicated in Figure 1 and is located in Motsane, Limpopo Province. The GPS coordinates are as follows:

Latitude: 24°16'55.87"S
Longitude: 30°13'16.89"E

Refer to Part C4 (Site Information) of this document for further information.
C3.1 Technical Specification

CONSTRUCTION SPECIFICATIONS

PORTION 1

Quality Assurance, Expediting and Sub-Contract Co-ordination

The Contractor’s quality control plan must allow for the review of documentation and surveillance by the Engineer’s quality assurance personnel at mutually agreed times during normal working hours of all operations in the Contractor’s Works.

Quality assurance expediting and co-ordination of Subcontractors is the sole responsibility of the Contractor. All quality control will be via the Contractor’s QA manager.

APPLICABLE STANDARDISED SPECIFICATIONS

For the purpose of this contract the Standardised Specification and Codes of Practice for Civil Construction as approved by the Council of the South African Bureau of Standards as issued at date of Tender shall apply.

The following is a list of the relevant SANS 1200 and SANS 2001 series which, apply to the Contract:

SANS 1200A General;
SANS 2001-BS1:2008 Site Clearance;
SANS 2001-BE1:2008 Earthworks (General);
SANS 1200DK Gabions and Pitching;

Variations to the requirements of this Standardised Specification are included in Portion 2 of this section.

APPLICABLE PARTICULAR SPECIFICATIONS

The following Particular Specifications shall apply and are included in Portion 3 of this section.

1. Environmental Specification
ADDITIONAL SURVEY CONTROL AND HANOVER PROCEDURES

1. The Contractor will install and protect all secondary survey controls for structure setting out. These controls will then be submitted to the Engineer to check prior to the commencement of Works for the particular structure.

2. Handing over of the works will include the submission of “as-built” surveys and drawings in electronic format for approval by the Engineer.

3. Where excavations require quantification for whatever reason, the survey must be agreed to by the Engineer prior to backfill/gabion wall construction commencing.
PORTION 2

VARIATIONS TO STANDARD SPECIFICATIONS
SANS 1200 A - 1986

GENERAL

Variations specified as follows:

3.2 Structures and Natural Materials on Site
Add the following to the clause:
“Only existing structures specified by the Engineer must be removed in a responsible manner where instructed to do so.”

4.2. Contractor’s Offices, Stores and Services
Add the following to the clause:
“The Contractor shall supply and maintain adequate and suitable sheds for the storage of materials at the areas prescribed by the Employer. The Contractor shall allow for any additional services and / or infrastructure required as may be specified in the Occupational Health and Safety requirements.”

5.1.1. Setting out of the Works
Delete this clause and replace with the following:
“The Contractor is to set out the works as per the construction drawings provided. In instances of uncertainty, the Contractor is to consult with the Engineer.”

5.2. Watching, Barricading, Lighting and Traffic Crossings
Add the following to the clause:
“The Contractor is to acquire applicable wayleave permits, and/or authorisation from the applicable authorities, for works near existing infrastructure and adhere to the minimum requirements applicable as set out by the local authority.”

5.4. Protection of Overhead and Underground Services
Add the following to the clause:
“Additional precautions must be taken when crossing and / or working under the overhead power lines as set out in the Occupational Health and Safety Specification included in C3.2 of this document.”

5.6. Pollution
Add the following to the clause:
“Additional precautions must be taken to ensure that works comply with National Asbestos Regulations and the Health and Safety Specification included in C3.2 of this document and to ensure adequate dust suppression.”

5.7. Safety
Add the following to the clause:
“The Contractor is also required to comply at all times with the relevant Health and Safety specifications provided in C3.2 of this document.”
### Table A2-Specification data associated with this part of SANS 2001

<table>
<thead>
<tr>
<th>Specification Data associated with this part of SANS 2001</th>
<th>Clause number</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>The designated area or site in which work shall be carried out ……………</td>
<td>3.2</td>
<td>“is in accordance with the General Arrangement drawings (DRG No. 4000).”</td>
</tr>
<tr>
<td>The level of the finished earthworks shall be as follows: ……..</td>
<td>3.4</td>
<td>“Stated in the relevant construction drawings.”</td>
</tr>
<tr>
<td>The designated areas in roadworks are …</td>
<td>4.1.3</td>
<td>Omit</td>
</tr>
<tr>
<td>Activity numbers …….. apply.</td>
<td>4.2.1</td>
<td>“1; 2 (As per construction drawings only); 5; and 6”</td>
</tr>
<tr>
<td>The reusable material comprises……..</td>
<td>4.2.1</td>
<td>N/A</td>
</tr>
<tr>
<td>The depth of removal of underground structures shall be …..m.</td>
<td>4.2.2 (table 1 – activity 3)</td>
<td>N/A</td>
</tr>
<tr>
<td>The following reusable materials shall be stacked as specified below: …..</td>
<td>4.2.2 (table 1 – activity 6)</td>
<td>“Reusable material shall be stacked to Contractor’s method.”</td>
</tr>
<tr>
<td>The depth of scarifying and breaking up hardened areas shall be … m.</td>
<td>4.2.2 (table 1 – activity 10)</td>
<td>Omit</td>
</tr>
<tr>
<td>The pipes shall be reclaimed, or the pipes shall be disposed of.</td>
<td>4.2.4(b)</td>
<td>Omit</td>
</tr>
<tr>
<td>Materials from clearing and grubbing operations and the demolition of structures shall be disposed of as follows: ………</td>
<td>4.4.1</td>
<td>“Shall be deposited in open adits and/or shafts where backfilling has been specified, or consolidated into Consolidated deposit ‘Area A’ as per the construction drawings.”</td>
</tr>
<tr>
<td>Combustible material shall be disposed of as follows:……….</td>
<td>4.4.2</td>
<td>“If any combustible material is discovered on site, this must be brought to the attention of the Engineer within 7 days and a site instruction will be issued.”</td>
</tr>
<tr>
<td>Tree trunks shall be disposed of as follows:…………….</td>
<td>4.4.2</td>
<td>Omit</td>
</tr>
<tr>
<td>Fencing material shall be stacked at……….</td>
<td>4.4.3</td>
<td>Omit</td>
</tr>
<tr>
<td>The material which is to be reused shall be stacked at ………….</td>
<td>4.4.4</td>
<td>“The Contractors stockpile area.”</td>
</tr>
<tr>
<td>The following trees shall be conserved:…………….</td>
<td>4.6</td>
<td>Omit</td>
</tr>
<tr>
<td>Topsoil together with any grass and other suitable vegetation shall be removed and placed …….</td>
<td>4.9</td>
<td>Omit</td>
</tr>
</tbody>
</table>
**SANS2001-BE1:2008 EARTHWORKS**

Table A2-Specification data associated with this part of SANS 2001

<table>
<thead>
<tr>
<th>Specification Data associated with this part of SANS 2001</th>
<th>Clause number</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The following materials are required in embankments and terraces….</td>
<td>4.1.1</td>
<td><strong>Omit and replace with instructions on relevant construction drawings.</strong></td>
</tr>
<tr>
<td>Topsoil shall be conserved</td>
<td>4.1.5.1</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>Materials from excavations shall be disposed of as follows:</td>
<td>4.1.5.2</td>
<td><strong>&quot;As specified on the relevant construction drawings.&quot;</strong></td>
</tr>
<tr>
<td>All areas in which excavation is to take place or that are to be covered by terraces, banks or structures, shall be cleared in terms of SANS 2001-BS1 and stripped of all remaining vegetation to a depth of 150 mm.</td>
<td>4.2.1.1</td>
<td><strong>Required</strong></td>
</tr>
<tr>
<td>Topsoil shall be conserved for later use in the following manner:</td>
<td>4.2.1.2</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>The overburden shall be stripped and removed to a depth of 300 mm.</td>
<td>4.2.1.3</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>The excavation shall be trimmed as follows as it will not act as a form for concrete works:</td>
<td>4.2.2.1.3</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>A working space of 1,0 m shall be provided</td>
<td>4.2.2.1.4</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>The formation width of private sidings shall be as shown in the drawings</td>
<td>4.2.2.1.8</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>The slopes of cuttings shall not be trimmed.</td>
<td>4.2.2.1.9</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>Topsoil and overburden shall not be stripped and stockpiled separately.</td>
<td>4.2.2.3</td>
<td><strong>Omit</strong></td>
</tr>
<tr>
<td>Surplus and unsuitable material shall be disposed of as follows:</td>
<td>4.2.3</td>
<td><strong>“Shall be deposited in open adits and/or shafts where backfilling has been specified, or consolidated into Consolidated deposit ‘Area A’ as per the construction drawings or as instructed by the Engineer. Clean rock surplus can be used as cover material to post-rehabilitation works as indicated on the relevant construction drawings and provided it is in compliance with the on-site material selection specification.”</strong></td>
</tr>
</tbody>
</table>

*Contract*

*Part C3.1: Technical Specification*
<table>
<thead>
<tr>
<th>All timbering and sheeting shall remain in the excavation.</th>
<th>4.2.4</th>
<th>Omit</th>
</tr>
</thead>
<tbody>
<tr>
<td>The layers shall be compacted to ……</td>
<td>4.2.5.1.6</td>
<td>“As specified in the relevant construction drawings.”</td>
</tr>
<tr>
<td>The density close to structures shall be not less than ……</td>
<td>4.2.5.2.5</td>
<td>“As specified in the relevant construction drawings.”</td>
</tr>
<tr>
<td>Topsoiling of the following areas shall be required: ………</td>
<td>4.2.6.2</td>
<td>Omit</td>
</tr>
<tr>
<td>The following vegetation shall be planted after topsoiling in the following areas: ………...</td>
<td>4.2.6.3</td>
<td>Omit</td>
</tr>
<tr>
<td>A degree of accuracy …….. is required in respect of position, dimensions, levels, etc.</td>
<td>5.2.1</td>
<td>“III”</td>
</tr>
<tr>
<td>A degree of accuracy …….. is required in respect of moisture content and density.</td>
<td>5.2.2</td>
<td>“III”</td>
</tr>
</tbody>
</table>

**Variations**
1 Replace … with the following:
2 The provisions of … do not apply.

**Additional clauses**
1 …………
2 …………

None
Variations specified as follows:

3.1.2 Gabion cages

Add the following to the clause:

“All gabion cages are to comply with the following specifications:

- Wire mesh must have a nominal diameter of 3mm
- 0.08mm tolerance as per SANS 675
- Minimum mass of Zinc/Galfan must be 275mg/m²
- Wire must be coated with either a minimum diameter of 4mm PVC coating as per SANS 1580 or a 8mm PA6 Nylon Coating Diameter EN 1245-5.
- Sizes of gabions to be installed are as shown and specified in the construction drawings.”

3.1.3 Geotextile

Add the following to the clause:

“Geotextile specifications are as indicated on the construction drawings.”

3.1.5 Concrete

Replace the clause with the following:

“Where required, concrete shall comply with SANS 2001 CC1 and CC2.”

6. Tolerances

Add the following to the clause:

“The materials and finish of the work shall be to Degree of Accuracy II.”
PORTION 3

PARTICULAR SPECIFICATIONS

The following specifications shall be added to this portion of the document;

1. Environmental Specification
3.1.1. ENVIRONMENTAL SPECIFICATION

1. Site establishment

1.1. Demarcation of the site
   - Identify and demarcate the extent of the site and associated Works Areas as defined by the Client.
   - Maintain site demarcations in position until the cessation of construction works.
   - Maintain the demarcation line, and ensure that any asbestos bearing material remains within the designated site.
   - Do not use the site for any other purpose other than for the proper carrying out of the Works under the Contract.
   - Do not establish any site Works besides those specified and allowed for in the Contract.
   - Do not paint or mark any natural feature. Marking for surveying and other purposes must be done using pegs, beacons or rope and droppers.

1.2. Protection of vegetation and natural features
   - Locate construction camps on the outside fringe of the riparian vegetation zone, as directed by the Client.
   - Do not disturb, deface, destroy or remove plants or natural features, other than those on the site where disturbance is unavoidable by virtue of construction activity, for the duration of the Contractor's presence on site.
   - No open fires are permitted under trees.
   - No material storage or laydown is permitted under trees.
   - No vegetation matter may be removed for firewood.

1.3. Protection of fauna
   - No wild animal may under any circumstance be handled, removed or be interfered with.
   - No wild animal may under any circumstance be hunted, snared, captured, injured or killed.
   - Ensure that the Work Site is kept clean, tidy and free of rubbish that would attract animal pests.
   - Ensure that domesticated animals belonging to the local community are kept away and are safe from any unprotected Works.
   - Do not make use of any pesticides.

1.4. Protection of the cultural historical aspects
   - Do not disturb deface, destroy or remove protected features and sites.
   - If any chance archaeological finds, graves or skeletal material are unearthed, halt Works in that area immediately and inform the Client.

1.5. Topsoil conservation
   - Ahead of all construction, borrowing and quarrying, strip the entire available topsoil layer.
   - Stockpile topsoil separately from overburden (subsoil and rocky material).
   - In the absence of a recognizable topsoil layer, strip the upper most 300mm of soil.
   - Strip and stockpile herbaceous vegetation, overlying grass and other fine organic matter along with the topsoil.
   - Do not strip topsoil when it is wet.
   - Store stripped topsoil in an approved location according to the specifications in Section 3.
   - Do not mix topsoil obtained from different sites.
1.6. De-bushing and de-stumping
- Afford local communities the opportunity to access areas earmarked for de-bushing for the collection of firewood, medicinal plants etc.
- Any plant material not collected by the community to be disposed of at a proximate general landfill site.

2. Site infrastructure

2.1. Structures and accommodation
- Locate all buildings and structures, including offices, stores etc. within predetermines zones as identified by the Client.

2.2. Contractors camp and lay-down areas
- Only security and emergency personnel are to be housed on the construction site.
- In the event that a camp is established, keep the camp and all its storage and laydown areas secure and neat at all times and employ appropriate access control measures during construction.

2.3. Batching plants
- Do not locate batching plants or associated sludge dams within the 1:100 year floodline, or within a horizontal distance of 100m (whichever is greater) of a watercourse, drainage line or identified wetland.
- Do not locate batching plants or associated sludge dams within any riparian vegetation zone.
- Protect the batching plant on the up-slope side by an earth berm or sandbag system to deflect clean surface runoff away from the plant.
- Contain the batching plant on the down-slope side by a trench and earth berm or sandbag system to control contaminated runoff and construction water emanating from within the plant.
- Collect all construction water and contaminated runoff emanating from within the batching plant (and associated wash bays) and contain within a sludge dam for later disposal in the appropriate manner.
- Ensure that appropriate measures are in place to prevent the overflow of sludge dams during heavy rains and storm conditions.

