



**South African**  
NATIONAL PARKS

**SOUTH AFRICAN NATIONAL PARKS**

**MAPUNGUBWE NATIONAL PARK -  
ROAD UPGRADING**

**CONTRACT NO: CI-GK-0190**

**TENDER DOCUMENT**

October 2024

**ISSUED BY:**

Mr. Garret Kobe

Manager SCM: Infrastructure and Special Projects

SOUTH AFRICAN NATIONAL PARKS

P.O. BOX 787

PRETORIA

0001

**NAME OF TENDERER:** .....

# MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING

## CONTRACT No. CI-GK-0190

### CONTENTS

Number	Heading	Colour
<b>THE TENDER</b>		
<b><i>Part T1: Tendering procedure</i></b>		
T1.1	Tender Notice and Invitation to Tender	White
T1.2	Tender Data	Pink
<b><i>Part T2: Returnable documents</i></b>		
T2.1	List Of Returnable Documents	Yellow
T2.2	Returnable Schedules	Yellow
<b>THE CONTRACT</b>		
<b><i>Part C1: Agreement and Contract Data</i></b>		
C1.1	Form of Offer and Acceptance (Including Schedule of Deviations)	Yellow
C1.2	Contract Data	Yellow
C1.3	Form of Guarantee	White
C1.4	OHS Mandatory Form	White
C1.5	Declaration of Ownership of Unused Materials	White
<b><i>Part C2: Pricing data</i></b>		
C2.1	Pricing Instructions	Yellow
C2.2	Activity Schedule / Bills of Quantities	Yellow
<b><i>Part C3: Scope of work</i></b>		
C3.1	Description of Works	Blue
C3.2	Engineering	Blue
C3.3	Procurement	Blue
C3.4	Construction	Blue
C3.5	Management	Blue
C3.6	Annexes (Particular and Standardised Specifications)	Blue
<b><i>Part C4: Site information</i></b>		
C4	Site Information	Green
<b><i>Part C5: Drawings</i></b>		
C5	Drawings	

The Tenderer is required to check the numbers of pages and should any be found to be missing or duplicated, or should any of the typing be distinct, or any doubt or obscurity arise as to the meaning of any description or particular of any item, or if the Tender Document contains any obvious errors, then the Tenderer must immediately inform the Employer and have them rectified or explained in writing as the case may be. No liability whatsoever will be admitted by reason of the Tenderer having failure to comply with the foregoing instructions.

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

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# 1: The Tender

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Document for information purposes ONLY

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Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

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# Part T1: Tendering procedures

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Document for information purposes ONLY

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Contractor

Witness for Contractor

Employer

Witness for Employer

**SBD1  
PART A  
INVITATION TO BID**

<b>YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE SOUTH AFRICA NATIONAL PARKS</b>					
<b>BID NUMBER:</b>	CI-GK-0190	<b>CLOSING DATE:</b>	05 November 2024	<b>CLOSING TIME:</b>	11h00
<b>DESCRIPTION:</b>	<b>MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING</b>				
<b>BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)</b>					
Location of tender box:	SANParks Head Office, Groenkloof, Main Entrance Gate, 643 Leyds Street, Muckleneuk, Pretoria, Gauteng, 0002				
Identification:	Contract No. CI-GK-0190: MAPUNGUBWE NATIONAL PARK – ROAD UPGRADING				
T1.1: Tender Notice and Invitation to Tender					
The South African National Parks invites tenders for <b>Mapungubwe National Park Road Upgrading:</b>					
<b><u>ELIGIBILITY</u></b>					
<b>CIDB Grading:</b>					
<p>a) Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a <b>6CE</b> or higher class of construction work, are eligible to submit tenders:</p> <p>b) Joint ventures are eligible to submit tenders provided that:</p> <ul style="list-style-type: none"> <li>(i) every member of the joint venture is registered with the CIDB;</li> <li>(ii) the lead partner has a contractor grading designation in the <b>6CE</b> or higher class of construction work; or not lower than one level below the required grading designation in the class of construction works under consideration and possess the required recognition status;</li> <li>(iii) the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered of <b>6CE</b> class of construction work or a value determined in accordance with the Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.</li> </ul> <p>c) Only tenderers who comply with the following are eligible to submit tenders:</p> <ul style="list-style-type: none"> <li>(i) Have the required and valid CIDB grading stated.</li> <li>(ii) Achieved the minimum score for Functionality</li> <li>(iii) Tenderer is not listed in the Register of Tender Defaulters and prohibited from doing business with the public sector.</li> <li>(iv) The tenderer has not abused the Employer’s supply chain management system</li> <li>(v) The tenderer has not failed to perform on any previous contract with the employer.</li> </ul>					
<b>Functionality Criteria:</b>					

Contractor

Witness for Contractor

Employer

Witness for Employer

Tenderers are required to score a minimum of **8 points** out of a possible **12 points** in order to be responsive: Tender Data, of the proposed functionality criteria and point system for evaluation.  
Refer to Clause **C.3.11.1** in the Tender Data

The physical address for collection of tender documents is:

**R572 (Musina Road)  
Mapungubwe Interpretive Centre  
Mapungubwe National Park and World Heritage Site  
Limpopo Province**

Tender documents will ONLY be available at the COMPULSORY clarification meeting.

A non-refundable tender deposit of R 300-00 payable in cash ONLY is required on collection of the tender documents.

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

**All Queries**

Mr Garret Kobe

Tel No: (012) 426 5132

e-mail [garret.kobe@sanparks.org](mailto:garret.kobe@sanparks.org)

A compulsory clarification meeting with representatives of the Employer will take place at the **Interpretive Centre, Mapungubwe National Park and World Heritage Site** on **16 October starting at 11:00 hrs.**

Prospective tenderers who arrive later than 11h20 will not be allowed into the Clarification meeting.

The tenderer must be represented at the site inspection by a person who is suitably qualified and experienced to comprehend the implications of the work involved. Attendance of the site inspection is compulsory, and a tender will be disqualified if the site inspection is not attended by a representative of the tenderer.

Tenders may only be submitted on the tender documentation that is issued.

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

**The closing time for receipt of tenders is 05 November 2024 @ 11:00 hrs.**

**E-mail and late tenders will not be accepted.**

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL ENQUIRIES MAY BE DIRECTED TO:	
CONTACT PERSON	G Kobe	CONTACT PERSON	J Jacobs
TELEPHONE NUMBER	012 426 5132	TELEPHONE NUMBER	021 741 2561
FACSIMILE NUMBER		FACSIMILE NUMBER	
E-MAIL ADDRESS	garret.kobe@sanparks.org	E-MAIL ADDRESS	joep.jacobs@sanparks.org
SUPPLIER INFORMATION			
NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE NUMBER	CODE		NUMBER
CELL PHONE NUMBER			
FACSIMILE NUMBER	CODE		NUMBER

Contractor

Witness for Contractor

Employer

Witness for Employer

E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS / SERVICES / WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS / SERVICES / WORKS OFFERED?		<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER PART B:3 ]

**QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS**

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?  YES  NO  
 DOES THE ENTITY HAVE A BRANCH IN THE RSA?  YES  NO  
 DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?  YES  NO  
 DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?  YES  NO  
 IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?  YES  NO

**IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.**

**PART B  
TERMS AND CONDITIONS FOR BIDDING**

<b>1. BID SUBMISSION:</b>
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. <b>ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.</b>
1.3. THIS BID IS SUBJECT TO THE PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022,
1.4. THE CONDITIONS OF TENDER ARE THE STANDARD CONDITIONS OF TENDER AS CONTAINED IN <b>ANNEX C OF THE CIDB STANDARD FOR UNIFORMITY IN CONSTRUCTION PROCUREMENT (AUGUST 2019)</b>
<b>2. TAX COMPLIANCE REQUIREMENTS</b>
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

**NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.**

SIGNATURE OF BIDDER: .....

CAPACITY UNDER WHICH THIS BID IS SIGNED: .....  
(Proof of authority must be submitted e.g. company resolution)

DATE: .....