2.4. Crusher plants
- Utilise the minimum area required for the storage of different stone sizes.
- Do not locate crusher plants or associated settlement ponds within the 1:100 year floodline, or within a horizontal distance of 100m (whichever is greater) of a watercourse, drainage line or identified wetland.
- Do not locate crusher plants or associated settlement ponds within any riparian vegetation zone.
- Protect the crusher plant on the up-slope side by an earth berm or sandbag system to deflect clean surface runoff away from the plant.
- Contain the crusher plant on the down-slope side by a trench and earth berm or sandbag system to control contaminated runoff and construction water emanating from within the plant.
- Collect all construction water and contaminated runoff emanating from within the crusher plant and contain within a closed settlement pond system.
• Ensure that appropriate measures are in place to prevent the overflow of settlement ponds during heavy rains and storm conditions.

2.5. Roads and access

• Make use of existing roads and tracks where feasible, rather than creating new routes.
• Routes should not traverse slopes with gradients in excess of 8%. Where this is unavoidable, stabilise the road surface.
• Ensure that only authorised roads and access routes are used.
• Vehicles may not leave the designated roads and tracks and turnaround points will be limited to specific sites.
• Maintain all access routes and roads adequately in order to minimise erosion and undue surface damage. Repair rutting and potholing and maintain stormwater control mechanisms.
• Runoff from roads must be managed to avoid erosion and pollution problems.

2.6. Gates and fences

• Protect and maintain existing private property, fences and gates.
• Respect the open or closed status of gates for the duration of the construction period.
• Prevent unnecessary vehicular and personnel access into adjacent undisturbed areas.

3. Site Management

3.1. Dust Control

Dust will be controlled to minimise exposure to site personal as well as to communities which may be located within the zone of influence of construction activities. Four levels of dust control will be implemented, dependant on the nature of the activity being undertaken:

• Non asbestos containing roadways: Maintain a 2.5% moisture content by mass in the top 50mm of the road surface using water.
• Asbestos containing roadways: Maintain a 2.5% moisture content by mass in the top 50mm of the road surface using a mixture of water and surfactant. The surfactant to use is a 50:50 mixture of polyoxyethylene ester and polyoxyethylyne ether in a 0.16% solution of water.
• Non asbestos excavations: Maintain a 2.5% moisture content by mass in the excavated material using water.
• Asbestos containing excavations: Maintain a 2.5% moisture content by mass in the excavated material using a mixture of water and surfactant. The surfactant to use is a 50:50 mixture of polyoxyethylene ester and polyoxyethylyne ether in a 0.16% solution of water.

The contractor is required to undertaken daily testing of material for moisture content for any activity, either traffic or excavation on asbestos areas and biweekly testing on non-asbestos areas.

3.2. Rubble and waste rock

• Store rock aggregate separately from soils.

3.3. Topsoil

• Topsoil is to be handled twice only - once to strip and stockpile, and once to replace and level.
• Position topsoil stockpiles on the higher side of a disturbed area, and above a 1:50 year flood line wherever possible.
• Do not stockpile topsoil in heaps exceeding 2m in height.

3.4. Solid waste
• Collect all domestic waste in adequate numbers of litter bins located as required on the Work Site and within the Contractors camp.
• Empty litter bins weekly (or as required before they reach capacity).
• Any skips for waste storage on site need to be covered to limit animal access.
• Skips removed from site need to be covered to prevent wind blowing the waste from the truck.
• Where necessary, dedicate a storage area on site for the collection of construction waste.
• Ensure that solid waste is transported properly, avoiding waste spills en-route.
• No excavations may be made on Site or auxiliary areas for the purposes of waste disposal. All solid waste to be removed from site for disposal at a landfill commensurate with the level of risk associated with the waste.

3.5. Liquid waste
• Do not locate any site toilet, sanitary convenience, septic tank or French drain within the 1:100 year floodline, or within a horizontal distance of 100m (whichever is greater) of a watercourse, drainage line or identified wetland.
• Any water contained in the sludge dams associated with a Batching Plant or Crusher plant to be tested in a laboratory to determine the chemical composition including but not limited to pH, EC, alkalinity, major cations, major anions and metal content, to determine disposal requirements.

3.6. Hazardous waste
• Store hazardous waste as indicated on the approved.
• Ensure compliance with all national, regional and local legislation with regard to the disposal of hydrocarbons, chemicals, solvents and any other harmful and hazardous substances and materials.
• Collect any hazardous waste in receptacles located on a drip tray on site pending disposal.
• Retain waste oils and batteries for recycling by the supplier wherever possible.
• Regularly dispose of all hazardous waste not earmarked for reuse, recycling or resale (such as oil and grease) at a registered hazardous waste disposal site.
• Contain chemical spills, and arrange for clean-up/control by the supplier, or by professional pollution control personnel.

3.7. Pollution control
• Do not dump waste of any nature, or any foreign material into any drainage line or wetland or anywhere else on Site or within auxiliary areas.
• Do not allow the use of any drainage line or wetland for swimming, bathing, or the cleaning of clothing, tools or equipment.
• Prevent the discharge of water containing polluting matter or visible suspended materials directly into drainage lines or wetlands.
• Ensure that water passing through vehicle wash bays and workshops pass through oil baffles / oil traps and oils separators in addition to any filtration system to remove potential asbestos fibres.
• Treat all oil sludge hazardous waste.
• Take special care during rainy periods to prevent the contents of sumps and drip trays from overflowing.
• Immediately clean any accidental oil or fuel spills or leakages.
• Do not hose oil or fuel spills into the surrounding natural environment.
• Clean small oil or fuel spills with an approved absorbent material, such as 'Drizit' or 'Spill-sorb'.
• Contain oil or fuel spills in water using an approved oil absorbent fibre.
• Treat soil contaminated by oil or fuel as specified by the Client.
• Limit cement and concrete mixing to single sites where possible.
• Dispose of all visible remains of excess cement and concrete after the completion of tasks. Dispose of in the approved manner (solid waste concrete may be treated as inert construction rubble, but wet cement and liquid slurry, as well as cement powder must be treated as hazardous waste).
• Do not allow the washing of trucks delivering concrete anywhere but within designated wash bays equipped with runoff containment. Direct such waste water into a settlement pond or sludge dam for later disposal.

3.8. Air quality
• Manage dust resultant from the Works according to the OHS requirements for asbestos control. Fugitive dust arising from the auxiliary areas and access to be limited by the regular wetting of these areas.
• Dust from the construction site must not disturb economic or social activities in the vicinity of the construction site.

3.9. Noise control
• Unless otherwise specified by the Client, normal work hours will apply.
• Ensure that employees and staff conduct themselves in an acceptable manner while on site, both during Work hours and after hours.
• No loud music is permitted on site or in the auxiliary areas.
• Respond to community complaints with regard to noise generation, taking reasonable action to ameliorate the impact.
• Where complaints cannot be addressed to the satisfaction of all parties, then the Contractor will, upon instruction by the Client, provide an independent and registered Noise Monitor to undertake a survey of the noise output levels. Recommendations to reduce noise to legislated levels must be implemented. This may include the construction of noise barriers, earth berms or sound attenuation walls as required.

3.10. Fire control
• Take adequate precautions to ensure that fires are not started as a result of Works on site: the Contractor will be held liable for any damage to property adjoining the Site as a result of any fire caused by one of his employees.
• Ensure that the Work Site and auxiliary areas are equipped with adequate firefighting equipment.
• Take immediate steps to extinguish any fire which may break out on the construction site.
• No open fires are permitted anywhere on site.
• Restrict contained fires for heating and cooking (i.e. in a fire drum) to designated areas on site. Prevent employees from creating fires randomly outside designated areas.
• Do not store any fuel or chemicals under trees.
• Do not store gas and liquid fuel in the same storage area.
• Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area.
4. Borrow areas

4.1. Borrow pits and rock quarries

- Remove and separately stockpile topsoil for use during rehabilitation of the borrow area.
- Minimise the flow of any surface water or floodwater into borrow areas. Where necessary protect borrow areas by an earth berm or sandbag system to deflect clean surface runoff away from the excavations.
- Allow for the natural free drainage of borrow areas. All borrow areas must be drained unless otherwise specified.
- Plan the location of dump sites within the borrow area taking into account the progression of borrow activities and the potential for rehabilitation.

Implement the following procedure for all activities at the borrow area:

STEP 1: ESTABLISHING THE BORROW AREA. The borrow area must be clearly defined by the Client. The extent of the borrow area must be marked using stakes or rock cairns by the contractor. The alignment of the haul road must be similarly defined.

STEP 2: PREPARATION OF BORROW AREA. The borrow must be cleared of vegetation with the exception of large trees (>200mm diam) which must be protected. Topsoil must be stripped and stockpile for later rehabilitation of the borrow area. Where the borrow area is being used as a source of cover material for rehabilitation of asbestos waste a minimum of 300mm of topsoil to be stockpiled at the borrow area for rehabilitation of the borrow area. Topsoil stockpiles shall be protected against erosion and weeds. Surface water deflection berms must be constructed up slop of the borrow pit.

STEP 3: EXCAVATION OF BORROW MATERIAL. The borrow material must be removed to leave a slope no steeper than 1:3 on the borrow pit perimeter. Where steeper slopes are formed, these will have to be cut back during closure of the borrow area.

STEP 4: FINISHING OFF OF BORROW AREA. Surplus material and rock must be returned to the pit to aid the finishing off process. All fill material must be levelled. Slides of the pit must be graded to a maximum of 1:3 (the preferred slope is 1:5). The gradient of side slopes should vary and sharp angles must be avoided, to blend with the natural landscape. The shaping of the pit shall facilitate drainage of water out of the pit wherever possible.

STEP 5: REHABILITATION – TOPSOIL. Replace and redistribute stockpiled topsoil together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas. Stockpiled topsoil shall be spread over shaped and ripped surfaces. The surface water deflection berm must be maintained. Haul roads shall be ripped and scarified. Where appropriate earth banks must be constructed to prevent erosion.

STEP 6: REHABILITATION – VEGETATION. Vegetation should be allowed to re-establish naturally. Fence off the borrow area to keep animals out until vegetation has re-established.

5. Storage and handling

5.1. Vehicles and equipment

- No vehicles, machinery or equipment with leaks or causing spills may be allowed to operate on the construction site. These must be sent to the maintenance yard or workshop for repair, or must be removed from site.
- Ensure that the maintenance of all vehicles and equipment, including oil and lubricant changes, takes place only within properly equipped, bunded maintenance areas or workshops.
- Only emergency and essential repairs of vehicles and equipment may take place on site.
- Provide drip pans for generators, or any machinery that will be in position for longer than one day.
• Drip trays are to be watertight, and must be emptied regularly and before rain events. The contents of drip trays are to be treated as hazardous waste.
• Day to day parking of vehicles is to be on hard surfacing wherever possible.
• Where oil and fuel spills are expected, parking is to be on an impervious surface with adequate pollution control mechanisms in place.

5.2. Fuel

• Position long term fuel stores as indicated by the Client.
• Do not locate any fuel depot within the 1:100 year floodline, or within a horizontal distance of 100m (whichever is greater) of a watercourse, drainage line or identified wetland.
• Store fuel at temporary depots within a bunded area, or alternatively in an area underlain by heavy duty PVC sheeting and covered with 100mm of sand. This is to include an area adjacent to the tanks upon which vehicles must park during refuelling.
• The only permitted method of fuel transfer is by means of a pump / controlled valve / tap / hose / funnel.
• Treat spills within the bund and the contents of the sump as hazardous waste

5.3. Hazardous substances

• Clean any accidental spills immediately, treating the spilled material and used cleaning products as hazardous waste

6. Erosion control

6.1. Surface water management

• No water may be abstracted from any surface water body for the purpose of construction unless permitted in terms of the Contract.
• Monitor water consumption and ensure that all possible use is accounted for and areas of waste are identified
• Avoid over-wetting, saturation and unnecessary runoff during dust control activities and irrigation.
• Do not drain, fill or alter in any way, any wetland or drainage line, including the riverbanks unless this forms part of the construction Works.

6.2. Erosion protection

• Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and Work Areas.
• Retain natural trees, shrubbery and grass species wherever possible.
• Do not permit vehicular or pedestrian access into natural areas beyond the demarcated boundary of the Work Area.
• Utilise only light equipment for access and deliveries into areas of unstable soils, in areas where erosion is evident, and at stream and river embankments.
• Limit vehicular access into rocky outcrops and ridges.
• Institute adequate sedimentation control measures at river crossings and when excavation or disturbance within riverbanks, or the riverbed takes place.
• Repair all erosion damage as soon as possible.
7. Construction closure out requirements

This relates to areas auxiliary to the Works where laydown areas, workshops, offices etc. may have been constructed and does not influence soil/cover placement requirements defined in the technical specification.

7.1. Removal of structures and infrastructure

• Clear and completely remove from site all construction plant, equipment, storage containers, temporary fencing, temporary services, fixtures and any other temporary Works.

7.2. Inert waste and rubble

• Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates.
• Load and haul excess borrow material to borrow area.
• Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site.

7.3. Hazardous waste and pollution control

• Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner.

7.4. Final shaping

• Where possible, programme the backfill of excavations so that subsoil is deposited first, followed by the topsoil.
• Backfill French drains, sludge dams and evaporation dams and compact, covering with a final layer of topsoil to a height of 100mm above the surrounding ground surface.
• Dismantle and flatten temporary drifts and river crossings, reinstating all drainage lines to approximate their original profile.
• Shape all disturbed areas to blend in with the surrounding landscape.
• Ensure that no excavated material or stockpiles are left on site and that all material remaining after backfill is smoothed over to blend in with the surrounding landscape.

7.5. Topsoil replacement and soil amelioration

• Replace and redistribute stockpiled topsoil together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas.

7.6. Vegetation establishment

• Vegetation should be allowed to re-establish naturally.
Part C3.2: Occupational Health and Safety Specification
Occupational health and safety specification

1. Definitions

In this document the following expressions shall bear the meanings assigned to them below:

1.1 Asbestos demolition work includes demolition, alteration, stripping, removing, repair, gleaning of any spilt asbestos, or high-pressure water jetting of any structure containing asbestos lagging or insulation, but does not include work performed on asbestos cement sheeting and related products and asbestos cement products that form part of the structure of a workplace, building, plant or premises;

1.2 Asbestos Regulations means the Occupational Health and Safety Act's, No 85 of 1993, Asbestos Regulations that came into effect on 10 February 2002;

1.3 Asbestos work means work that exposes or is likely to expose any person to asbestos dust;

1.4 Client means any person for whom construction work is being performed and/or undertaken [i.e. MINTEK for purposes of this specification];

1.5 Construction Regulations means the Occupational Health and Safety Act's, No 85 of 1993, new Construction Regulations that came into effect on 01 March 2014;

1.6 Exposed to asbestos means exposed or likely to be exposed to asbestos dust while at the workplace, and “exposure” has a corresponding meaning;

1.7 MDHS 39/4 means the Methods for the Determination of Hazardous Substances 39/4 of the Health and Safety Executive of the United Kingdom: Asbestos fibres in air, sampling and evaluation by phase contrast microscopy (PCM) under the Control of Asbestos at Work Regulations, 1995 HSE ISBN 0 7176 0913 8, as revised from time to time;

1.8 MHSACT means the Mine Health and Safety Act, No 29 of 1996, as amended;

1.9 Occupational exposure limit for asbestos means an occupational exposure limit of 0,2 regulated asbestos fibres per millilitre of air averaged over any continuous period of four hours measured in accordance with MDHS 39/4;

1.10 Occupational health and safety plan means a sufficiently documented plan to the standards of the Client, which addresses hazards identified and includes safe working procedures to mitigate, reduce or control the hazards identified;

1.11 Occupational health and safety specification means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons working, visiting, passing, staying and/or working close to the construction site and/or other applicable areas such as site camp;

1.12 OHSACT means the Occupational Health and Safety Act, No 85 of 1993, as amended;
1.13 **Principal Contractor** means an employer, as defined by Section 1 of the OHSACT who performs construction work and is appointed by the Client to be in overall control and management of the construction site and works; and

1.14 **Respirator zone** means a respirator zone contemplated in Asbestos Regulation 10 (a).

2. **Introduction**

In terms of Construction Regulation 5(1)(b) of the OHSACT, the Client is required to compile an occupational health and safety specification for any intended project and provide such specification to prospective tenderers/bidders.

This specification has as objective to ensure that the principal contractor entering into a contract with the Client achieves and maintain an acceptable level of occupational health and safety performance and compliance. This document forms an integral part of the contract between the Client and the principal contractor and the principal- and other contractors should make it part of any contract/s that they may have with other contractors and/or suppliers as far as this project is concerned.

Compliance with this document does not absolve the principal contractor from complying with any other minimum legal requirements and the principal contractor remains responsible for the health and safety of his employees, those of his mandataries as well as any persons coming on site or on adjacent properties as far as it relates to the construction activities.

3. **Scope**

To develop a project specific occupational health and safety specification that addresses the reasonable and foreseeable risks, exposures and aspects of occupational health and safety as affected by the abovementioned contract work.

The specification will provide the requirements that the principal contractor and other contractors will have to comply with in order to reduce the risks associated with the abovementioned contract work and that may lead to incidents causing injury and/or ill health, to a level as low as reasonably practicable and possible.

Any contractor interested in submitting a bid in response to the Client’s formal tender for any construction project, has to prepare and include a draft occupational health and safety plan based on this specification as well as the OHSACT and MHSACT in its tender submission. The Client will evaluate this plan as part of its formal tender adjudication processes to ensure compliance with Construction Regulation 5 that stipulates that the Client may only appoint a contractor who has the necessary competencies and resources to carry of the work appointed for safely.
4. General occupational health and safety provisions

4.1 Hazard identification and risk assessment (Construction Regulation 9)

4.1.1 Risk assessments

Annexure 1 of this specification contains a list of risk assessment headings that have been identified by the Client as possibly applicable to the abovementioned contract work. It is, by no means, exhaustive and is only offered as assistance to the contractors intending to tender for the applicable works. It therefore remains the overall responsibility of the principal contractor to consider all applicable risks and pro-actively undertake risk assessments and implement appropriate risk mitigation measures.

4.1.2 Development of risk assessments

Every principal contractor performing construction work shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, ensure that risk assessments are undertaken by a competent person, appointed in writing, and the risk assessments shall form part of the occupational health and safety plan and be implemented and maintained as contemplated in Construction Regulation 7(1)(a).

The risk assessments shall include, at least:

- The identification of the current as well as emerging risks and hazards to which persons may be exposed to;
- The analysis and evaluation of the risks and hazards identified;
- A documented plan of safe working procedures (SWP) and any method statements to mitigate, reduce or control the risks and hazards that have been identified;
- A plan to monitor the application of the SWPs; and
- A plan to review the risk assessments as the work progresses and changes are introduced or incidents occurred which requires the re-evaluation of the processes/risk mitigation.

Based on the risk assessments, the principal contractor must develop a set of site-specific occupational health and safety rules that will be applied to regulate the occupational health and safety aspects of the construction.

The risk assessments, together with the site-specific occupational health and safety rules, must be submitted to the Client before mobilisation on site commences.

Despite the risk assessments listed in Annexure 1, the principal contractor is required to conduct a baseline risk assessment and the aforesaid risk assessments must be incorporated into the baseline risk assessment. The baseline risk assessment must further include the SWPs and the applicable method statements based on the risk assessments.
Hazard identification and risk assessments must be undertaken whilst SWPs must be developed for all out-of-scope work.

4.1.3 Review of risk assessments

The principal contractor is to review the hazards identified, the risk assessments and the SWPs at each production planning and progress report meeting as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and/or processes.

It is also proposed that should an incident occur the SWPs and all other applicable processes be re-evaluated to ensure that the mitigation measures are still applicable and appropriate and if not a revision of the risk assessments be undertaken.

The principal contractor must provide the Client, other contractors and all other concerned or affected parties with copies of any changes, alterations or amendments as soon as possible but within 14 calendar days of such changes.

4.2 Legal Requirements

All Contractors entering into a contract with the Client shall, as a minimum, comply with the -

- OHSACT and a current, up-to-date copy of the OHSACT and its Regulations must be available on site at all times;
- Asbestos Regulations of the OHSACT that came into effect on 10 February 2002;
- Compensation for Occupational Injuries and Diseases Act, No 130 of 1993 (COIDAct) as amended. The principal contractor will be required to submit a letter of registration and “good-standing” from the Compensation Commissioner or compensation insurer before being awarded the contract. A current, up-to-date copy of the COIDAct must be available on site at all times;
- Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965);
- Environment Conservation Act, 1989 (Act No. 73 of 1989);
- National Water Act, 1998 (Act No. 36 of 1998);
- National Environmental Management Act, 1998 (Act No. 107 of 1998);
- Where work is being carried out on mine premises, the contractor will comply with the MHSACT, as amended, and any other occupational health and safety requirements that the mine may specify. Current, up-to-date copies of these Acts must, if applicable, also be available on site at all times; and
- The principal contractor appointed must have proof that it is duly registered as an asbestos contractor with the chief inspector of the Department of Labour. Such registration should be valid and remain valid for the duration of the construction work.
4.3 Mine Health and Safety Act (MHSACT)

The following extract of the MHSACT is applicable to the contract.

4.3.1 Contractors

The principal contractor and subcontractors are compelled to comply with the MHSACT when employed by a mining concern or when conducting any work on a mine.

a. The principal contractor must provide a certificate of good standing with the Department of Labour regarding his/her registration as an employer/Contractor.
b. The principal contractor must provide proof that employees in his service is registered and paid up at the Compensation Commissioner.
c. The principal contractor must provide proof that employees in his service are medically fit to perform the duties and tasks assigned to them.
d. The principal contractor must provide proof that his employees are on a program for medical surveillance.
e. The principal contractor must provide proof that employees are trained, fit and found competent for the tasks they are expected to perform. Employees must be trained to understand the hazards attached to their tasks and how to conduct their duties safely and without risk.
f. The principal contractor must ensure that equipment and tools brought onto mine premises are safe and without risk to employees or other employees.
g. The principal contractor must appoint a certificated first aid person as his health representative.
h. There must be a qualified fire warden and fire team trained for fire and hazard control.
i. First-aiders should specifically be trained in treating snake and reptile bites as well as scorpion and bee stings.
j. A health and incident risk assessment has to be done before any access to the site can be allowed.

4.3.2 Applicable sections

The following sections of the act are applicable to the principal contractor as well as subcontractors:

a. Section 6 (1):

Every employer must -

a. Supply all necessary health and safety equipment and safety facilities to each employee.
b. Maintain, as far as reasonably practical, that equipment and those facilities in a serviceable and hygienic condition.

b. Section 6 (2):

Every employer must ensure that sufficient quantities of all necessary personal protective equipment are available so that every employee who is required to use that equipment is able to do so.
c. Section 6 (3):

Every employer must take reasonable steps to ensure that all employees who are required to use personal protective equipment are instructed in the proper use, the limitations and appropriate maintenance of that equipment.

d. Section 7 (1):

As far as reasonably practicable, every employer must -
   a. Ensure that every employee complies with the requirements of this Act;
   b. Consider an employee’s training capabilities in respect of health and safety before assigning a task to that employee; and
   c. Ensure that work is performed under the general supervision of a person trained to understand the hazards associated with the work and who has the authority to ensure that the precautionary measures laid down by the employer are implemented.

e. Section 10 (1):

As far as reasonably practicable, every employer must –
   a. Provide employees with any information, instruction, training or supervision that is necessary to enable them to perform their work safely and without risk to health; and
   b. Ensure that every employee becomes familiar with work-related hazards and risks and the measures that must be taken to eliminate, control and minimise those hazards and risks.

f. Section 10(2):

As far as reasonably practicable, every employer must ensure that every employee is properly trained -
   a. To deal with every risk to the employee’s health or safety that –
      i. is associated with any work that the employee has to perform,
      ii. has been recorded in terms of section 11;
   b. in the measures necessary to eliminate, control and minimize those risks to health and safety,
   c. in the procedures to be followed to perform that employee’s work, and
   d. in relevant emergency procedures

g. Section 10 (3):

In respect of every employee, the provisions of subsection (2) must be complied with –
   a. before that employee first starts work;
   b. at intervals determined by the employer after consulting the health and safety committee,
   c. before significant changes are made to the nature of that employee’s work.
h. Section 11:
Every employer must assess and respond to risk.

i. Section 13:
Every employer must establish a system of medical surveillance.

j. Section 14:
Record of risk work

k. Section 15:
Keep records of medical surveillance

l. Section 16:
Annual medical reports

m. Section 17:
Exit certificates

n. Section 18:
Costs of medical examinations

o. Section 19:
Employee’s right to information

p. Section 21:
Any person who -
   a. Designs, manufactures, repairs, imports or supplies any article for use at a mine must ensure, as far as reasonably practicable –
      i. that the article is safe and without risk to health and safety when used properly; and
      ii. that it complies with all the requirements in terms of this Act.
   b. designs, manufactures, erects or installs any article for use at a mine must ensure, as far as it is reasonably practicable, that ergonomic principles are considered and implemented during design, manufacture, erection or installation.

q. Section 22:
Employees’ duties for health and safety

r. Section 25(1):
Health and safety representatives to be appointed where more than 20 employees are employed.
4.4 Structure and responsibilities

4.4.1 Overall supervision and responsibility for occupational health and safety

a. The principal contractor [appointed in terms of Construction Regulation 5(1)(k)] is responsible to implement and maintain the occupational health and safety plan approved by the Client.

b. The Chief Executive Officer (in terms of Section 16(1) of the OHSACT) of the principal contractor is to ensure that the Employer (as defined in the OHSACT) complies with the OHSACT.

c. The principal contractor’s Chief Executive Officer may appoint any person reporting to him/her as Designated Person in terms of Section 16(2) of the OHSACT. Such Designated Person is responsible to assist the Chief Executive Officer to ensure that the Employer complies with the requirements of the OHSACT.

d. The construction manager, assistant construction manager, construction supervisor and assistant construction supervisor(s) appointed in terms of Construction Regulation 8 are responsible for supervising the construction work and in specific to ensure that all work undertaken comply with the requirements of the OHSACT, its Regulations and the Client’s specifications.

4.4.2 Operational responsibilities for occupational health and safety

The principal contractor shall appoint designated competent employees and/or other competent persons as outlined in the following list to assist with the operational responsibilities for occupational health and safety. This list is only the minimum requirement and is therefore in no way exhaustive.

<table>
<thead>
<tr>
<th>Appointment description</th>
<th>Appointment required in terms of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adit or shaft work competent person</td>
<td>OHSACT Section 8(1)</td>
</tr>
<tr>
<td>Asbestos supervisor</td>
<td>Asbestos Regulations</td>
</tr>
<tr>
<td>Assistant construction manager</td>
<td>Construction Regulation 8(2)</td>
</tr>
<tr>
<td>Assistant construction supervisor</td>
<td>Construction Regulation 8(8)</td>
</tr>
<tr>
<td>Bulk mixing plant supervisor</td>
<td>Construction Regulation 20</td>
</tr>
<tr>
<td>Construction manager</td>
<td>Construction Regulation 8(1)</td>
</tr>
<tr>
<td>Construction supervisor</td>
<td>Construction Regulation 8(7)</td>
</tr>
<tr>
<td>Construction vehicle, mobile plant and machinery supervisor</td>
<td>Construction Regulation 23</td>
</tr>
<tr>
<td>Demolition supervisor</td>
<td>Construction Regulation 14</td>
</tr>
<tr>
<td>Electrical installation and appliances inspector</td>
<td>Construction Regulation 24</td>
</tr>
<tr>
<td>Emergency, security and fire coordinator</td>
<td>Construction Regulation 29</td>
</tr>
<tr>
<td>Excavation supervisor</td>
<td>Construction Regulation 13</td>
</tr>
<tr>
<td>Fall protection supervisor</td>
<td>Construction Regulation 10</td>
</tr>
<tr>
<td>First-aiders</td>
<td>General Safety Regulation 3</td>
</tr>
<tr>
<td>Fire fighting equipment inspector</td>
<td>Construction Regulation 29</td>
</tr>
<tr>
<td>Hazardous chemical substances supervisor</td>
<td>Hazardous Chemicals Substances Regulations 10</td>
</tr>
<tr>
<td>Incident investigator</td>
<td>General Administrative Regulation 9</td>
</tr>
</tbody>
</table>
Appointment description | Appointment required in terms of
--- | ---
Ladder inspector | General Safety Regulation 13(a)
Lifting machines and equipment inspector | Construction Regulation 22
Manager | MHSACT Section 3(1)(a)
Occupational health and safety committee | OHSACT Section 19
Occupational health and safety officer | Construction Regulation 8(5)
Occupational health and safety representatives | OHSACT Section 17
Person responsible for machinery | General Machinery Regulation 2
Risk assessor | Construction Regulation 9(1)
Stacking and storage supervisor | Construction Regulation 28
Structures supervisor | Construction Regulation 11
Traffic management supervisor | OHSACT Section 9(1)
Traffic safety officer | OHSACT Section 9(1)
Working on, over or next to water supervisor | Construction Regulation 26

These appointments must be in writing and the responsibilities clearly stated together with the period for which each appointment is made. This information must be communicated to and agreed with the appointees.