**PROTECTION OF PERSONAL INFORMATION ACT, 4 of 2013 (POPIA)**

SANParks adheres to the Protection of Personal Information Act, 4 of 2013 (POPIA) requirements regarding personal information which came into effect 1 July 2021.

As SANParks, we are committed to protecting your privacy and ensuring that personal information collected is used properly, lawfully and transparently.

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**T1.2: Tender Data**

The conditions of tender are the Standard Conditions of Tender as contained in **Annex C of the CIDB Standard for Uniformity in Construction Procurement (August 2019)** which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to the Tender Data.

**The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender.**

Each item of the Tender Data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

Clause number	
C.1.1	The employer is the South African National Parks.
C.1.2	<p>The following documents form part of this tender:</p> <p><b>VOLUME 1:</b> The General Conditions of Contract for Construction Works, Third Edition, 2015, prepared by the South African Institution of Civil Engineering (SAICE). This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: <a href="mailto:civilinfo@saice.org.za">civilinfo@saice.org.za</a>.</p> <p><b>VOLUME 2:</b> The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998, prepared by the Committee of Land Transport Officials, which the tenderer shall obtain / purchase from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: <a href="mailto:civilinfo@saice.org.za">civilinfo@saice.org.za</a>. The tender documents issued by the Employer comprise:</p> <p><b>VOLUME 3:</b> The Contract Document in which is bound:</p> <p><b>THE TENDER</b></p> <p><b>Part T1: Tendering procedures</b></p> <p>T1.1 - Tender notice and invitation to tender T1.2 - Tender data</p> <p><b>Part T2: Returnable documents</b></p> <p>T2.1 - List of returnable documents T2.2 - Returnable schedules</p> <p><b>THE CONTRACT</b></p> <p><b>Part C1: Agreements and Contract data</b></p> <p>C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 - Performance Bond</p> <p><b>Part C2: Pricing data</b></p> <p>C2.1 - Pricing assumptions C2.2 - Bill of Quantities</p> <p><b>Part C3: Scope of work</b></p> <p>C3 - Scope of work and Drawings</p> <p><b>Part C4: Site information</b></p> <p>C4 - Site information</p> <p><b>Part C5 : Drawings</b></p> <p>C5 - Drawings</p>

Contractor

Witness for Contractor

Employer

Witness for Employer

C.1.4	<p><b>The employer's agent is:</b></p> <p>Name: SMEC South Africa (Pty) Ltd  Address: 230 Albertus Street  La Montagne  Pretoria  0184</p> <p>Tel: +27(0) 12 481 3909  E-mail: francois.retief@smec.com</p> <p>The language for communications is English</p>						
C.2.1	<p><b>Only those tenders who satisfy the following eligibility criteria and who provide the required evidence in their tender submission are eligible to submit and have their tenders evaluated:</b></p> <p>Tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submission, are eligible to have their tenders evaluated:</p> <p>It is estimated that tenderers must have a CIDB contractor grading designation of <b>6CE</b> or Higher.</p> <p>Joint Venture are eligible to submit tenders provided that:</p> <ul style="list-style-type: none"> <li>(i) every member of the joint venture is registered with the CIDB;</li> <li>(ii) the lead partner has a contractor grading designation in the <b>6CE</b> class of construction work; or not lower than one level below the required grading designation in the class of construction works under consideration and possess the required recognition status.</li> <li>(iii) the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 6CE class of construction work or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations.</li> </ul>						
C.2.7	<p>The arrangements details for the compulsory clarification meeting are stated under Part T1.1: Tender Notice and Invitation to Tender.</p> <p>Tenderers must complete and sign the attendance register at the clarification meeting in the name of the tendering entity.</p>						
C.2.8	<p>Should it be necessary for a bidder to obtain clarity on any matter arising from or referred to in this tender document, please refer queries, in writing, to the contact person listed below. Under no circumstances may any other employee within the SANParks be approached for any information. Any such action may result to disqualification of a response submitted in competition to the tender process.</p> <p>Enquiries should reference specific page and or paragraph numbers, where appropriate.</p> <ul style="list-style-type: none"> <li>• All questions / enquiries must be forwarded in writing not later than <b>12:00 on 30 October 2024</b>.</li> </ul> <p>Questions/enquiries received after <b>12:00 on 30 October 2024</b> will not be considered.</p> <p>Name: Garret Kobe  Capacity: Manager SCM: Infrastructure and Special Projects.  Address: PO Box 787, PRETORIA, 0001  Tel: 012 426 5132  Fax: 086 416 2121  E-mail: <a href="mailto:Garret.kobe@sanparks.org">Garret.kobe@sanparks.org</a></p>						
C.2.12	No alternative proposals will be accepted.						
C.2.13.2	Electronic tender offers will not be accepted.						
C.2.13.3	Parts of each tender offer communicated on paper shall be submitted as an original, plus Nil copies.						
C.2.13.7	<p>The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:</p> <table border="1"> <tr> <td><b>Location of tender box:</b></td> <td>SANParks Head Office, Groenkloof, Main Entrance Gate</td> </tr> <tr> <td><b>Physical address:</b></td> <td>643 Leyds Street, Muckleneuk, Pretoria, 0002</td> </tr> <tr> <td><b>Identification details:</b></td> <td>Contract No. CI-GK-0190: MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING.</td> </tr> </table>	<b>Location of tender box:</b>	SANParks Head Office, Groenkloof, Main Entrance Gate	<b>Physical address:</b>	643 Leyds Street, Muckleneuk, Pretoria, 0002	<b>Identification details:</b>	Contract No. CI-GK-0190: MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING.
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<b>Identification details:</b>	Contract No. CI-GK-0190: MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING.						

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Contractor

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Witness for Contractor

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Employer

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Witness for Employer

C.2.15.9	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.												
C.2.15.1	The closing time for submission of tender offers is as per Notice and Invitation to Tender T1.1.												
C.2.16	The tender offer validity period is 12 Weeks.												
C.2.19	Access shall be provided for inspections, tests and analysis as may be required by the employer.												
C.2.23	<p>The tenderer is required to submit the following documents:</p> <ol style="list-style-type: none"> <li>1) Compulsory Enterprise Questionnaire (Completed and Signed) (<b>Compulsory</b>)</li> <li>2) Site Inspection Certificate (Completed and signed by SANParks representative) (<b>Compulsory</b>)</li> <li>3) Form of Offer (Completed and Signed) (<b>Compulsory</b>)</li> <li>4) Bill of Quantities (Completed) (<b>Compulsory</b>)</li> <li>5) Letter of Good Standing from Compensation Commissioner (<b>Compulsory</b>)</li> <li>6) Preference Points claimed in terms of the Preferential Procurement Regulations 2022 (Form SBD 6.1) (Completed and Signed) (<b>Compulsory</b>)</li> <li>7) An original and valid B-BBEE sworn affidavit, SANAS or DTIC certificate, or certified copy thereof. For Joint Ventures, a SANAS certificate in the name of the JV must be provided (<b>Compulsory, if claiming points for specific goals</b>)</li> <li>8) Resolution of Board of Directors (Authority for Signatory)</li> <li>9) Proof of National Treasury Central Supplier Data Base (CSD) registration</li> <li>10) Invitation To Bid (From SBD 1) (Completed and Signed)</li> <li>11) Declaration of Interest (Form SBD 4) (Completed and Signed)</li> <li>12) Proof of Contractor Registration issued by the Construction Industry Development Board (CIDB)</li> <li>13) Proof of registration of Closed Corporation, Company or other legal entities</li> <li>14) Letter of intent for construction guarantee (FSCA registered institutions only)</li> <li>15) Record of Addenda to tender documents, if applicable (Completed and Signed)</li> <li>16) Joint Venture / Joint Venture signed agreement / Consortium Disclosure Form (Where applicable)</li> <li>17) A valid Tax Compliance Status Verification PIN issued by the South African Revenue Services.</li> <li>18) Proposed Subcontractors</li> <li>19) Signed acknowledgment of the "Health and Safety Specification Acknowledgement Receipt" in the name of the document in the tender</li> <li>20) Signed acknowledgement of the "Environmental Management Plan/Programme Receipt" in the name of the document in the tender</li> </ol>												
C.3.4.1	<p>The time and location for opening of the tender offers are:</p> <ul style="list-style-type: none"> <li>• <b>05 November 2024 @ 11:00 hrs.</b></li> <li>• <u>SANParks Head Office, Groenkloof, Main Entrance Gate, 643 Leyds Street, Muckleneuk, Pretoria, Gauteng, 0002</u> <b>Coordinates:</b> 22°14'34.29"S 29°24'17.21"E</li> </ul>												
C.3.11.1	<p><b>The procedure for the evaluation of responsive tenders is Method: <u>Price and Specific Goals</u></b></p> <p><b>1) Tenderers are required to demonstrate their ability to undertake the work and provide proof of experience in road construction projects.</b></p> <p>Tenderers are required to score a minimum of 8 points out of a possible 12 points in order to qualify for the tender.</p> <p>Tenderers who fail to meet the minimum threshold shall be declared non-responsive and subsequently rejected. The onus rests with the tenderer to supply sufficient information to allow for the proper scoring, evaluation and award of points.</p> <p>Where insufficient information is provided, zero points will be awarded for such particular criterion. The functionality criteria and maximum score in respect of each of the criteria as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Functionality criteria</th> <th style="text-align: center;">Sub-criteria</th> <th style="text-align: center;">Maximum number of points</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>Road Construction Projects</b></td> <td></td> <td></td> </tr> <tr> <td>1) Contracts of value from R4.500 million, inclusive of VAT</td> <td style="text-align: center;">2 point per contract</td> <td style="text-align: center;"><b>12</b></td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Maximum possible score for functionality</b></td> <td style="text-align: center;"><b>12</b></td> </tr> </tbody> </table>	Functionality criteria	Sub-criteria	Maximum number of points	<b>Road Construction Projects</b>			1) Contracts of value from R4.500 million, inclusive of VAT	2 point per contract	<b>12</b>	<b>Maximum possible score for functionality</b>		<b>12</b>
Functionality criteria	Sub-criteria	Maximum number of points											
<b>Road Construction Projects</b>													
1) Contracts of value from R4.500 million, inclusive of VAT	2 point per contract	<b>12</b>											
<b>Maximum possible score for functionality</b>		<b>12</b>											

Contractor

Witness for Contractor

Employer

Witness for Employer

Tenderer to submit list of past and current projects for functionality information – information must clearly state project information, contractor to submit “**Letter of Award**” for current projects, and “**Letter of Award**” and “**Completion Certificates**” for completed projects, functionality points will only be awarded on letter submitted. Project details shall include telephone contact details of either the client or the engineer for the project.

It is the responsibility of the tenderer to submit authentic supporting documentation, tenderers will be disqualified and reported if found to have submitted fraudulent information.

**2) PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022.**

**2.1) POINTS AWARDED FOR PRICE**

The total number of tender evaluation points ( $T_{EV}$ ) will be calculate in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P$$

where;

$N_{FO}$  is the number of tender evaluation points awarded for the financial offer made in accordance with;

**80/20 preference point system for acquisition of goods or services for Rand value equal to or above R30 000 and up to R50 million.**

The following formula will be used to calculate the points out of 80 for price in respect of a tender with a Rand value equal to or above R30 000 and up to a Rand value of R50 million, inclusive of all applicable taxes:

$$P_S = 80 \left( 1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where-

$P_S$  = Points scored for price of tender under consideration;

$P_t$  = Price of tender under consideration; and

$P_{\min}$  = Price of lowest acceptable tender.

**2.2) POINTS AWARDED FOR SPECIFIC GOALS**

Specific goals for the tender and points claimed are indicated per the table below.

Specific Goal	Points Scored
<b>1) Enterprises owned by black people</b>	
Persons historically disadvantaged on the basis of race with 100% black ownership, or	6
Persons historically disadvantaged on the basis of race with 75% - 99% black ownership, or	5
Persons historically disadvantaged on the basis of race with 60% - 74% black ownership, or	3
Persons historically disadvantaged on the basis of race with 51% - 59% black ownership, or	2
Persons historically disadvantaged on the basis of race with 0 – 50% black ownership, or	1
<b>2) Qualifying Small Enterprise</b>	
• Qualifying Small Enterprise (annual turn-over of between R10m and R50m)	6
<b>3) Locality</b>	
• To qualify, bidder must provide / include verifiable proof of business address in the Limpopo Province, older than 2 years.	8
<b>Total Points</b>	<b>20</b>

**The following will be accepted as proof:**

Contractor

Witness for Contractor

Employer

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	<p><b>1) Black ownership</b></p> <ul style="list-style-type: none"> <li>Bidders to submit valid B-BBEE certificate or DTIC certificate clearly indicating the percentage Black ownership.</li> </ul> <p><b>2) Exempted Micro or Qualifying Small Enterprises</b></p> <ul style="list-style-type: none"> <li>Bidders to submit valid B-BBEE certificate or DTIC certificate clearly indicating the type of enterprise.</li> </ul> <p><b>3) Locality</b></p> <ul style="list-style-type: none"> <li>To qualify, bidder must provide / include verifiable proof of business address in one of the criteria, older than 2 years (Municipal or Eskom account)</li> <li>Rental agreement in the name of the bidding company with proof of payment for the month prior to closing of the tender.</li> <li>or ownership of business premises - municipal account in the name of the bidding company to confirm 2-year business address.</li> </ul> <p><u><i>NB: Bidders who are not located in the Northern Province and who are not a QSE's may still tender but will not claim points for specific goals. Failure to provide the afore-mentioned documentation, will result in an allocation of zero points for specific goals.</i></u></p>
C.3.13	<p>Tender offers will only be accepted if:</p> <ol style="list-style-type: none"> <li>The tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation;</li> <li>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;</li> <li>The tenderer has not: <ol style="list-style-type: none"> <li>abused the employer's supply chain management system;</li> <li>or</li> <li>failed to perform on any previous contract and has been given a written notice to this effect; and</li> </ol> </li> <li>Has completed the Compulsory Enterprise Questionnaire, SBD 1, 4, 6.1 and declaration 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.</li> <li>Has submitted the documentation listed in C2.23</li> </ol>
C.3.17	<p>Provide to the successful tenderer <b>one</b> copy of the signed contract document.</p>
Annex 1	<p><b>CONTRACT PARTICIPATION GOAL</b></p> <p>This contract includes a contract participation goal of sub-contracting (e.g works, material supply, plant ect) to local EME's and QSE's within the Musina Local Municipality and Alldays Municipality.  Contract Participation Goals (CPG) Targets  Contractors are required to subcontract a minimum of 15% of the contract value to EME's and QSE's that are 51% black owned within the Musina Local Municipality and Alldays Municipality.</p> <p>The Contractor shall allow in his pricing for the implementation of the above CPG targets. The Contractor must also allow for the provision of monthly reports (as per the attached example) to specify their achievements with regards to the CPG targets.</p> <p>Sanctions in the event of Non-Compliance  Achievement towards the tendered Contract Participation Goal (CPG) will be monitored against the individual contributions for targeted enterprises and targeted labour. Achievement shall be measured on a month by month basis against each of the individual tendered CPG targets. Penalties shall be applied as outlined hereinafter calculated according to the shortfall of each of the individual tendered CPG targets upon completion of the contract.</p> <p>In the event that the Contractor fails to substantiate that any failure to achieve each individual Contract Participation Goal (CPG) relating to the tendered target goal was due to quantitative underruns, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall pay to the Employer penalties (P) in an amount determined in accordance with the following formula::  <math display="block">P = 0.5 \times (D - D_0) \times NA \times (100)</math></p>

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Where

D = tendered Contract Participation Goal (15%) percentage.

Do = the Contract Participation Goal (percentage) which the Employer's Representative, based on the credits passed, certifies as being achieved upon completion of the Contract.

NA = Net Amount, being Tender Sum excluding VAT, contingencies, escalation, provisional sums and prime cost items.