Copies of appointments must be submitted to the Client together with concise CV’s of the appointees as part of the principal contractor’s health and safety plan and if appointed copies of the appointments included in the occupational health and safety file. All appointments must be approved by the Client and any changes of appointees or appointments must be communicated to the Client and agreed upon before being implemented.

The principal contractor must, furthermore provide the Client with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated on a weekly basis.

### 4.4.3 Designation of occupational health and safety representatives (Section 17 of the OHSACT and Section 25(1) of the MHSACT)

Where the principal contractor employs more than 20 persons [including the employees of other contractors (sub-contractors) and its supervisors] he has to appoint one occupational health and safety representative for every 50 employees or part thereof. General Administrative Regulation 6 requires that the election, appointment and subsequent designation of the occupational health and safety representatives be executed in consultation with employee representatives or employees. (Section 17 of the OHSACT as well as General Administrative Regulation 6 and 7 refer).

Occupational health and safety representatives have to be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

### 4.4.4 Duties and functions of the occupational health and safety representatives (Section 18 of the OHSACT)

a. The principal contractor must ensure that the designated occupational health and safety representatives conduct a weekly inspection of their
respective areas of responsibility, using a checklist, and report thereon to the principal contractor.

b. Occupational health and safety representatives must be included in accident and/or incident investigations.

c. Occupational health and safety representatives must attend all occupational health and safety committee meetings.

4.4.5 Appointment of occupational health and safety committee (Section 19 of the OHSACT)

The principal contractor must establish an occupational health and safety committee consisting of all the designated occupational health and safety representatives together with a number of management representatives that are not allowed to exceed the number of occupational health and safety representatives on the committee and a representative of the Client who shall act as the chairperson without voting rights. The members of the occupational health and safety committee must be appointed in writing and copies of the appointments included in the occupational health and safety file.

The occupational health and safety committee must meet as a minimum on a monthly basis and consider, at least, the following agenda items:

1. Opening and welcome.
2. Members present, apologies and absent.
3. Minutes of previous meeting.
4. Matters arising from the previous meeting.
5. Occupational health and safety representatives' reports.
6. Incident and/or accident reports and investigations.
7. Incident, accident and/or injury statistics.
8. Other matters.
9. Endorsement of registers and other statutory documents by a duly authorised representative of the principal contractor.
10. Close and next meeting.

4.5 Mandataries

It is a requirement that the principal contractor, when he appoints contractors or sub-contractors in terms of Construction Regulations 7(1)(c) includes an OHSACT Section 37(2) agreement (i.e. Agreement with Mandatary) in his agreement with such contractor.

4.6 Administrative controls and the occupational health and safety file

4.5.1 The occupational health and safety file [Construction Regulation 7(1)(b)]

As required by Construction Regulation 7(1)(b), the principal contractor and other contractors will each keep an occupational health and safety file on site containing the following documents as a minimum:

1. Copy of the construction work permit (for applicable projects) (Construction Regulation 3)
2. Notification of construction work (Construction Regulation 4.).
3. Updated copies of the OHSACT and its Regulations as well as the COID Act (General Administrative Regulation 4.).
4. Proof of registration and good standing with the Compensation Commissioner or a COID Insurer [Construction Regulation 5(1)(j)].
5. Occupational health and safety plan agreed with the Client including the underpinning risk assessment(s) and method statements [Construction regulation 7(1)].
6. Copies of occupational health and safety committee meetings and other relevant minutes.
7. Designs and/or drawings [Construction Regulation 7(1)(b)].
8. A list of contractors (sub-contractors) including copies of the agreements between the parties, proof of good standing with the Compensation Commissioner or COID Insurer, and the type of work to be undertaken by each contractor (Construction Regulation 7).
9. Appointment and designation forms as per paragraphs 4.3.1 and 4.3.2 above.
10. The following registers:
   - Accident and/or incident register (Annexure 1 of the General Administrative Regulations);
   - Occupational health and safety representatives inspection register;
   - Construction vehicles and mobile plant inspections by controller;
   - Daily inspections of vehicles, plant and other equipment by the operator, driver and/or user;
   - Designer’s inspections and structures record;
   - Inspection and maintenance of explosive powered tools;
   - Inspection of electrical installations (including inspection of portable electrical tools, electrical equipment and other electrical appliances);
   - Fall protection inspections;
   - First-aid box content;
   - Record of first-aid treatment;
   - Fire equipment inspections and maintenance;
   - Record of hazardous chemical substances kept and used on site;
   - Ladder inspections;
   - Machine safety inspections (including machine guards, lock-outs etcetera);
   - Inspection registers and logbooks for lifting machines and –tackle (including daily inspections by drivers/operators);
   - Inspections of scaffolding;
   - Inspections of stacking and storage;
   - Inspections of structures;
   - Pressure equipment inspections; and
   - Inspections of welding equipment.
   - Wetting and dust control register
   - Inspections register for adit or shaft
   - Excavation registers

11. All other applicable records.

The Client will conduct an evaluation of the principal contractor’s occupational health and safety file from time to time.

4.7 Occupational health and safety goals and objectives and arrangements for monitoring and review of occupational health and safety performance

The principal contractor is required to maintain a casualty incident frequency rate (CIFR) of not more than four and report on this to the Client on a monthly basis.
4.8 Notification of construction work (Construction Regulation 4)

The principal contractor must, where the contract meets the requirements laid down in Construction Regulation 4, at least 7 days before construction work is to be carried out, notify the Department of Labour of the intention to carry out construction work and use the form (Annexure 2 in the Construction Regulations) for this purpose. A copy of the notification must be held on the occupational health and safety file and a copy must also be forwarded to the Client for record purposes.

4.9 Notification of asbestos work (Asbestos Regulation 3)

No employer or self-employed person shall carry out any asbestos work unless he or she has notified the provincial director of the Department of Labour in writing thereof prior to the commencement of such work.

4.10 Medical certificates of fitness (Construction Regulation 7)

As required by Construction Regulation 7(1)(g), the principal contractor must ensure that all employees have a valid medical certificate of fitness specific to the construction work to be performed. These certificates must be issued by an occupational health practitioner in the form of Annexure 3 (i.e. Annexure 3 in the Construction Regulations).

4.11 Training, awareness and competence

The contents and syllabi of all training required by the OHSACT and Regulations must be included in the principal contractor’s occupational health and safety plan.

4.11.1 General induction training

All members of the contractor’s site management as well as all the persons appointed as responsible for occupational health and safety in terms of the Construction and other Regulations will be required to attend a general induction session. The induction training should specifically deal with the minimum asbestos training requirements as detailed in Asbestos Regulation 5.

All employees of the principal and other contractors must be in possession of proof of general induction training.

All subsequent and newly appointed employees must also be subjected to the induction training as soon as possible after the appointment but prior to starting working on site.

4.11.2 Site-specific induction training

The principal contractor will be required to develop a contract work project specific induction training course based on the risk assessments for the contract work and train all employees and other contractors and their employees in this.

All employees of the principal and other contractors must be in possession of proof that they have attended a site-specific occupational health and safety induction training at all times.
4.11.3 Asbestos training

The principal contractor shall, before any employee is exposed or may be exposed to asbestos dust, after consultation with the health and safety committee established for that section of the workplace, ensure that the employee is adequately and comprehensively informed and trained, on both practical aspects and theoretical knowledge, with regard to—

1. the contents and scope of the Asbestos Regulations;
2. the potential sources of exposure, including the recognition of derelict asbestos-containing materials;
3. the potential health risk caused by exposure to asbestos, including the health risks to employees’ families and others, which could result from taking home asbestos contaminated equipment and clothing, and the dramatically increased risk of lung cancer for asbestos workers who smoke;
4. the measures taken by the employer to protect an employee against any risk from exposure;
5. the precautions to be taken by the employee to protect himself or herself against the health risks associated with the exposure, which precautions include the wearing and use of protective clothing and respiratory protective equipment;
6. the necessity, correct use, maintenance and limitations of protective equipment, facilities and engineering control measures provided;
7. the assessment of exposure, the purpose of air sampling, the necessity for medical surveillance and the long term benefits and limitations thereof;
8. the occupational exposure limit and its meaning;
9. the importance of good housekeeping at the workplace and personal hygiene;
10. the safe working procedures regarding the use, handling, processing, and storage of any material containing asbestos, which procedures include the correct use of control measures to limit the spread of asbestos dust outside the work area, and to limit the exposure of workers inside the work area as far as is reasonably practicable;
11. procedures to be followed in the event of an accidental spillage or any other similar emergency situation likely to result in the release of asbestos dust;
12. procedures for reporting and correcting defects likely to result in the release of asbestos dust;
13. safe disposal of asbestos waste; and
14. procedures for record keeping;

Refresher training shall be given at least every year or at more frequent intervals that may be recommended by the health and safety committee.

Training shall be given more frequently than once a year if—

1. work methods change;
2. the type of work carried out changes significantly; or
3. the type of equipment used to control exposure changes.
4.11.4 Working under or close to overhead power lines training

The principal contractor shall, before any employee is allowed to work close-to or under overhead power lines ensure that the employee is adequately and comprehensively informed and trained, on –

1. The risks associated with such work;
2. Steps to be taken to prevent accidental contact with the overhead power lines; and
3. Steps to be taken in case of accidental contact with the overhead power lines.

4.11.5 Other training

1. All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid proof of training and where applicable licenses or proof of competency.
2. The driver of any vehicle utilised for the transportation of asbestos must be in possession of a valid PrDP-D (i.e. Professional driving permit dangerous goods).
3. All employees in jobs requiring training in terms of the OHSACT and Regulations must be in possession of valid proof of training.
4. Occupational health and safety training requirements [as required by the Construction Regulations and as indicated by the occupational health and safety specification and the risk assessment(s)] i.e. -
   a. General induction (Section 8 of the OHSACT);
   b. Site and job specific induction, including visitors (Sections 8 and 9 of the OHSACT);
   c. Site and project manager;
   d. Construction supervisor;
   e. Occupational health and safety representatives [Section 18 (3) of the OHSACT];
   f. Training of the appointees indicated in paragraphs 4.3.1 and 4.3.2;
   g. Operators and drivers of construction vehicles and mobile plant (Construction Regulation 21);
   h. Basic fire prevention and protection (Environmental Regulations 9 and Construction Regulation 27);
   i. Basic first-aid (General Safety Regulations 3);
   j. First-aiders should specifically be trained in treating snakes and reptiles bites as well as scorpion and bee stings
   k. Storekeeping methods and safe stacking (Construction Regulation 26); and
   l. Emergency, security and fire coordinator.
5. All employees that have to enter an adit or shaft must be formally trained and confirmed competent before being required to enter such areas. The training should focus on among others –
   a. Safety precautions to be observed prior to entering an adit of shaft;
   b. Procedures to be taken should an employee need to be rescued from an adit or shaft;
   c. Use of a gas monitor and interpreting the readings;
   d. Use of a safety harness and life line;
   e. Use of a self-rescuers (where applicable);
   f. Applicable registers to be kept and maintained; and
g. Procedure to be taken when work in the adit or shaft has been completed at the end of each shift and prior to leaving the adit or shaft. Continuous on site training and support by supervisory staff should be undertaken and enforced where required.

4.11.6 Awareness and promotion

The principal contractor is required to have a promotion and awareness programme in place to create an occupational health and safety culture within employees as well as sub-contractors. The following are some of the methods that may be used:

- Toolbox talks
- Posters
- Videos
- Competitions
- Suggestion schemes
- Participative activities such as employee “occupational health and safety circles”.

4.11.7 Notices and signs

The following notices and signs are, where applicable, compulsory on the construction site as well as the contractors’ yards:

<table>
<thead>
<tr>
<th>Area and/or activity where notice or sign is required</th>
<th>Notice or sign required in terms of</th>
</tr>
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<tbody>
<tr>
<td>Display of notices and signs</td>
<td>General Safety Regulation 2B and SABS Code 1186</td>
</tr>
<tr>
<td>Entry</td>
<td>General Safety Regulation 2C(2)</td>
</tr>
<tr>
<td>First-aid</td>
<td>General Safety Regulation 3(6)</td>
</tr>
<tr>
<td>Toilets and change rooms</td>
<td>Facilities Regulation 2 (5) 4(2)(f)</td>
</tr>
<tr>
<td>Storage of flammable materials</td>
<td>General Safety Regulation 4(8)(a)(i) and (ii) [10(e) only applicable to contractor’s yards]</td>
</tr>
<tr>
<td>Grinding wheels</td>
<td>Driven Machinery Regulation 8(1)(7)</td>
</tr>
<tr>
<td>Machinery</td>
<td>General Machinery Regulation 9 Schedule D)</td>
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</tbody>
</table>
4.11.8 Competence

The principal contractor shall ensure that his and other contractors’ employees appointed are competent and that all training required to undertake the work safely and without risk to health of their or other persons, has been successfully completed before work commences.

The principal contractor shall ensure that follow-up and refresher training is conducted on a regular basis as well as the contract work progresses and the work situation or requirements changes.

Records of all training must be kept on the occupational health and safety file for auditing purposes.

4.12 Consultation, communication and liaison

The following arrangements will apply:

4.12.1 Occupational health and safety liaison between the Client, the principal contractor, the other contractors, the designer and other concerned parties will be through the occupational health and safety committee. In the absence of a health and safety committee, the Client and principal contractor will agree on an alternative communication forum to be implemented.