P = Rand value of penalty payables

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# Annex C

## Standard conditions of tender

(As per Construction Industry Development Board, Government Gazette No42622, 08 August 2019)

### C.1 General

#### C.1.1 Actions

C.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

C.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

*Note:*

- 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
- 2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

C.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

#### C.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

#### C.1.3 Interpretation

C.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

C.1.3.2 These conditions of tender, the tender data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender.

C.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

a) **Conflict of interest** means any situation in which:

- i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
- ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
- iii) incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.

b) **Comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;

c) **Corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;

d) **Fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

#### C.1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

#### C.1.5 Cancellation and Re-Invitation of Tenders

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- C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-
- a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
  - b) funds are no longer available to cover the total envisaged expenditure; or
  - c) no acceptable tenders are received.
  - d) there is a material irregularity in the tender process.

C.1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised

C.1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

## **C.1.6 Procurement procedures**

### **C.1.6.1 General**

Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

### **C.1.6.2 Competitive negotiation procedure**

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

C.1.6.2.2 All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

C.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

C.1.6.2.4 The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.

### **C.1.6.3 Proposal procedure using the two stage-system**

#### **C.1.6.3.1 Option 1**

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

#### **C.1.6.3.2 Option 2**

C.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

C.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

## **C.2 Tenderer's obligations**

### **C.2.1 Eligibility**

C.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

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- C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.
- C.2.2 Cost of tendering**
- C.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.
- C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.
- C.2.3 Check documents**
- Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
- C.2.4 Confidentiality and copyright of documents**
- Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.
- C.2.5 Reference documents**
- Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.
- C.2.6 Acknowledge addenda**
- Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.
- C.2.7 Clarification meeting**
- Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.
- C.2.8 Seek clarification**
- Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.
- C.2.9 Insurance**
- Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.
- C.2.10 Pricing the tender offer**
- C.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.
- C.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.
- C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.
- C.2.10.4 State the rates and prices in unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.
- C.2.11 Alterations to documents**
- Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.
- C.2.12 Alternative tender offers**

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- C.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.
- C.2.12.2 Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.
- C.2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.

**C.2.13 Submitting a tender offer**

- C.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.
- C.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.
- C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
- C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.
- C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
- C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
- C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

**C.2.14 Information and data to be completed in all respects**

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

**C.2.15 Closing time**

- C.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.
- C.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

**C.2.16 Tender offer validity**

- C.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.
- C.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.
- C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in 2.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).
- C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

**C.2.17 Clarification of tender offer after submission**

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

**Note:** Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

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**C.2.18 Provide other material**

- C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.
- C.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

**C.2.19 Inspections, tests and analysis**

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

**C.2.20 Submit securities, bonds and policies**

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

**C.2.21 Check final draft**

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

**C.2.22 Return of other tender documents**

If so instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the tender data.

**C.2.23 Certificates**

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

**C.3 The employer's undertakings**

**C.3.1 Respond to requests from the tenderer**

- C.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.
- C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:
  - a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
  - b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
  - c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

**C.3.2 Issue Addenda**

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

**C.3.3 Return late tender offers**

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

**C.3.4 Opening of tender submissions**

- C.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

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- C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBEE status level and time for completion for the main tender offer only.
- C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.

### C.3.5 Two-envelope system

- C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.
- C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

### C.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

### C.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

### C.3.8 Test for responsiveness

- C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:
- complies with the requirements of these Conditions of Tender,
  - has been properly and fully completed and signed, and
  - is responsive to the other requirements of the tender documents.
- C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:
- detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
  - significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
  - affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

### C.3.9 Arithmetical errors, omissions and discrepancies

- C.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.
- C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:
- the gross misplacement of the decimal point in any unit rate;
  - omissions made in completing the pricing schedule or bills of quantities; or
  - arithmetic errors in:
    - line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
    - the summation of the prices.
- C.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.
- C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:
- If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
  - Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

### C.3.10 Clarification of a tender offer

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Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

### C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

<b>The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:</b>	
<b>Requirement</b>	<b>Qualitative interpretation of goal</b>
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

**The activities associated with evaluating tender offers are as follows:**

- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether or not tender offers are responsive
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report

#### C.3.11.1 General

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

### C.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

### C.3.13 Acceptance of tender offer

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
- c) has the legal capacity to enter into the contract;
- d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act

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Contractor

--

Witness for  
Contractor

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Employer

--

Witness for  
Employer

- No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
- e) complies with the legal requirements, if any, stated in the tender data; and
  - f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

**C.3.14 Prepare contract documents**

- C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:
- a) addenda issued during the tender period,
  - b) inclusion of some of the returnable documents, and
  - c) other revisions agreed between the employer and the successful tenderer.

**C.3.15 Complete adjudicator's contract**

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

**C.3.16 Registration of the award**

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the cidb Register of Projects.

**C.3.17 Provide copies of the contracts**

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

**C.3.18 Provide written reasons for actions taken**

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

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## Part T2: Returnable Schedules

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Document for information purposes ONLY

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Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

## T2.1: List of Returnable Documents

The complete tender document as received from the employer, together with all additional documentation as requested, must be submitted. No documentation must be removed from the tender document.

The tenderer must complete the following returnable documents:

- 1 Returnable Schedules required for tender completeness purposes and are COMPULSORY**
  - Compulsory Enterprise Questionnaire
  - Site inspection certificate
  - Health and Safety Specifications Acknowledgement
  - Letter of good standing from the Compensation Commissioner
  - Letter of intent for a Construction Guarantee (FSCA registered institutions only)
  
- 2 Other documents required only for tender evaluation purposes**
  - A valid Tax verification pin as issued by the South African Revenue Services
  - An original and valid B-BBEE sworn affidavit, DTIC or SANAS certificate, or certified copy thereof. [For JV's, only SANAS certificates are acceptable]
  - Capacity of Tenderer
  - Documentation for Functionality evaluation
  
- 3 Other documents that will be incorporated into the contract**
  - Resolution of board of directors / members / partners (Authority of Signature)
  - Special Resolution of Joint Venture Partners – if applicable
  - Record of Addenda to Tender Documents – if applicable
  - Proposed Amendments and Qualifications – if applicable
  - SBD 1: Invitation to Bid
  - SBD 4: Declaration of interest
  - SBD 6.1: Preference points claim form in terms of preferential procurement regulations 2022
  - Proof of active Contractor Registration issued by the Construction Industry Development Board
  - Clarification Meeting Information
  - Health and Safety Specifications
  - Code of conduct for implementing a project for SANParks
  - Environmental Management Plan for General Construction Activities
  
- 4 C1.1 Offer and Acceptance (the offer portion of C1.1)**
- 5 C1.2 Contract Data (Part 2)**
- 6 C2.2 Bills of Quantities (As per tender document, completed in black ink) (COMPULSORY)**
- 7 DOCUMENTATION FOR FUNCTIONALITY EVALUATION (CV's and Previous Contracts Information)**

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

**T2.2 Returnable Schedules**

This returnable schedule needs to be completed if the tenderer is a company or other legal person.

**Resolution of Board of Directors / Members / Partners**

RESOLUTION of a meeting of the Board of \*Directors / Members / Partners of:

\_\_\_\_\_ (legally correct full name and registration number, if applicable, of the Enterprise)

Held at \_\_\_\_\_ (place)

On \_\_\_\_\_ (date)

**RESOLVED that:**

- 1. The Enterprise submits a Tender to the South African National Parks in respect of the following project:

\_\_\_\_\_ (project description as per Tender Document)

Tender Number: \_\_\_\_\_ (Tender Number as per Tender Document)

- 2. \*Mr/Mrs/Ms: \_\_\_\_\_

in \*his/her Capacity as: \_\_\_\_\_ (Position in the Enterprise)

and who will sign as follows: \_\_\_\_\_

be, and is hereby, authorised to sign the Tender, and any and all other documents and/or correspondence in connection with and relating to the Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Tender to the Enterprise mentioned above.

No.	Name	Capacity	Signature
1.			
2.			
3.			
4.			
5.			
6.			

**NOTE:**

- 1. \* Delete which is not applicable
- 2. **NB.** This resolution must be signed by all the Directors / Members / Partners of the Tendering Enterprise
- 3. Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page

**ENTERPRISE STAMP**

\_\_\_\_\_

Contractor

\_\_\_\_\_

Witness for Contractor

\_\_\_\_\_

Employer

\_\_\_\_\_

Witness for Employer

This returnable schedule needs to be completed if the tenderer is a joint venture. This form must be completed by each partner of the joint venture. The name of the principal partner must be stated under Point 2.

## Resolution of Board of Directors / Members / Sole Proprietor/ Partners of Partnership (i.e. of each legal person to comprise the Joint Venture Partnership)

RESOLUTION of a meeting of the Board of \*Directors / Members / Sole Proprietor/ Partners of:

\_\_\_\_\_  
(Legally correct full name and registration number, if applicable, of the Enterprise)

Held at \_\_\_\_\_ (place)

On \_\_\_\_\_ (date)

### RESOLVED that:

1. The Enterprise submits a Tender, in Joint Venture with the following Enterprises:

\_\_\_\_\_  
(List all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Joint Venture)

to the South African National Parks in respect of the following project:

\_\_\_\_\_  
(Project description as per Tender Document)

Tender Number: \_\_\_\_\_ (Tender Number as per Tender Document)

2. The Principal Partner of the Joint Venture will be

\_\_\_\_\_  
(Legally correct full name and registration number, if applicable, of the Principal Partner of Joint Venture)

3. \*Mr/Mrs/Ms: \_\_\_\_\_

in \*his/her Capacity as: \_\_\_\_\_ (Position in the Enterprise)

and who will sign as follows: \_\_\_\_\_

be, and is hereby, authorised to sign a joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the joint venture, in respect of the project described under item 1 above.

4. The Enterprise accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the South African National Parks in respect of the project described under item 1 above.

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Witness for  
Contractor

\_\_\_\_\_  
Employer

\_\_\_\_\_  
Witness for  
Employer

5. The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the South African National Parks in respect of the project under item 1 above:

Physical address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ (code)

Postal Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ (code)

Telephone number: \_\_\_\_\_ (code)

Fax number: \_\_\_\_\_ (code)

No.	Name	Capacity	Signature
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

**NOTE:**

- \* Delete which is not applicable
- NB. This resolution must be signed by all the Directors / Members / Partners of the Bidding Enterprise**
- Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page**

**ENTERPRISE STAMP**

\_\_\_\_\_  
 Contractor

\_\_\_\_\_  
 Witness for Contractor

\_\_\_\_\_  
 Employer

\_\_\_\_\_  
 Witness for Employer

This returnable schedule needs to be completed if the tenderer is a joint venture.

### Special Resolution of Joint Venture Partners

**RESOLUTION** of a meeting of the duly authorised representatives of the following legal entities who have entered into a joint venture to jointly tender for the project mentioned below: *(legally correct full names and registration numbers, if applicable, of the Enterprises forming a Joint venture)*

- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_
- 11. \_\_\_\_\_
- 12. \_\_\_\_\_
- 13. \_\_\_\_\_

Held at \_\_\_\_\_ *(place)*

On \_\_\_\_\_ *(date)*

**RESOLVED that:**

A. The above-mentioned Enterprises submit a tender in joint venture partnership to the South African National Parks in respect of the following project:

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Witness for Contractor

\_\_\_\_\_  
Employer

\_\_\_\_\_  
Witness for Employer

\_\_\_\_\_  
\_\_\_\_\_  
(Project description as per Tender Document)

Tender Number: \_\_\_\_\_ (Tender Number as per Tender Document)

B. Mr/Mrs/Ms: \_\_\_\_\_

in \*his/her Capacity as: \_\_\_\_\_ (Position in the Enterprise)

and who will sign as follows: \_\_\_\_\_

be, and is hereby, authorised to sign the Tender, and any and all other documents and/or correspondence in connection with and relating to the Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Tender to the Enterprises in joint venture mentioned above.

- C. The Enterprises constituting the Joint Venture, notwithstanding its composition, shall conduct all business under the name and style of: \_\_\_\_\_
- D. The Enterprises to the Joint Venture accept joint and several liability for the due fulfilment of the obligations of the Joint Venture deriving from, and in any way connected with, the contract entered into with the South African National Parks in respect of the project described under item A above.
- E. Any of the Enterprises to the Joint Venture intending to terminate the Joint Venture agreement, for whatever reason, shall give the South African National Parks 30 day's written notice of such intention. Notwithstanding such decision to terminate, the Enterprises shall remain jointly and severally liable to the South African National Parks for the due fulfilment of the obligations of the Joint Venture as mentioned under item D above.
- F. No Enterprise to the Joint Venture shall, without the prior written consent of the other Enterprises to the Joint Venture and of the South African National Parks, cede any of its rights or assign any of its obligations under the Joint Venture agreement in relation to the contract with the South African National Parks referred to herein.
- G. The Enterprises choose as the *domicilium citandi et executandi* of the Joint Venture for all purposes arising from the Joint Venture agreement and the contract with the South African National Parks in respect of the project under item A above:

Physical address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (code)

Postal Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (code)

Telephone number: \_\_\_\_\_ (code)

Fax number: \_\_\_\_\_ (code)

	Name	Capacity	Signature
1			
2			
3			

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Witness for Contractor

\_\_\_\_\_  
Employer

\_\_\_\_\_  
Witness for Employer

	Name	Capacity	Signature
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

**Note:**

- \* Delete which is not applicable*
- NB.** This resolution must be signed by all the Duly Authorised Representatives of the Legal Entities to the Joint Venture submitting this Tender
- Should the number of Duly Authorised Representatives of the Legal Entities joining forces in this Tender exceed the space available above, additional names and signatures must be supplied on a separate page
- Resolutions, duly completed and signed, from the separate Enterprises who participate in this Joint venture must be attached to the Special Resolution.

Contractor

Witness for Contractor

Employer

Witness for Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**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, if any:** .....

**Section 3: cidb registration number:** .....

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

Name*	Identity number*	Personal income tax number*

\* 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: SBD1 issued by National Treasury must be completed for each tender and be attached as a tender requirement.**

**Section 7: SBD4 issued by National Treasury must be completed for each tender and be attached as a tender requirement.**

**Section 8: SBD6 issued by National Treasury must be completed for each tender and be attached as a tender requirement.**

**Section 9: 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:

- |  |   |
|--|---|
| <input type="checkbox"/> a member of any municipal council                                     | <input type="checkbox"/> 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)                         |
| <input type="checkbox"/> a member of any provincial legislature                                | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity  |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> an employee of Parliament or a provincial legislature  |
| <input type="checkbox"/> a member of the board of directors of any municipal entity            | <input type="checkbox"/> an employee, director or board member of or otherwise employed by or contracted to the South African National Parks or had or has any contractual relationships of any kind with the South African National Parks. |

an official of any municipality or municipal entity

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

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (Tick appropriate column)	
		Current	Within last 12 months

\* Insert separate page if necessary

**Section 10: 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
- an employee, director or board member of or otherwise employed by or contracted to the South African National Parks or had or has any contractual relationships of any kind with the South African National Parks.

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

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (Tick appropriate column)	
		Current	Within last 12 months

Contractor

Witness for Contractor

Employer

Witness for Employer


\*Insert separate page if necessary

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

- i) Authorises the Employer to obtain a tax clearance certificate from the South African Revenue Services that it is 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.

Name	Position	Signed

Enterprise name	Date

Contractor

Witness for Contractor

Employer

Witness for Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**Record of Addenda to tender documents**

I / We confirm that the following communications received from the South African National Parks before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:  
 (Attach additional pages if more space is required)

No.	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		

Name	Position	Signed

Name of Tenderer	Date

--

Contractor

--

Witness for Contractor

--

Employer

--

Witness for Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**Proposed Amendments and Qualifications**

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule.