4.12.2 In addition to the above, communication may be directly to the Client or his appointed Agent, verbally (followed up in writing within 14 calendar days) or in writing, as and when the need arises.

4.12.3 Consultation with the workforce on occupational health and safety matters will be through their supervisors, occupational health and safety representatives, the occupational health and safety committee and their elected trade union representatives, if any.

<table>
<thead>
<tr>
<th>Area and/or activity where notice or sign is required</th>
<th>Notice or sign required in terms of</th>
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</thead>
<tbody>
<tr>
<td>Explosive actuated fastening devises</td>
<td>Construction Regulation 19(2)(f)</td>
</tr>
<tr>
<td>Prohibition on smoking and eating or drinking at the workplaces where high risk substances [FRS (1)] are stored or handled</td>
<td>Facilities Regulation 6(b)</td>
</tr>
<tr>
<td>Non-potable water</td>
<td>Facilities Regulation 7(B)</td>
</tr>
<tr>
<td>Asbestos warning signs</td>
<td>General Safety Regulation 2B</td>
</tr>
<tr>
<td>Respiratory zone</td>
<td>Asbestos Regulation 10</td>
</tr>
<tr>
<td>Working close to under overhead lines</td>
<td>SABS Code 1186</td>
</tr>
</tbody>
</table>
4.12.4 The principal contractor will be responsible for the dissemination of all relevant occupational health and safety information to the other contractors, for example design changes agreed with the Client and the designer, instructions by the Client and/or his Agent, exchange of information between contractors, the reporting of hazardous and/or dangerous conditions and/or situations etcetera.

4.12.5 The principal contractor will be required to do site safety walks with the Client and/or his Agent on a basis to be determined and agreed between the parties.

4.12.6 The principle and other contractors will be required to conduct toolbox talks with their employees on at least a weekly basis and records of these including the topics discussed must be kept on the occupational health and safety file. Employees must acknowledge the receipt of toolbox talks which record must, likewise be kept on the occupational health and safety file.

4.12.7 The principal contractor’s most senior manager on site will be required to attend all the Client’s occupational health and safety meetings.

4.12.8 The Client or his Agent and the principal contractor will agree on the dates, times and venues of the occupational health and safety meetings.

4.13 Checking, reporting and corrective actions

4.13.1 Monthly compliance assessment by Client [Construction Regulation 5(1)(0)]

The Client will be conducting a periodic assessment to comply with Construction Regulation 5(1)(0) and to confirm that the principal contractor has implemented and is maintaining the agreed and approved occupational health and safety plan.

4.13.2 Other assessments and inspections by the Client

The Client reserves the right to conduct other ad-hoc assessments and inspections as deemed necessary. This could include among others site safety walks.

4.13.3 Conducting an assessment

A representative of the principal contractor must accompany the Client on all assessments and inspections and may conduct his/her own inspection at the same time. Each party will, however, take responsibility for the results of his/her own assessment and/or inspection.

4.13.4 Contractor’s assessments and inspections

The principal contractor is to conduct his own internal assessments and inspections to verify compliance with his own occupational health and safety plan and management system as well as the requirements of this specification and the compliance of other contractors under his/her control.
4.13.5 Inspections by occupational health and safety representatives and other appointees

Occupational health and safety representatives must conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees must conduct inspections and report thereon as specified in their appointments for example, vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

4.13.6 Recording and review of inspection results

All the results of the abovementioned inspections must be in writing, reviewed at occupational health and safety committee meetings, endorsed by the chairperson of the meeting and placed on the occupational health and safety file.

4.13.7 Reporting of inspection results

The principal contractor is required to provide the Client with a monthly report.

4.14 Incident reporting and investigation

4.14.1 Reporting of accidents and incidents (Section 24 and General Administrative Regulation 8 of the OHSACT)

The principal contractor must report all incidents where an employee is injured on duty to the extent that he/she:

- dies
- becomes unconscious
- loses a limb or part of a limb
- is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

or where -

- a major incident occurred
- the health or safety of any person was endangered
- where a dangerous substance was spilled
- the uncontrolled release of any substance under pressure took place
- machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- machinery ran out of control

to the Client within two calendar days and to the Provincial Director of the Department of Labour within seven calendar days from date of incident (Section 24 of the OHSACT and General Administrative Regulation 8), except that, where a person has died, has become unconscious for any reason or has lost a limb or part of a limb or may die or suffer a permanent physical defect, the incident must be reported to both the Client and the Provincial Director of the Department of Labour forthwith by telephone, telefax or e-mail. All other reports should still be completed and provided as required.
The principal contractor is required to provide the Client with copies of all statutory reports required in terms of the OHSACT within seven calendar days of the incident occurring.

The principal contractor is required to provide the Client with copies of all internal and external accident/incident investigation reports, including the reports contemplated in 4.11.2 (3) and (4) below, within seven calendar days of the incident occurring.

4.14.2 Accident and incident investigation (General Administrative Regulation 9)

1. The principal contractor is responsible for the investigation of all accidents and/or incidents where employees and non-employees were injured to the extent that he, she and/or they had to be referred for medical treatment by a doctor, hospital or clinic.

2. The results of the investigation to be entered into the accident and/or incident register.

3. The principal contractor is responsible for the investigation of all minor and non-injury incidents as described in Section 24 (1) (b) and (c) of the OHSACT and keeping a record of the results of such investigations including the steps taken to prevent similar accidents/incidents in future.

4. The principal contractor is responsible for the investigation of all road traffic accidents, related to the construction activities, and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

5. The Client reserves the right to hold its own investigation into an incident or call for an independent external investigation.

4.15 Medical surveillance

The following is applicable to the rehabilitation of asbestos mines and the contractor must adhere to the following requirements:

1. The principal contractor, as an employer, must ensure that every employee undergoes a pre-employment medical surveillance examination by a qualified medical practitioner according to the specified standards for the medical examinations, prior to accessing the construction terrain. The medical surveillance will include chest and respiratory tract x-rays, pulmonary function testing and an appropriate physical examination.

2. The principal contractor must provide the names and ID numbers of all employees to be employed on the project within seven days after receiving the preliminary letter of acceptance.

3. No construction work on the project will commence unless all employees have been declared fit for the work they intend to do by a suitably qualified medical practitioner.

4. The same procedure will be followed for the post-employment medical examinations after completion of the project. Exit medical examinations must be done before permission will be granted for the de-establishment of the site.
5. The Client will withhold the guarantee that was provided for the due completion of the works or two and a half percent (2½%) retention until the interpretation of the post-employment medical examinations have been provided.

6. The principal contractor must inform, in writing, any subcontractors and all employees that post-employment medical examinations are required according to the MHSACT. The principal contractor must further indicate that if subcontractors remove employees from the terrain or employees leave the service of the principal contractor without giving the principal contractor the opportunity to have the employees examined, they thereby indemnify the principal contractor and the Client from any obligations regarding related occupational diseases and bear the risk for such actions. A copy of this documentation must be provided to the Client before the work commences.

7. The cost of all medical surveillance deemed necessary by the contracting engineer in order to ensure compliance with this project and the applicable legislation is for the account of the principal contractor.

4.16 Offences and penalties

Any person who contravenes or fails to comply with any provision of Asbestos Regulations 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13(2), 14, 15, 16, 17,18, 19, 20, 21 or 22 shall be guilty of an offence and liable on conviction to a fine not exceeding R1 000 or imprisonment for a period not exceeding 12 months and, in the case of a continuous offence, to an additional fine of R200 for each day on which the offence continues or to additional imprisonment of one day for each day on which the offence continues: Provided that the period of such additional imprisonment shall in no case exceed 90 days.

5. Operational control

5.1 Emergency preparedness, contingency planning and response

5.1.1 The Contractor must appoint a competent person to act as emergency controller and/or coordinator.

5.1.2 The principal contractor must conduct an emergency identification exercise and establish what emergencies could possibly develop. He/she must then develop detailed contingency plans and emergency procedures, taking into account any emergency plan that the Client may have in place.

5.1.3 The principal contractor and the other contractors must hold regular practice drills of contingency plans and emergency procedures to test them and familiarise employees with them.

5.2 First-aid (General Safety Regulation 3)

5.2.1 The principal contractor must provide first-aid equipment (including a stretcher) and have qualified first-aider(s) on site as required by General Safety Regulation 3 of the OHSACT.

5.2.2 The contingency plan of the principal contractor must include arrangements for the speedily and timeously transportation of injured and/or ill person(s) to a medical facility or getting emergency medical support to person(s) who may require it.
5.2.3 The principal contractor must have firm arrangements with his contractors in place regarding the responsibility of these contractor’s first-aid arrangements as well as treatment of injured and/or ill employees.

5.3 Security

5.3.1 The principal contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must, amongst other, include the rule that non-employees will not be allowed on site unaccompanied.

5.3.2 The principal contractor must develop a set of project applicable security rules and procedures and maintain these throughout the construction period.

5.4 Accommodation of traffic

5.4.1 Where construction work is undertaken in, next to or close to a public road, the use of appropriate as well as a sufficient number of road signs is of paramount importance to protect employees against traffic and to warn all road users of the presence of construction work as well as construction employees/risks/vehicles.

5.4.2 The principal contractor shall ensure that appropriate as well as a sufficient number of road signs are posted to protect employees against traffic and to warn all road users of the presence of construction work as well as construction employees/vehicles. These signs shall be repeated and utilised, where appropriate, as actual construction work is approached.

5.4.3 The following signage is required as a minimum where construction work is undertaken in, next to or close to a public road:

a. “Construction work ahead” sign at least 45 meters before the start of the construction work;

b. “Lane narrows” sign 30 meters before the start of the construction work;

c. “Keep right/left” sign 15 meters before the start of the construction work and again where the tapering begins; and

d. Delineators and cones every 5 meters for the entire stretch of construction work.

5.4.4 Where construction work includes excavations in or next to a public road, warning lights or visible boundary indicators should be provided after dark or when visibility is poor.

5.4.5 The maintenance of all signage and especially those that is suitable after dark should be duly managed.

5.4.6 Where appropriate duly trained flag persons should be deployed a good distance ahead of areas where traffic is deviated or lanes closed off. These flag persons should be managed assertively to ensure that they add optimal value and should they not do so they should be retrained and if necessary replaced.
5.4.7 The community liaison officer (CLO) should also be sensitised on the optimal management of traffic and the risks involved and then be instructed to increase community awareness through talking to all stakeholders including the distribution of suitable information brochures.

5.5 Fall protection [Working in elevated positions (Construction Regulation 10)]

5.5.1 A pre-emptive risk assessment will be required for any work to be carried out from a fall risk position and will be classified as “work in elevated positions”.

5.5.2 As far as is practicable, any person working in an elevated position will work from a stable platform, ladder or other device that is at least as safe as if he or she is working at ground level and whilst working in this position be wearing suitable fall arrest equipment to prevent the person falling from the platform, ladder or other device utilised. This fall arrest equipment will be, as far as is possible, secured to a point away from the edge over which the person might fall and the lanyard must be of such a length and strength that the person will not be able to move over the edge.

5.5.3 Where the requirement in paragraph 5.5.2 is not practicable, the person will be provided with a full body harness that will be worn and attached above the wearer’s head at all times and the lanyard must be fitted with a shock absorbing device or the person must be attached to a fall arrest system that is approved by the Client.

5.5.4 Where the requirements in paragraph 5.5.3 are not practicable, a suitable catch net, which must be able to sustain the weight of at least the average person working in the elevated position, must be erected.

5.5.5 Employees working in elevated positions must be trained to do this safely and without risk to their or other person’s health and safety.

5.5.7 Updated records confirming the physical and psychological fitness of employees working at elevated positions should be kept on the health and safety file at all times.

5.6 Structures (Construction Regulation 11)

The principal contractor must ensure that:

5.6.1 Only skilled employees are allowed to erect structures and that the skills of these employees are being verified at regular intervals.

5.6.2 Steps are taken to ensure that no structure becomes unstable or collapses due to construction work being performed on it or in the vicinity of it.

5.6.3 No structure is overloaded to the extent where it becomes unsafe.

5.6.4 He or she has received from the designer the following information:
  • Information on known or anticipated hazards relating to the construction work and the relevant information required for the safe execution of the construction work.
  • A geo-scientific report (where applicable).
  • The loading the structure is designed to bear.
• The methods and sequence of the construction process.
• Any other applicable information.

5.6.5 All drawings pertaining to the design are on site, utilised and available for inspection.

5.7 Lifting equipment (Construction Regulation 22)

Lifting equipment must be designed and constructed in accordance with the manufactures/designers specifications as well as generally accepted technical standards and operated, used, inspected and maintained in accordance with the manufactures requirements as well as that of the Driven Machinery Regulation 18 of the OHSACT:

The Driven Machinery Regulation requires that:

a. Lifting equipment to be clearly and conspicuously marked with the maximum mass load (MML) that it is designed to carry safely. When the MML varies with the conditions of use, the table of maximum loads should be used by the driver/operator;
b. Each winch on a lifting machine must at all time have, at least, three full turns of rope on the drum when the winch has been run to its lowest limit;
c. Lifting equipment be fitted with a brake or other applicable device capable of holding the MML. This brake or device must automatically prevent the downward movement of the load when the lifting power is interrupted;
d. Lifting equipment fitted with a load limiting device that automatically arrest the lift when the load reaches its highest safe position or when the mass of the load is greater than the MML;
e. Every chain or rope on a lifting machine that forms an integral part of the machine must have a factor of safety as prescribed by the manufacturer of the machine and where no standard is available the factor of safety must be:
   • chains – 4 (four)
   • steel wire ropes - 5 (five)
   • fibre ropes- 10 (ten)
f. Every hook or load attaching device must be designed as such or fitted with a device that will prevent the load from slipping off or disconnecting;
g. Every lifting machine must be inspected and load tested by a competent person every time it has been dismantled and re-erected and every 12 months after that. The load test must be in accordance with the manufacturers prescription or to 110% of the MML in addition all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine must be inspected every 6 months by a competent person;
h. All maintenance, repairs, alterations and inspection results must be recorded in a log book and each lifting machine must have its own log book; and
i. No person may be lifted by a lifting machine not designed for lifting persons unless in a cradle approved by an inspector of the Department of Labour.