Page	Clause or item	Proposal

Name	Position	Signed

Name of Tenderer	Date

Contractor

Witness for Contractor

Employer

Witness for Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**Capacity of Tenderer**

**1. WORK CAPACITY**

*(The Tenderer is requested to furnish the following full particulars, attach additional pages if more space is required. Failure to furnish the particulars may result in the Tender being disregarded.)*

Skilled artisans employed		Unskilled employees employed	
Categories of artisans	Number	Categories of employees	Number
Machinery	Plant	Workshops	

Contractor

Witness for Contractor

Employer

Witness for Employer

**1. QUALIFICATIONS AND EXPERIENCE OF PROPOSED SITE SUPERVISION TEAM FOR THE PROJECT**

Tenderer to provide name(s), key qualifications and experience of site supervision team that will supervise the project on behalf of the Contractor.  
 Attach additional documents as proof.

Item	Description
<b>Site Agent (Provide copy of CV)</b>	
<b>Name of Person</b>	
<b>No of years' experience</b>	
<b>Field/s of experience</b>	
<b>Permanent employment (Yes/No)</b>	
<b>Site Foreman (Provide copy of CV)</b>	
<b>Name of Person</b>	
<b>No of years' experience</b>	
<b>Field/s of experience</b>	
<b>Permanent employment (Yes/No)</b>	

Contractor

Witness for Contractor

Employer

Witness for Employer

**2. PARTICULARS OF COMMITMENTS WHICH THE TENDERER HAS PREVIOUSLY COMPLETED AND PRESENTLY ENGAGED WITH:**

**2.1. Current projects**

***NB:*** Letters of Intent / Appointment and all other relevant detail to be attached.

Project	Place (town)	Reference / Contact person	Contact Tel. No.	Contract amount	Contract period	Date of commencement	Scheduled date of completion
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

Contractor

Witness for Contractor

Employer

Witness for Employer

**2.2. Previous projects**

**NB:** Letters of Appointment, Completion Certificates and all other relevant detail to be attached.

Project	Place (town)	Reference / Contact person	Contact Tel. No.	Contract amount	Contract period	Date of commencement	Scheduled date of completion	Actual date of completion
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

Contractor

Witness for Contractor

Employer

Witness for Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**Site Inspection Certificate**

This is to certify that I,

Representing   
Company

Position

Visited the site on

I have made myself familiar with all local conditions likely to influence the work and the cost thereof. I further certify that I am satisfied with the description of the work and explanations given at the site inspection meeting and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.

I have attended the Clarification Meeting at Mapungubwe National Park and listened to the explanations regarding the works. I declare that read the Clarification Meeting document, signed it and include it herewith.

<input type="text"/>	<input type="text"/>	<input type="text"/>
Name Tenderer's Representative	Position	Signed

<input type="text"/>	<input type="text"/>
Name of Tenderer	Date

<input type="text"/>	<input type="text"/>	<input type="text"/>
Name of Employer's Representative	Signature	Date

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**HEALTH AND SAFETY SPECIFICATION ACKNOWLEDGEMENT RECEIPT**

**Contractor's Acknowledgement:**

I, \_\_\_\_\_ representing  
 \_\_\_\_\_ (Contractors), have  
 satisfied myself with the content of this Health and Safety Specification and have made the relevant  
 provision under my Preliminary & General Section for any and all costs involved to ensure  
 compliance of this Specification and shall we be the successful contractor, we shall ensure that our  
 employees and contractors on site comply with the requirements of these documents, our safety  
 documentation and health and safety legislation

Signature of Contractor: \_\_\_\_\_ Date: \_\_\_\_\_

**Comments:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contractor

\_\_\_\_\_

Witness for Contractor

\_\_\_\_\_

Employer

\_\_\_\_\_

Witness for Employer

### ENVIRONMENTAL MANAGEMENT PLAN ACKNOWLEDGEMENT RECEIPT

**Contractor's Acknowledgement:**

I, \_\_\_\_\_ representing  
\_\_\_\_\_ (Contractors), have satisfied myself with the content of this Environmental Management Plan and have made the relevant provision under my Preliminary & General Section for any and all costs involved to ensure compliance of this Plan and shall we be the successful contractor, we shall ensure that our employees and contractors on site comply with the requirements of this document and the Code of Conduct when working in a national park.

\_\_\_\_\_  
Signature of Contractor

\_\_\_\_\_  
Date

Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Witness for Contractor

\_\_\_\_\_  
Employer

\_\_\_\_\_  
Witness for Employer

**BIDDER'S DISCLOSURE**

**1. PURPOSE OF THE FORM**

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

**2. BIDDER'S DECLARATION**

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest<sup>1</sup> in the enterprise, employed by the state?

**YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution?

**YES/NO**

2.2.1 If so, furnish particulars:

.....  
 .....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having

<sup>1</sup> the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

Contractor

Witness for Contractor

Employer

Witness for Employer

a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....  
.....  
.....

**3 DECLARATION**

I, the undersigned, (name) ..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>2</sup> will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition

<sup>2</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

Contractor

Witness for Contractor

Employer

Witness for Employer

Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.  
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of bidder

Contractor

Witness for Contractor

Employer

Witness for Employer

Document for information purposes ONLY

**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022**

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022**

**1. GENERAL CONDITIONS**

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and

1.2 The applicable preference point system for this tender is the 80/20 preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 The maximum points for this tender are allocated as follows:

	<b>POINTS</b>
<b>PRICE</b>	80
<b>SPECIFIC GOALS</b>	20
<b>Total points for Price and SPECIFIC GOALS:</b>	<b>100</b>

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

**2. DEFINITIONS**

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

invitation, and includes all applicable taxes;

- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

### 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

#### 3.1. POINTS AWARDED FOR PRICE

##### 3.1.1 THE 80/20 PREFERENCE POINT SYSTEMS

A maximum of 80 points is allocated for price on the following basis:

#### 80/20

$$Ps = 80 \left( 1 - \frac{Pt - P_{min}}{P_{min}} \right)$$

Where

- Ps = Points scored for price of tender under consideration
- Pt = Price of tender under consideration
- Pmin = Price of lowest acceptable tender

### 4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof / documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of —
  - (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
  - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

**Table 1: Specific goals for the tender and points claimed are indicated per the table below.**

**Note to organs of state:** The 80/20 preference point system is applicable, corresponding points must also be indicated as such.

**Note to tenderers:** The tenderer must indicate how they claim points for each preference point system.

THE SPECIFIC GOALS ALLOCATED POINTS IN TERMS		Number of	Number of
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Contractor	Witness for Contractor	Employer	Witness for Employer

OF THIS TENDER	points allocated (80/20 system) <i>(To be completed by the organ of state)</i>	points claimed (80/20 system) <i>(To be completed by the tenderer)</i>
<b>1) Enterprises owned by black people (6)</b>		
Persons historically disadvantaged on the basis of race with 100% black ownership, or	6	
Persons historically disadvantaged on the basis of race with 75% - 99% black ownership, or	5	
Persons historically disadvantaged on the basis of race with 60% - 74% black ownership, or	3	
Persons historically disadvantaged on the basis of race with 51% - 59% black ownership, or	2	
Persons historically disadvantaged on the basis of race with 0 – 50% black ownership, or	1	
<b>2) Qualifying Small Enterprise (6)</b>		
Qualifying Small Enterprise (annual turn-over of between R10m and R50m)	6	
<b>3) Locality (8)</b>		
To qualify, bidder must provide / include verifiable proof of business address in the Limpopo Province, older than 2 years.	8	
<b>Total Points</b>	<b>20</b>	

**NOTE:** Points will not be allocated for failure to provide proof or evidence.

**DECLARATION WITH REGARD TO COMPANY/FIRM**

4.3. Name of company/firm.....

4.4. Company registration number: .....

4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

- (a) disqualify the person from the tendering process;

Contractor

Witness for Contractor

Employer

Witness for Employer

- (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
- (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
- (e) forward the matter for criminal prosecution, if deemed necessary.

.....  
**SIGNATURE(S) OF TENDERER(S)**

**SURNAME AND NAME:** .....

**DATE:** .....

**ADDRESS:** .....

.....

.....