5.8 Lifting tackle

The following requirements will apply to lifting tackle:

a. Manufactured of sound material, well constructed and free from latent defects;
b. Clearly and conspicuously marked with an identity number;
c. Maximum mass load factor of safety:
   • Natural fibre ropes - 10(ten)
   • Man-made fibre ropes and woven webbing - 06(six)
- Steel wire ropes – single rope - 06(six)
- Steel wire ropes – combination slings - 08(eight)
- Mild Steel chains - 05(five)
- High tensile/alloy steel chains - 04(four)

d. Steel wire ropes must be discarded (not used any further for lifting purposes) when wear and corrosion is evident and must be examined by a competent person every three months for this purpose and the results recorded in a designated log book.

5.9 Construction vehicle and mobile plant operators

The following requirements will apply to construction vehicle and mobile plant operators:

a. Only certified and/or competent employees may be allowed to operate any construction vehicle and mobile plant.

b. Every lifting machine operator must be trained specifically for the type of lifting machine that he or she is operating.

c. Operators of jib cranes with a maximum mass load of 500 kg or more must be in possession of a certificate of training issued by an accredited (by the Department of Labour) training provider.

d. Only employees duly authorised to do so may operate any construction vehicle and mobile plant.

e. Only employees physically and psychologically fit, i.e. in possession of a medical certificate of fitness, may be allowed to operate any construction vehicle and mobile plant.

f. Operators of construction vehicle and mobile plant carrying asbestos or asbestos containing material that has the potential of causing environmental pollution or affecting human health need to be given instructions in writing on the procedures to be followed in the event of an accidental spillage or any other similar emergency situation likely to result in the release of asbestos dust.

5.10 Construction vehicles and mobile plant (Construction Regulation 23 and Asbestos Regulations)

Construction vehicles and mobile plant will initially during the competency evaluation process be inspected by the Client prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment will be required to comply with this specification as well as the OHSACT and Regulations.

Construction vehicles and mobile plant:

a. must be of acceptable design and construction;
b. must be maintained in good working order;
c. must be in a roadworthy condition;
d. must have brake systems that is in a proper working condition and may be tested by the Clients supervising engineer at random;
e. must have chocks (brake blocks) that will be placed behind wheels when stationary;
f. must have steering mechanisms that is in proper working condition.
g. must be used in accordance with their design and intention for which they were designed;
h. must be operated and/or driven by trained, competent and authorised operators/drivers. No unauthorised persons to be allowed to drive construction vehicles and mobile plant;

i. must be provided with safe and suitable means of access;

j. must be fitted with adequate signalling devices to make movement safe including reversing;

k. must be fitted with yellow or other rotating (strobe) lights;

l. must be provided with roll-over protection;

m. must be inspected daily before start-up by the driver, operator and/or user and the findings recorded in a register/log book and any defects addressed as matter of urgency;

n. must be fitted with two head and two tail lights that are in good working condition whilst operating under poor visibility conditions;

o. must be fitted with brake lights and reverse lights that are in proper working condition, and

p. used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported; and

r. in which asbestos is transported must be clearly identified, classified and packed in accordance with SABS 0228 and SABS 0229

Construction vehicles and mobile plant which have been in contact with asbestos waste should be cleaned and decontaminated after use, in such a way that such vehicles and/or plant do not cause a hazard inside or outside the construction site.

Smaller vehicles, for example, pick-ups must have an approved vertical whip attached to the vehicle

No loose tools, material etcetera is allowed in the driver and/or operators compartment/cabin nor in the compartment in which any other persons are transported.

No person may ride on construction vehicles and mobile plant except for in a safe place designed and provided for this purpose.

The construction site must be organised to facilitate the movement of construction vehicles and mobile plant in such a manner that pedestrians and other vehicles are not endangered. Traffic routes to be suitable, sufficient in number and adequately demarcated.

Construction vehicles and mobile plant left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights, reflectors or adequate barricades to prevent moving traffic from a sudden emergency, or to come into contact with the parked construction vehicles and mobile plant.

In addition construction vehicles and mobile plant left unattended after hours must be parked with all buckets, booms etc. full lowered, the emergency brakes engaged and, where necessary, the wheels chocked, the transmission in neutral and the motor switched off and the ignition key removed and stored safely.

All construction vehicles and mobile plant daily inspection records must be kept in the occupational health and safety file.

5.11 Electrical installations (Construction Regulation 24)

The installation of temporary electricity for construction use shall be in accordance with Construction Regulation 24 and the Electrical Installation Regulations.
The principal contractor must ensure that:

a. Existing services are to be located and clearly marked before construction commences and during the progress thereof;
b. Electrical installations and machinery are sufficiently robust to withstand normal working conditions on site;
c. Temporary electrical installations must be inspected at least once per week by a competent person and a record of the inspections kept on the occupational health and safety file;
d. Electrical machinery used on a construction site must be inspected daily before start-up by the competent driver/operator or any other competent person and a record of the inspections kept on the occupational health and safety file; and
e. A competent person appointed in writing must control all temporary electrical installations.

5.12 Electrical and mechanical lockout

An electrical and mechanical lockout procedure must be developed by the principal contractor and submitted to the Client for approval before construction commences. All contractors on site must be informed of and adhere to this lockout procedure.

5.13 Use and storage of flammables (Construction Regulation 25)

The principal contractor must ensure that:

a. No person is required or permitted to work in a place where there is the danger of fire or an explosion due to flammable vapours being present unless adequate precautions is taken;
b. No flammables are used or applied, for example in spray painting, unless in a room or cabinet or other enclosure specially designed and constructed for the purpose unless there is no danger of fire or explosion due to the application of adequate ventilation;
c. The workplace is effectively ventilated. Where this cannot be achieved:
   • Employees must wear suitable respiratory equipment
   • No smoking or other sources of ignition is allowed in the area
   • The area is conspicuously demarcated as “flammable”
d. Flammables stored on a construction site are stored in a well-ventilated, reasonably fire-resistant container, cage or room that is kept locked with consistent access control measures in place and sufficient fire fighting equipment installed and fire prevention methods practiced for example proper housekeeping;
e. Only one day’s quantity of flammables are to be kept in the workplace; and
f. Containers (including empty containers) to be kept closed to prevent fumes/vapours from escaping and accumulating in low lying areas.

5.14 Housekeeping (Construction Regulation 27)

The principal contractor must ensure that:

a. Housekeeping is continuously implemented and maintained;
b. Materials and equipment is properly stored;
c. Scrap, waste and debris is removed off site regularly;
d. Materials placed for use are placed safely and not allowed to accumulate or cause obstruction to the free-flow of pedestrians and vehicular traffic;
e. Where practicable, construction sites are fenced off to prevent entry of unauthorised persons;
f. An unimpeded work space is maintained for every employee;
g. Every workplace is kept clean, orderly and free of tools and the likes that are not required for the work being done;
h. As far as is practicable, every floor, walkway, stair, passage and gangway is kept in good state of repair, skid-free and free of obstruction, waste and materials; and
i. The walls and roof of every indoor workplace be sound and leak-free.

5.15 Stacking and storage (Construction Regulation 28)

The principal contractor must ensure that:

a. A competent person is appointed in writing to supervise all stacking and storage on a construction site;
b. Adequate storage areas are provided and demarcated;
c. The storage areas are kept neat and under control;
d. The base of any stack is level and capable of sustaining the weight exerted on it by the stack;
e. The items in the lower layers can support the weight exerted by the top layers;
f. Cartons and other containers that may become unstable due to wet conditions are kept dry;
g. Pallets and containers are in good condition and no material is allowed to spill out;
h. The height of any stack does not exceed 3 times the base unless stepped back at least half the depth of a single container at least every fifth tier or the approval of an inspector of the Department of Labour has been obtained to build the stacks higher with the aid of a machine. (The operator of the machine must be protected against items falling from overhead or off the stack and no items may overhang);
i. The articles that make up a single tier are consistently of the same size, shape and mass;
j. Structures for supporting stacks are structurally sound and able to support the mass of the stack;
k. No articles are removed from the bottom of the stack first but from the top tier first;
l. Anybody climbing onto a stack can and does do it safely and that the stack is sufficiently stable to support him or her;
m. Stacks that are in danger of collapsing are broken down and restacked;
n. Stability of stacks are not threatened by vehicles or other moving plant and machinery;
o. Stacks are built in a header and stretcher fashion and that corners are securely bonded; and
p. Persons climbing onto stacks do not approach unguarded moving machinery or electrical installations.

5.16 Storage of flammable and hazardous chemicals (Hazardous Chemical Substances Regulations)

See paragraphs 5.13 above and 5.22 below.
5.17 Fire prevention and protection

The principal contractor must ensure that:

a. The risk of fire is avoided;
b. Sufficient and suitable storage of flammables is provided;
c. All employees are instructed in the use of the fire fighting equipment and know how to attempt to extinguish a fire;
d. A sufficient number of employees are appointed and trained to act as an emergency team to deal with fires and other emergencies;
e. Employees are informed regarding emergency evacuation procedures and escape routes;
f. Emergency escape routes are kept clear at all times and clearly marked;
g. Evacuation assembly points are demarcated and made known to employees;
h. Evacuation is regularly practiced to ensure that all persons are evacuated timeously and;
i. Roll call is held after evacuation to account for all employees and to ensure that no-one including visitors and disabled persons have been left behind; and
j. A clearly audible, to all persons on site, siren or alarm is fitted and regularly tested.

5.18 Eating, changing, washing and toilet facilities (Construction Regulation 30 and Asbestos Regulation 17 and 22)

5.18.1 Toilets

a. The principal contractor must provide ablution facilities within 200 metres from the working area. The minimum number of toilets for mixed use (or women only) will be as follows:

<table>
<thead>
<tr>
<th>Number of people at work</th>
<th>Number of toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>1</td>
</tr>
<tr>
<td>6-25</td>
<td>2</td>
</tr>
<tr>
<td>26-50</td>
<td>3</td>
</tr>
<tr>
<td>51-75</td>
<td>4</td>
</tr>
<tr>
<td>76-100</td>
<td>5</td>
</tr>
</tbody>
</table>

b. Chemical toilets are allowed instead of the water borne sewerage type.

5.18.2 Washing facilities and change rooms

Adequate washing facilities which are readily accessible and located in an area where the facilities will not become contaminated, in order to enable the employees to meet a standard of personal hygiene consistent with the adequate control of exposure, and to avoid the spread of asbestos dust.

Two separate lockers labelled “protective clothing” and “personal clothing” respectively have to be provided for each employee. The principal contractor shall ensure that the clothing is kept separately in the lockers concerned.

Separate change rooms for each sex labelled “clean change room” and “dirty change room” have to be provided with suitable barrier and bathing facilities between to prevent the contamination of personal clothes with asbestos dust.
5.18.4 Eating facility

No employee may be allowed to smoke, eat, drink or keep food or beverages in an area not specifically designated for it or require or permit any other person to smoke, eat, drink or keep food or beverages in such area.

An appropriate and designated eating facility must therefore be provided.

5.18.5 Living accommodation

Where the site is in a remote location and transport to home is not readily available, reasonable and suitable living accommodation must be provided after obtaining of the necessary permission from authorities and adhering to requirements such as Bylaws of the local municipality.

5.19 Personal and other protective equipment (Sections 8, 15 and 23 of the OHSACT)

The principal contractor is required to proactively identify the hazards in the workplace and deal with them on an ongoing basis. He/she must either remove them or, where impracticable take steps to protect employees and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment should, however, be the last resort and there should always first be an attempt to apply re-engineering and other solutions to mitigating hazardous situations before the issuing of personal protective equipment is considered.

Where it is not possible to create an absolutely safe and healthy workplace the principal contractor is required to inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the principal contractor maintain the said equipment, that he/she instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s in a consistent and correct manner.

Employees do not have the right to refuse to use and/or wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other valid reason, the employee cannot be allowed to continue working under the hazardous condition(s) for which the equipment was prescribed but an alternative solution has to be found that may include relocating the employee.

The principal contractor may **not charge any fee** for protective equipment prescribed by him or her but **may charge for equipment under the following conditions**, following a disciplinary hearing:

- Where the employee requests additional issue in excess of what is prescribed;
- Where the employee has blatantly abused or neglected the equipment leading to early failure; and
- Where the employee has lost the equipment.
5.20 Portable electrical tools and equipment (Electrical Machinery Regulation 9)

Portable electrical tools and equipment includes every unit that takes electrical power from a 15 ampere plug point and is moved around for use in the workplace i.e. drills, saws, grindstones, portable lights, etcetera. In addition electrical appliances such as fridges, hotplates, heaters, etcetera must be inspected regularly but at least on a weekly basis and maintained to the same standards as portable electrical tools and appliances.

The use, inspection and maintenance of portable electrical tools and equipment must be governed by the following:

- Regular inspections by a competent person appointed in writing;
- Inspection results must be recorded in a register;
- Only competent authorised persons are allowed to use portable electrical tools and equipment; and
- The correct protective equipment is worn/used whilst operating portable electrical tools and equipment.

This equipment -

- Must be maintained in good condition at all times to prevent an electrical shock to the user;
- The main source should incorporate an earth leakage protection device or receive power through a double wound transformer or be double insulated and clearly marked as such; and
- All equipment must be fitted with a switch to allow for safe and easy starting and stopping.

5.21 Public health and safety (Section 9 of the OHSACT)

The principal contractor is responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes among others:

a. Non-employees entering the site for whatever reason;
b. The surrounding community; and
c. Passers by the site.

Appropriate signage must be posted to this effect and all employees on site must be instructed to ensure that non-employees are protected at all times.

All non-employees entering the site must receive site applicable induction into the hazards and risks and the control measures for these.

5.22 Hazardous chemical substances

The principal contractor must ensure that:

a. Employees receive the necessary information and training to be able to use, handle and store hazardous chemical substances safely;
b. Employees obey lawful instructions regarding:
   - The wearing and use of personal protective equipment
   - The use, handling and storage of hazardous chemical substances
   - The prevention of the release of hazardous chemical substances
   - The wearing and using of exposure monitoring and measuring equipment
• The cleaning up and disposal of materials containing hazardous chemical substances
• Housekeeping, personal hygiene and the protection of the environment

c. The risk assessments required in terms of Construction Regulation 7 include employee exposure to hazardous chemical substances and that the necessary measures be taken to protect persons from being detrimentally affected by hazardous chemical substances present or used in the workplace;

d. Suppliers provide the necessary information in the form of material safety data sheets regarding hazardous chemical substances required to ensure the safe use, handling and storage of these substances;

e. An up-to-date list is kept on site of hazardous chemical substances stored and used together with the material safety data sheet of the said hazardous chemical substances;

f. Hazardous chemical substances containers be clearly marked as to the contents and main hazardous category e.g. “Flammable” or “Corrosive” and the reference number of the hazardous chemical substances on the list indicated above;

g. Hazardous chemical substances for example asbestos dust is not cleared by using compressed air but should be vacuumed;

h. No person eats or drinks in a hazardous chemical substances workplace; and

i. Hazardous chemical substances waste is disposed of safely in terms of hazardous waste disposal requirements.