Document for information purposes ONLY

**Contractor**

**Witness for Contractor**

**Employer**

**Witness for Employer**

**STANDARD BIDDING DOCUMENTS DECLARATION**

The following documents are deemed to form and be read and construed as part of this agreement even where integrated in this document:

Declaration of Interest (SBD1)
Declaration of Interest (SBD4)
Preference points claimed (SBD6.1) – Original or certified copy of B-BBEE certificate or Sworn Affidavit

**The obligation to complete, duly sign and submit these declarations included in this SBD declaration pack cannot be transferred to an external authorised representative, auditor or any other third party acting on behalf of the legal entity.**

I declare that I have had no participation in any collusive practices with any Bidder or any other person regarding this or any other procurement. I certify that the information furnished in these declarations (SBD 1 and SBD6.1) is correct and I accept that SANParks may reject the Offer or act against me should these declarations prove to be false. I confirm that I am duly authorised to sign this SBD declaration pack nominated in writing by the Chief Executive Officer or Senior Member/Person with management responsibility (Close Corporation, Partnership or Individual).

<b>NAME (PRINT)</b>	
<b>CAPACITY</b>	
<b>SIGNATURE</b>	
<b>NAME OF FIRM</b>	
<b>DATE</b>	

**WITNESSES:**

1 \_\_\_\_\_

2 \_\_\_\_\_

**Date** \_\_\_\_\_

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Witness for Contractor

\_\_\_\_\_  
Employer

\_\_\_\_\_  
Witness for Employer

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# 2: The Contract

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Document for information purposes ONLY

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Contractor

Witness for Contractor

Employer

Witness for Employer

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## Part C1: Agreement and contract data

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Document for information purposes ONLY

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Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**C1.1 Form of Offer and Acceptance**

**Offer**

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

**CONTRACT No. CI-GK-0190: MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

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 authorized, 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 form of offer 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.

<b>Signature(s)</b>		<b>Date</b>	
<b>Name(s)</b>			
<b>Capacity</b>			
<b>For the Tenderer</b>			
<b>Name of tenderer</b> (Company)			
<b>Address of tenderer</b>			
<b>Name of witness</b>			
<b>Signature of witness</b>		<b>Date</b>	

Contractor

Witness for Contractor

Employer

Witness for Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**Acceptance** (NB: To be completed by SANParks and not the Tenderer)

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.

The tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (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 signed and fully completed Form of Offer and Acceptance, 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.

<b>Signature(s)</b>		<b>Date:</b>	
<b>Name(s)</b>			
<b>Capacity</b>			
<b>For the Employer</b>			
<b>Name of Employer</b>	South African National Parks		
<b>Address of Employer</b>	643 Leyds Street Muckleneuk 0002 P O Box 787 Pretoria 0001		
<b>Name of witness</b>			
<b>Signature of witness</b>		<b>Date:</b>	

**Schedule of Deviations**

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<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <p>Contractor</p>	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <p>Witness for Contractor</p>	<p>Page 54 of 200</p>	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <p>Employer</p>	<div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <p>Witness for Employer</p>
--	--	-----------------------	--	--

**Notes:**

1. The extent of deviations from the tender documents issued by the employer before 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, be 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 becomes 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.

1    **Subject** .....

**Details** .....

      .....

      .....

      .....

2    **Subject** .....

**Details** .....

      .....

      .....

      .....

3    **Subject** .....

**Details** .....

      .....

      .....

      .....

4    **Subject** .....

**Details** .....

      .....

      .....

      .....

5    **Subject** .....

**Details** .....

      .....

      .....

      .....

By the duly authorised representatives signing this agreement, 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.

**For the Tenderer:**

Signature(s): .....

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

Name(s): .....

Capacity: .....

Name of organization / tenderer: .....

Address of organization / tenderer: .....

.....

Name and signature of witness: .....

Date: .....

**For the Employer:**

Signature(s): .....

Name(s): .....

Capacity: .....

Name and address of organization: The South African National Parks

Name and signature of witness: .....

Date: .....

Document for information purposes ONLY

Contractor

Witness for Contractor

Employer

Witness for Employer

# 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 Deviations (if any) today:

the..... (day)

of ..... (month)

20..... (year)

at ..... (place)

### For the Contractor:

Signature(s): .....

Name(s): .....

Capacity: .....

Signature and name of witness:

Signature: .....

Name: .....

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

Document for information purposes ONLY

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**C1.2 Contract Data**

**Part 1: Contract Data provided by the Employer**

The General Conditions of Contract for Construction Works, Third Edition, 2015 published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering (Tel 011-805 5947) [www.saice.org.za](http://www.saice.org.za).

The General Conditions of Contract make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

Each item of data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works, Third Edition, 2015, to which it mainly applies.

**The variations to the General Conditions of Contract are:**

CLAUSE	DESCRIPTION / WORDING
1.1.1	The term “the Engineer” shall be taken to mean “the Employer’s Agent” as defined in clause 1.1.1.16, where “the Engineer” is used in other documentation (for example SANS / SABS standardised specifications and particular specifications in this tender document – see also C3 Scope of Work, Construction, Specifications for further “mapping of definitions”).
1.1.1.13	The Defects Liability Period is <b>12 (twelve)</b> months.
1.1.1.14	The time for achieving Practical Completion is <b>6 (six) months</b> , including the 14 day period referred to in Clause 5.3.2 below, and inclusive of non-working days referred to in Clause 5.8.1 below, but exclusive of special non-working days (Clause 5.8.1).
1.1.1.15	The name of the Employer is: the <b>Chief Executive Officer, SOUTH AFRICAN NATIONAL PARKS</b> represented by <b>The General Manager: Infrastructure &amp; Special Projects</b> and/or such other person or persons duly authorised thereto by the Employer in writing.
1.1.1.16	The name of the Employer’s Agent is: <b>SMEC South Africa (Pty)Ltd</b> or their successors duly appointed by the Employer.
1.1.1.26	The Pricing Strategy is a <b>Re-measurement Contract</b> .
1.2.1.2	The Employer’s address for receipt of communications and notices is:  <b>Physical address:</b> South African National Parks The General Manager: Infrastructure & Special Projects. 643 Leyds Street Muckleneuk Pretoria 0002  <b>Postal Address:</b> Postal Address: PO Box 787 Pretoria 0001 Telephone: (012) 426 5126
1.2.1.2	The address of the Employer’s Agent is:  Name: <b>SMEC South Africa (Pty)Ltd</b>

Contractor

Witness for Contractor

Employer

Witness for Employer

CLAUSE	DESCRIPTION / WORDING
	Address: 230 Albertus Street, La Montagne Pretoria 0184  Tel: +27 12 481 3909 E-mail: francois.retief@smec.com
3.1.3	The Employer's Agent shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract:  1. Clause 3.2.1 Nomination of Employer's Agent's Representative. 2. Clause 3.2.4 Employer's Agent's authority to delegate. 3. Clause 5.8.1 Non-working times. 4. Clause 5.11.1 Suspension of the Works. 5. Clause 5.12.4 Acceleration instead of extension of time. 6. Clause 6.3.2 Orders for variations to be in writing. 7. Clause 10.1.1 Contractor's claim.
5.3.1	The documentation to be submitted by the Contractor before commencement with Works execution are:  (1) Health and Safety Plan (Refer to Clause 4.3). (2) Initial programme (Refer to Clause 5.6) - a program must be submitted for each work order issued. (3) security (Refer to Clause 6.2) (4) Insurance (Refer to Clause 8.6). (5) Occupational Health and Safety Agreement (C1.4 of the Contract Document). (6) Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer). (7) A signed Agreement between the Employer and the Contractor for the Works to be completed by the Contractor in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act No.85 of 1993) and the Construction Regulations promulgated thereunder (Refer to Clause 4.3). (8) Proof to the Employer, of payment, that the Contractor has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act, No. 130 of 1993 (Refer to Clause 4.3).
5.3.2	The time to submit the documentation required before commencement with Works execution is <b>14 days</b> .
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but shall be as set out elsewhere in the Contract.
5.8	Delete the words "between sunrise and sunset" in the first line and replace with "within normal working hours".  <u>Add the following:</u>  "Normal working hours shall be between 07h00 and 17h00 (season dependant) on weekdays from Monday to Friday, and from 07h00 until 13h00 on Saturdays. Note that the parks access gates are locked after hours and the Contractor shall make provision for transporting his staff off site in good time. The park seasonal hours are;  <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Winter: April - September              Summer: October - March           </div> <div style="text-align: center;">             07:00 - 17:00              06:00 - 18:00           </div> </div>
5.8.1	The non-working days are Saturday and Sundays.  The special non-working days are: (1) All gazetted public holidays falling outside the year end break. (2) The year end-break as determined by the South African Forum of Civil Engineering Contractors ( <a href="http://www.safcec.org.za">www.safcec.org.za</a> ).  The special non-working days are:  <ul style="list-style-type: none"> <li>Any statutory public holiday in terms of the Public Holidays Act, and, where such statutory public holiday falls on a Sunday, and the next Monday subsequently becomes a statutory public holiday in terms of the Public Holidays Act, then both the relevant Sunday and the relevant Monday shall be special non-working days under the contract; and</li> </ul>