5.23 Excavations (Construction Regulation 13)

All excavation work has to comply with the following:

5.23.1 Excavation work must be carried out under the supervision of a competent person with at least two years practical experience in excavation work who has been appointed in writing.

5.23.2 Before excavation work begins the stability of the ground must be evaluated by the excavation supervisor.

5.23.3 Whilst excavation work is being performed, the principal contractor must take suitable and sufficient steps to prevent any person from being buried or trapped by a fall or dislodgement of material.

5.23.4 No person may be required or permitted to work in an excavation that has not been adequately shored or braced.

5.23.5 Where the excavation is in stable material or where the sides of the excavation are sloped back to at least the maximum angle of repose measured relative to the horizontal plane, shoring or bracing may be left out but only after written permission has been obtained from the appointed competent person.

5.23.6 Shoring and bracing must be designed and constructed to safely support the sides of the excavation and prevent it from collapsing.

5.23.7 Where uncertainty exists regarding the stability of the soil the opinion of a competent professional engineer or professional technologist must be obtained, before excavation proceeds, whose opinion will be decisive. The opinion must be in writing and signed by the engineer or technologist as well as the appointed excavation supervisor.
5.23.8 No load or material may be placed near the edge of an excavation if it is likely to cause a collapse of the excavation, unless suitable shoring has been installed to be able to carry the additional load. Best practice requires a one meter clearance so as to reduce the pressure on the side walls as well as risk of material falling onto persons inside the excavation.

5.23.9 Neighbouring/adjoining buildings, structures or roads that may be affected or endangered by the excavation must be suitably protected.

5.23.10 Every excavation must be provided with means of access that must be within 6 metres of any employee within the excavation at any time. Should ladders be utilised for this purpose they should be duly secured.

5.23.11 The location and nature of any existing services such as water, electricity, gas, telecommunication etcetera must be established before any excavation is commenced with and any service that may be affected by the excavation must be protected and made safe for employees working in or near in the excavation.

5.23.12 Every excavation, including the shoring and bracing or any other method to prevent a possible collapse, must be inspected by the appointed competent person as follows:
- Daily before work commences
- After every blasting operation
- After an unexpected collapse of the excavation or part thereof
- After substantial damage to any support
- After rain

5.23.13 The results of any inspections must be recorded in a register kept on site in the health and safety file.

5.23.14 Every excavation accessible to the public or that is adjacent to a public road or thoroughfare or that threatens the safety of persons, must be adequately barricaded or fenced off, on all sides, to at least one meter high and as close to the excavation perimeter as practicable. All such excavations must also be provided with warning lights or visible boundary indicators after dark or when visibility is poor.

5.24 Working over or close to water

Where construction or other support work is undertaken over or in close proximity to water or similar liquids such as wastewater and sludge, the principal contractor shall –

a. Appoint a competent person in writing to supervise, control and inspect any work on or over or in close proximity of the water as well as the construction, installation, and dismantling of caissons and/or cofferdams and/or other support or safety structures;

b. Ensure that written proof of the competence of above appointee is available on site;

c. Ensure that risk assessments are carried out by the competent person before any work is undertaken, mitigation measures documented as well as implemented and thereafter evaluated on a daily basis;
d. Undertake the necessary induction and refresher training;
e. Ensure that measures for the timeous warning of flooding are in place;
f. Ensure that provision is made to prevent employees from falling into the water and the rescuing of employees in danger of drowning;
g. Ensure that where an employee is exposed to the risk of drowning by falling into the water, a lifejacket is provided to and worn by the employee; and
h. Provide applicable personal protective equipment such as safety harnesses etcetera and enforce the utilisation thereof.

5.25 Demolition Work

5.25.1 Demolition work must be carried out under the supervision of a competent person who has been appointed in writing.
5.25.2 A detailed structural engineering survey of the structure to be demolished must be carried out and a method statement on the procedure to be followed in demolishing the structure must be developed by a competent person, before any demolition may be commenced.
5.25.3 As demolishing progresses the structural integrity of the structure must be checked at intervals as determined in the method statement by the appointed competent person in order to prevent any premature or uncontrolled collapse.
5.25.4 Steps must be taken to ensure that where a structure is being demolished:
   a. no floor, roof or any other part of the structure is overloaded with debris, material or equipment that would make it unsafe;
   b. precautions are taken to prevent the collapse of the structure when any frame, support or reinforcement is cut or removed;
   c. shoring or propping is applied where necessary;
   d. no employee is required or allowed to work under unsupported overhanging material; and
   e. the stability of an adjacent building, structure, road or services is maintained at all times.
5.25.5 The location and nature of any existing services such as water, electricity, gas etcetera must be established before any demolition is commenced with and any service that may be affected by the demolition must be protected and made safe for employees and other persons.
5.25.6 Every stairwell in a building being demolished must be adequately illuminated.
5.25.7 Convenient and safe means of access must be provided and maintained at all times.
5.25.8 A catch platform or net must be erected over every entrance to the building or structure being demolished where the likelihood exists of material or debris falling on employees and/or persons entering and leaving and every other area where the likelihood exists of material or debris falling on employees and/or persons must be fenced or barricaded.
5.25.9 No material may be dropped on the outside of the building unless the area into which it is dropped is fenced off or barricaded.
5.25.10 Waste and debris may only be disposed from a height in a chute with the following design:
   a. adequately constructed and rigidly fastened and secured;
   b. inclined greater than 45 degrees and enclosed on all four sides;
   c. fitted with a gate or control mechanism to control the flow of material that may not freefall down the chute;
   d. discharged into a container or a barricaded area; and
   e. demolition equipment may only be used on floors or slabs that are able to support it.
5.25.11 Asbestos related work must be conducted to the requirements of the Asbestos Regulations promulgated under the OHSACT and in particular Asbestos Regulation 21, i.e.:
   a. demolition of asbestos may only be carried out by a registered (with the Department of Labour) asbestos contractor;
   b. all asbestos materials likely to become airborne must be identified; and
   c. a plan of work must be submitted for approval to an Approved Asbestos Inspection Authority (AAIA), whom is approved by the Department of Labour, thirty calendar days prior to commencement of demolishing work unless the plan was drawn up by an AAIA and a signed (by all parties) copy is submitted to the Department of Labour fourteen calendar days before commencement of the demolishing.

5.25.12 During demolition work:
   a. all asbestos containing material must be disposed of safely, i.e. deposited only at a suitable site and proof of such deposits kept;
   b. employees must be issued with appropriate personal protective equipment and the proper use thereof enforced at all times; and
   c. after the demolition has been completed the area/premises must be thoroughly checked to ensure that all asbestos waste has been removed.

5.25.13 No employee is allowed to:
   a. use compressed air or permit the use of compressed air to remove asbestos dust from any surface or employee or person;
   b. smoke, eat, drink or keep food or beverages in an area not specifically designated for this; and
   c. apply asbestos by spraying.

5.25.15 Where demolition work will involve the use of explosives a method statement must be developed by a competent person in accordance with applicable explosives legislation before any explosives are used.

5.26 Bulk mixing plant

The principal contractor shall ensure that:

a. All Bulk mixing plants are operated and supervised by a competent person who has been appointed in writing.

b. A detailed risk assessment is undertaken for the erection, maintenance and operation of any Bulk mixing plant on site. This risk assessment should be kept on the health and safety file and also duly communicated to all employees working with or close to the Bulk mixing plant.

c. The placement and erection of a Bulk mixing plant complies with the requirements set out by the manufacturer and that such plant is erected as designed.

d. All devices to start and stop a Bulk mixing plant are provided and that these devices are:
   • placed in an easily accessible position; and
   • constructed in such a manner as to prevent accidental starting.

e. The machinery and plant selected is suitable for the task and that all dangerous moving parts of a mixer are placed beyond the reach of persons by means of doors, covers or other similar means.

f. No person is permitted to remove or modify any guard or safety equipment relating to a Bulk mixing plant, unless authorised to do so by the competent person duly appointed as Bulk mixing plant supervisor.

g. The top platform is provided with guardrails.
h. Dust abatement methods are implemented and maintained at all time when the Bulk mixing plant is in operation.

i. Operators are utilising appropriate and correct PPE i.e. eye, noise, hands and respiratory.

j. The Bulk mixing plant and surrounding areas are kept clean, dry and free from tripping and slipping hazards.

k. All persons authorised to operate the Bulk mixing plant are fully-
   • aware of all the dangers involved in the operation thereof; and
   • conversant with the precautionary measures to be taken in the interest of health and safety.

l. No person supervising or operating the Bulk mixing plant authorise any other person to operate the plant, unless such person is competent to operate such machinery.

m. A record is kept of any repairs or maintenance to a Bulk mixing plant and that it is readily available on site.

n. The Bulk mixing plant is inspected weekly by a competent person and inspections register kept in the health and safety file.

o. All precautionary measures are adhered to regarding the usage of electrical equipment in explosive atmospheres, when entering a silo.

5.27 Transportation of employees

5.27.1 Any vehicle used to transport employees must have seats firmly secured and adequate for the number of employees to be carried.

5.27.2 Regulation 247 of the National Road Traffic Act, Number 93 of 1996 (NRTA) stipulates that the principal contractor shall not allow employees to be transported in a vehicle unless the portion of the vehicle in which the employees are being conveyed is enclosed to a height of –

   a. at least 350 mm above the surface on which employees are seated; or
   b. at least 900 mm above the surface on which employees are standing,

   in a manner and with a material of sufficient strength to prevent employees from falling from such vehicle when it is in motion.

5.27.3 Regulation 247 of the NRTA also stipulates that the principal contractor shall also not allow any employees to be conveyed in the goods compartment of a vehicle together with any tools or goods, except their personal effects, unless that portion in which the employees are being conveyed is separated by means of a partition, from the portion in which such goods are being conveyed.

5.28 Working with asbestos

The principal contractor shall ensure that:

a. No asbestos work is undertaken unless the principal contractor or any subcontractor designated to do so is duly registered as an asbestos contractor with the Department of Labour.

b. A plan of work is developed and submitted for approval to an Approved Asbestos Inspection Authority (AAIA), whom is approved by the Department of Labour, thirty calendar days prior to commencement of demolishing work unless the plan was drawn up by an AAIA and a signed (by all parties) copy is submitted to the
Department of Labour fourteen calendar days before commencement of the demolishing

Asbestos waste is only disposed of in a waste disposal site specifically designated for this purpose in terms of the Environment Conservation Act, 1989 (Act 73 of 1989), as amended. A certificate from the designated disposal site should be obtained and submitted to the client for evaluation. A copy of this certificate should also be available in the health and safety file at all times.

5.29 Health requirements for working with asbestos

The principal contractor shall adhere to the following health requirements:

a. Every employee working on the terrain must be issued with a dust mask that is suitable and approved for asbestos work as described by SANS 275/2004. (FFP2)

b. Dust masks must be issued daily to remain effective. The employee shall sign for the receipt of the mask when passing through the decontamination unit on entering the site and the record of these daily signature logs will be kept along with the record of the weekly safety meetings. The frequency of the replacement of the masks will be reconsidered depending on the intensity of the dust on the terrain and the type of work being done. Used masks will be disposed of at a point designated for this purpose by the engineer, with due regard for the safe disposal thereof.

c. Every employee must be supplied with a minimum of two pairs of overalls when working on an asbestos site. The overalls must be handled in the following manner:
   - An employee is not allowed to enter the working area without wearing an overall;
   - An employee is not allowed to enter any residential area with an unwashed overall in his possession;
   - Overalls must be exchanged for clean clothes (employee’s clothes) at the end of each work shift; and
   - All employees must leave their overalls and other personal protective equipment (PPE) for safekeeping in a locker supplied on the site.

d. Every employee must shower at the end of a shift before leaving the site to go home.

e. For the purpose of adhering to the abovementioned requirements, a method and mechanism of personal decontamination must be implemented and maintained by the contractor. All the employees of the principal contractor and his subcontractors are compelled to go through the decontamination process so established at the end of each shift. At the end of each shift, dirty clothes and PPE shall be stripped off before the employee enter the decontamination process; the employees go through a shower or other device to physically remove asbestos fibres and put on their clean clothes. At the beginning of a shift, an employee’s clean clothes shall be left in lockers and he/she receives his PPE to go on site. The decontamination process must be designed such that there are clear ‘clean’ and ‘dirty’ zones which are physically separated by the shower or cleaning area. Employees enter and exit the site each day through the decontamination process and no cross-contamination of clean and dirty zones of the facility must be possible.

f. Dirty work clothes must be washed daily and a clean pair of overalls must be available daily for each employee to go to work in.

g. Every employee must wash his hands before taking any food or drink.

h. An employee may not eat or drink near contaminated machines or equipment.
i. The principal contractor must provide clean (potable) drinking water to the employees and prohibit the use of water out of streams or sources of which the quality is unknown.

j. Steps must be taken to reduce asbestos exposure to the lowest level reasonably practicable and to reduce the release of asbestos dust into the environment.

k. Where asbestos exposure is in excess of half the occupational exposure limit (OEL) for asbestos, the principal contractor shall ensure that a measurement programme of the concentration of airborne regulated asbestos fibres to which an employee is exposed is implemented and duly maintained.

5.30 Respirator zone

The principal contractor shall ensure that:

a. any workplace or part of a workplace where the concentration of regulated asbestos fibres in the air is, or may be, such that the exposure of persons in that workplace exceeds the occupational exposure limit (OEL) for asbestos without the wearing of respiratory protective equipment, is zoned as a respirator zone;

b. a respirator zone is clearly demarcated and identified by notice indicating that the relevant area is a respirator zone and that respiratory protective equipment and protective clothing must be worn there;

c. no person enters or remains in a respirator zone unless he or she wears the required respiratory protective equipment and protective clothing; and

d. the reason why the OEL for asbestos is exceeded is identified and action is taken, as soon as is reasonably practicable, to lower the concentration of asbestos in the air by means other than respiratory protective equipment, so that it does not exceed the OEL for asbestos.

5.31 Control of exposure to asbestos of persons other than employees

The principal contractor shall ensure that the release of asbestos dust into any environment or water system complies with the provisions of the Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965), the Environment Conservation Act, 1989 (Act No. 73 of 1989), the National Water Act, 1998 (Act No. 36 of 1998), and the National Environmental Management Act, 1998 (Act No. 107 of 1998).

In respect of asbestos dust which may be released from a workplace into any environment or water system which may affect the health of persons other than persons at his or her workplace, the principal contractor shall ensure:

a. with regard to airborne emissions -
   • that all work performed with asbestos be controlled as far as is reasonably practicable; and
   • that suitable filtration systems are used to control the release of asbestos dust into the environment to levels as low as is reasonably practicable;

b. with regard to the contamination of water with asbestos -
   • that any water that is contaminated with asbestos as a result of work being performed is passed through a filtration system before being released into any environment or water system; and
   • that a suitable water filtration system is used which will ensure that the asbestos being released or entering into any environment or water system are reduced as far as is reasonably practicable;

c. that contaminated parts of the filtration system, when discarded, are disposed of as asbestos waste; and
d. that appropriate measures are taken to prevent the release of asbestos dust into the environment arising from the transport of asbestos.

5.32 Working in adits or old shafts

The principal contractor shall ensure that the following requirements are duly considered and adhere to:

5.32.1 Stability of adit or shaft

Before any work is undertaken in or around an adit or shaft, the stability of such adit or shaft must be evaluated and confirmed by a competent person (i.e. the person in charge of the activities) with at least two years practical experience and who has been appointed in writing.

Whilst work is being performed in or around an adit or shaft, the principal contractor must take suitable and sufficient steps to prevent any person from being buried or trapped by a fall or dislodgement of material.

No person may be required or permitted to work in or around an adit or shaft that has not been confirmed as being safe, i.e. adequately shored or braced. Where required additional shoring and bracing must be designed and constructed to safely support the sides of the adit or shaft and prevent it from collapsing.

Where uncertainty exists regarding the stability of an adit or shaft the opinion of a competent professional engineer or professional technologist must be obtained, before work is allowed in or around such adit or shaft, whose opinion will be decisive. The opinion must be in writing and signed by the engineer or technologist as well as the appointed excavation supervisor.

Every adit or shaft, including the shoring and bracing or any other method to prevent a possible collapse, must be inspected by the appointed competent person as follows:

- Daily before work commences
- After an unexpected collapse of the adit or shaft or part thereof
- After substantial damage to any support
- After rain

The results of any inspections must be recorded in a register kept on site in the health and safety file.

5.32.2 Ventilation

The entrance to the adit or shaft should be opened be allowed to ventilate for at least 15 minutes before entering.

A gas monitor must be utilised to test the presence of any toxic/flammable gas. If any gas is detected, the adit or shaft must be force ventilated by means of a blower for at least 15 minutes where after the air must be tested again. Under no circumstances may any adit or shaft be entered while there is a toxic/flammable gas present.
After the undertaking of the necessary work, the person in charge of the activities must confirm that all the employees are accounted for and ensure that the adit or shaft are properly closed.

5.32.3 Entering an adit or shaft

When entering an adit or shaft, the person entering must wear a safety harness, fully operational gas detector as well as a self-rescuer. A lifeline must be attached to the safety harness and a person on the outside must be in continuous contact with the person in the adit or shaft. At least one person on the surface must be trained in basic first-aid (level 1) with proof of such training as well as a fully equipped first aid box available on site.

No person shall remain within an adit or shaft for a period of more than one hour at a time. A minimum of 5 minute rest periods on the outside must be taken after this period before re-entering.

Should the alarm sound on the gas monitor, all employees must exit the adit or shaft and the immediate area must also be evacuated immediately. The area must be properly ventilated and re-tested before re-entering. Professional support should be called for if necessary.

Employees must be provided with flameproof lighting when entering an adit or shaft with the possibility of flammable gases. No naked lights, smoking or unprotected electrical apparatus which may cause sparks, shall be permitted in any adit or shaft or in its vicinity.

5.32.4 General

All employees working in adit or shaft must be issued with fully functioning gas monitoring equipment and safety harnesses as well as self-rescuers where applicable. All these employees must be trained (including refresher training on a regular and continuous basis) in the use thereof.

5.32.5 Safety equipment

All teams must be issued with fully functional gas monitoring equipment and safety harnesses and self-rescuers where applicable. All employees must be trained (including refresher training on a regular and continuous basis) in the use thereof.

5.32.6 General records

The following records shall be implemented and maintained by the principal contractor:

a. Adit or shaft entry permits
b. Adit or shaft entry registers
c. Safety harness and gas monitoring equipment registers
d. Risk assessments
e. Incident registers
5.32.7 Training

a. All employees that have to enter an adit or shaft must be formally trained and confirmed competent before being required to enter such areas (new employees to complete this training and be declared competent before allowed to work in an adit or shaft).
b. Refresher courses must be attended by employees at least once every 2 years or immediately if new methodologies or equipment are adopted or acquired.
c. Continuous on site training and support by supervisory staff should be undertaken and enforced where required.

5.33 Working under or close to overhead power lines

The principal contractor shall ensure that the following requirements are duly considered and adhere to:

5.33.1 Passing underneath overhead lines to access the site

Some of the access roads to the site crosses under the existing power lines. To ensure that vehicles entering and leaving the site do not damage these lines and to reduce the risk of accidental contact the principal contractor should erect ground-level barriers to establish a safety zone to keep employees, other persons as well as construction vehicles and plant away from the wires. These barriers should be constructed out of large steel drums filled with rubble, concrete blocks, wire fence earthed at both ends, or earth banks marked with posts.

a. If steel drums are used they should be highlight by painting them with red and white horizontal stripes.
b. If a wire fence is used, put red and white flags on the fence wire posts.
c. Make sure the barriers can be seen at night, by using white or fluorescent paint or attaching reflective strips.

The principal contractor has to –

a. keep the number of passageways to a minimum;
b. define the route of the passageway using fences and erect goalposts at each end to act as gateways using a rigid, non-conducting material, for example timber or plastic pipe, for the goalposts, highlighted with, for example, red and white stripes. If the passageway is too wide to be spanned by a rigid non-conducting goalpost, the principal contractor has to use tensioned steel wire, earthed at each end, or plastic ropes with bunting attached. These should be positioned further away from the overhead line to prevent them being stretched and the safety clearances being reduced by plant moving towards the line;

c. ensure the surface of the passageway is levelled, firmed-up and well maintained to prevent undue tilting or bouncing of the vehicles and/or equipment;
d. put warning notices at either side of the passageway, on or near the goalposts and on approaches to the crossing giving the crossbar clearance height and instructing drivers to lower booms, tipper bodies etcetera and to keep below this height while crossing;
e. illuminate the notices and crossbar at night, or in poor weather conditions, to make sure they are visible;
f. enforce strict speed control measures; and

g. make sure that the barriers and goalposts are maintained.

5.33.2 Working underneath overhead lines

- a. The principal contractor must confirm with the local authority or if applicable Eskom what the standard is for working close to and under these overhead lines.

- b. A risk assessment should be undertaken taking into account any situations that could lead to danger from the overhead wires, for example, consider whether someone may need to stand on top of a machine or scaffold platform and lift a long item above their head, or if the combined height of a load on a low truck breaches the safe clearance distance. If this type of situation could exist, applicable precautionary measures have to be taken.

- c. Where there is a risk of contact from, for example, the upward movement of cranes or tipper trucks or employees carrying tools and equipment, the principal contractor should carefully assess the risks and precautionary measures.

- d. Vehicles, plant, machinery, equipment, or materials that could reach beyond the safe clearance distance should not be taken near the line.

- e. Under no circumstances may any part of plant or equipment such as ladders, poles and hand tools be able to be utilised within the danger zone or make contact with the lines.

- f. The principal contractor should allow for uncertainty in measuring the distances and for the possibility of unexpected movement of the equipment due, for example, to wind conditions.

- g. Long objects should be carried horizontally and close to the ground and vehicles positioned so that no part can reach into the danger zone, even when fully extended.

- h. Construction vehicles and plant working underneath overhead lines such as cranes, excavators and tele-handlers should be modified by the suppliers with the addition of suitable physical restraints so that they cannot reach beyond the safe clearance distances, measures should be put in place to ensure these restraints are effective and cannot be altered or tampered with.

- i. Operators of high machinery should be instructed not carry out any work on top of the machinery near overhead power lines.

- j. Make sure that employees, including any sub-contractors, understand the risks and are provided with instructions about the risk prevention measures.

- k. Arrange for the work to be directly supervised by a competent person at all times who is familiar with the risks and can make sure that the required safety precautions are observed.

5.33.3 Emergency procedures

If someone or something comes into contact with an overhead line, it is important that everyone involved knows what action to take to reduce the risk of anyone sustaining an electric shock or burn injuries. Key points include –

- a. Never touch the overhead line’s wires.

- b. Always assume that the wires are live, even if they are not arcing or sparking, or if they otherwise appear to be dead. Even if lines are dead, they may be switched back on either automatically after a few
seconds or remotely after a few minutes or even hours if the line’s owner is not aware that their line has been damaged.

c. In the event of accidental contact call the emergency services. Give them the location of the incident, tell them what has happened and that electricity wires are involved.

d. Should any employee or other person come in contact with, or close to, a damaged wire, he must away as quickly as possible and stay away until the line’s owner advises that the situation has been made safe.

e. In the event of a vehicle touching a wire, the driver and occupants should either stay in the vehicle or, should the need to get out, jump out of it as far as you can. Never touch the vehicle while standing on the ground. Do not return to the vehicle until it has been confirmed that it is safe to do so.

f. All employees and other persons should be aware that if a live wire is touching the ground the area around it may be live. A safe distance from the wire or anything else it may be touching should therefore be maintained.

g. Only duly competent and authorised persons may work on electrical wires and installations.

6. Health and safety policy

The principal contractor has to provide the Client, as an annexure to the health and safety plan, with a detailed health and safety policy outlining the principal contractor’s stance on and principles adopted for health and safety.

7. Cost for health and safety measures during the construction process

To enable the Client to comply with Construction Regulation 5(1)(g), all potential principal contractors submitting tenders/bids have to demonstrate to the Client that sufficient provision has been made for the cost to implement and maintain the health and safety plan proposed by the principal contractor to meet the requirements of this health and safety specification as well as that of the OHSACT and its Regulations.

A detailed schedule of costs has to be included in the health and safety plan submitted as part of the potential principal contractor’s tender document. Failure by the principal contractor to adhere to this requirement will force the Client to reject the tender/bid in terms of Construction Regulation 5(1)(h)

8. Enquiries

For any enquiries regarding this occupational health and safety specification, please contact –

Name: Mr. Leon Swanepoel
MINTEK
Tel: 011 709 4747
E-mail: leons@mintek.co.za

9. Annexure

Annexure 1: List of risk assessments.
Annexure 1

List of risk assessments

Asbestos loading
Asbestos transporting
Asbestos offloading
Aggregate/Sand Delivery
Bulk mixing plant
Demolition
Distribution boards – Electrical
Drivers – of vehicles
Electrical installation – Maintenance of
Excavator
Fire prevention and protection
Front end loader
Fuel supply
Gas welding-cutting operations
Hand tools
Kerb laying
Landscaping
 Levelling – of materials
 Loading supervisor
 Loading/unloading - of trucks
 Machine operator
 Making of steel items
 Material delivery
 Material handling
 Placing concrete
 Portable ladders
 Refuelling vehicles/plant
 Site establishment
 Traffic control
 Trenches – Digging of
 Trees – Bracing/removing if roots are damaged during excavations
 Use of portable electrical tools
 Vegetation establishment
 Work in elevated positions
 Working in adits or old shafts
 Working close to existing services i.e. electrical, waste water etc
 Working close to water
 Working under or close to overhead power lines
 Working with asbestos
 Workshops
C3.3 Drawings

The following drawings are issued with this tender and shall become part of the contract:

<table>
<thead>
<tr>
<th>DRAWING No</th>
<th>REVISION</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>466527-34-01-4000-11</td>
<td>A</td>
<td>Motsane – General Arrangement- Plan and Details</td>
</tr>
<tr>
<td>466527-34-01-4001-11</td>
<td>A</td>
<td>Motsane – Area A –Layout, Sections and Details</td>
</tr>
<tr>
<td>466527-34-01-4002-11</td>
<td>A</td>
<td>Motsane – Signage</td>
</tr>
</tbody>
</table>
Part C4: Site Information
C.4. SITE INFORMATION:

MOTSANE REHABILITATION:

The Motsane project site is an abandoned derelict asbestos mining facility near the Motsane Village in Limpopo Province. Features to be rehabilitated include spaced shallow workings, adits/decline shafts and asbestos contaminated dump rock deposits presumably associated with asbestos mining operations.

LOCATION:
The site area is indicated in Figure 1 and is located in Motsane, Limpopo Province. The GPS coordinates are as follows:

- Latitude: 24°16'55.87"S
- Longitude: 30°13'16.89"E

The site may be accessed by a gravel road which is accessible off the main Motsane road and passes in close proximity the project site. Minor temporary access works may be required (discretion of Contractor) to access all the project elements.
Figure 4-1: Locality map

MOTSANE SITE LOCATION

Project No. 466527
EXISTING CONDITIONS:

This site includes a number of open decline shafts/adits as well as accompanying residue deposits/waste rock dumps which resulted from prior mining operations.

The general topographical profile of the Motsane site is moderately steep with most of the identified residue deposits, adits, and workings/shallow excavations located along rock outcrops on the mountain face.

The asbestos contamination on this site mostly consists of banded ironstone rock with seams of fibre, asbestos cobs and loose but congealed fibres.

Figure 4-2: Typical residue deposits at Motsane
Figure 4-3: Aerial map of rehabilitative focus area at Motsane
SERVICES AND EXISTING INFRASTRUCTURE:

Services and existing infrastructure identified from site investigations include the following:

- Existing gravel access road;
- Power line traversing rehabilitation area;
- Steel water pipe traversing rehabilitation area;
- There are no known electricity supply or water supply sources on the site. These resources will need to be sourced and imported by the Contractor.
Figure 4-5: Pipeline traversing site
Figure 4-6: Powerline traversing site