Contractor

Witness for Contractor

Employer

Witness for Employer

CLAUSE	DESCRIPTION / WORDING																										
	<ul style="list-style-type: none"> <li>Any proclaimed statutory day of mourning, and</li> <li>Any proclaimed statutory election day which is proclaimed as a statutory public holiday, and</li> <li>All annual year-end shutdown periods as recommended by the South African Bargaining Council for the Civil Engineering Industry.</li> </ul>																										
5.12.2.2	<p>A delay caused by inclement weather conditions will be regarded as a delay only if, in the opinion of the Employer's Agent, all progress on an item or items of work on the critical path of the working programme of the contractor has been brought to a halt. Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of "n" working days caused by normal rainy weather, for which he will not receive any extension of time, where "n" equals days per month. The table shows the average number of days on which rainfall events of &gt; 10 mm has occurred at Mapungubwe National Park.</p> <table border="1"> <thead> <tr> <th>Month</th> <th>"n" Working days</th> </tr> </thead> <tbody> <tr><td>January</td><td>2.2 days</td></tr> <tr><td>February</td><td>1.9 days</td></tr> <tr><td>March</td><td>1 days</td></tr> <tr><td>April</td><td>0.1 days</td></tr> <tr><td>May</td><td>0.1 days</td></tr> <tr><td>June</td><td>0.1 days</td></tr> <tr><td>July</td><td>0 days</td></tr> <tr><td>August</td><td>0 days</td></tr> <tr><td>September</td><td>0.2 days</td></tr> <tr><td>October</td><td>0.3 days</td></tr> <tr><td>November</td><td>1.5days</td></tr> <tr><td>December</td><td>2 days</td></tr> </tbody> </table> <p>Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" working days.</p> <p>It shall be further noted that where the critical path is not affected, no extension of time for <u>abnormal</u> climatic conditions or for any other reason will be entertained.</p>	Month	"n" Working days	January	2.2 days	February	1.9 days	March	1 days	April	0.1 days	May	0.1 days	June	0.1 days	July	0 days	August	0 days	September	0.2 days	October	0.3 days	November	1.5days	December	2 days
Month	"n" Working days																										
January	2.2 days																										
February	1.9 days																										
March	1 days																										
April	0.1 days																										
May	0.1 days																										
June	0.1 days																										
July	0 days																										
August	0 days																										
September	0.2 days																										
October	0.3 days																										
November	1.5days																										
December	2 days																										
5.13.1	The penalty for failing to complete the Works is <b>R 3 000</b> per calendar day.																										
5.14.1	The requirements for achieving Practical Completion are when the works is fit for the intended purpose and occupation without danger or undue inconvenience to the employer.																										
5.16.3	The latent defects period is <b>5 Years</b> , commencing on the day after the date of certification of Practical Completion.																										
6.2.1	The security to be provided by the Contractor shall be a performance guarantee of <b>10%</b> of the Contract Sum. The performance guarantee shall contain the precise wording of the document included in Part C1.3 of the Contract Data: <b>Form of Guarantee</b> .																										
6.8.2	Contract Price Adjustment shall <b>NOT</b> be applicable.																										
6.8.4	<p><i>Add the following to Clause 6.8.4:</i></p> <p>Notwithstanding the above, in the event that a public holiday is proclaimed after 28 days before the closing date for Tenders, no costs other than those that can be claimed under Clause 5.12.3 shall be added to the contract price.</p>																										
6.10.1.5	The percentage advance on materials not yet built into the permanent Works is <b>80%</b> . Proof of ownership is required.																										
6.10.3	The limit on retention is <b>10%</b> total of the Contract Price (5% of cost payable at completion, and 5% after 12 month retention period – final completion). A guarantee in lieu of retention is not permitted.																										
8.6.1.1.2	The value of plant and materials supplied by the Employer to be included in the insurance sum is R0.																										
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is <b>R100 000 (One hundred thousand rand)</b> .																										
8.6.1.2	A Coupon Policy for Special Risks Insurance issued by the South African Special Risks Insurance Association is not required.																										
8.6.1.3	The limit of indemnity for liability insurance is <b>R10 000 000</b> for any single claim – the number of claims to be unlimited during the construction and Defects Liability Periods.																										
10.3.2	Amicable settlement in terms of Clause 10.4 shall be contemplated for all disputes prior to referring any dispute to adjudication or arbitration.																										

Contractor

Witness for Contractor

Employer

Witness for Employer

CLAUSE	DESCRIPTION / WORDING
10.5.3	The number of Adjudication Board Members to be appointed is <b>one</b> .
10.7.1	The determination of disputes which are unresolved in terms of Clause 10.4.2 shall be by arbitration.

The additions to the General Conditions of Contract are:

Clause	Additions
A2	<b>Pro forma – Form of Offer and Acceptance</b> The Form of Offer to be used shall be the Form of Offer bound in this document, which is not necessarily the same as that attached to the published version of the General Conditions of Contract.
A3	<b>Pro forma - Deed of Guarantee</b> The Deed of Guarantee shall be in the form bound in this document, which is not necessarily the same as that attached to the published version of the General Conditions of Contract.

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**Part 2: Contract Data provided by the Contractor**

Clause	Additions
<b>Clause 1.1.1.9:</b>	The name of the Contractor is: .....
<b>Clause 1.2.1.2:</b>	The address of the Contractor is:  Physical : ..... Postal : ..... Address: ..... Address: ..... ..... ..... ..... Telephone : ..... Fax: .....  Email : .....

Contractor

Witness for Contractor

Employer

Witness for Employer

### C1.3 Form of Guarantee

WHEREAS THE CHIEF EXECUTIVE, SOUTH AFRICAN NATIONAL PARKS

(hereinafter referred to as "the Employer") entered into a Contract with .....

.....

(hereinafter called "the Contractor") on the ..... day of ..... 20.... for **CONTRACT No. CI-GK-0190**

for the

#### **MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

WHEREAS WE, ..... (*name of Insurance Company/Bank*)

have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co principal Debtors to the Employer under renunciation of the benefits of division and excursion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Due Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Due Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money.
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder shall not exceed the sum of .....

Contractor

Witness for Contractor

Employer

Witness for Employer

.....(R.....)

6. The Guarantor reserves the right to withdraw from this guarantee by depositing the Guarantee Sum with the beneficiary, whereupon the Guarantor's liability hereunder shall cease.

7. We hereby choose our address for the serving of all notices for all purposes arising hereof as .....

.....

IN WITNESS WHEREOF this guarantee has been executed by us at .....

on this ..... day of ..... 20.....

As witnesses:

1. .... Signature

2. .... Duly authorized to sign on behalf of

..... Address

.....

.....

Document for information purposes ONLY

Contractor

Witness for Contractor

Employer

Witness for Employer

# C1.4: Pro-Forma – OHS Mandatory Form

TO BE COMPLETED AND SIGNED BY ALL MANDATARIES

## OCCUPATIONAL HEALTH AND SAFETY ACT NO. 85 OF 1993

**Note: Section 1(1)(xxviii) of the Act defines a "Mandatory" as including "an Agent, a Contractor or a Subcontractor for Work."**

The Employer and the Contractor hereby agree, in terms of the provisions of Section 37 (2) of the Occupational Health and Safety Act, Act No.85 of 1993, hereinafter referred to as "the Act", that the Contractor as an employer in its own right and in its capacity as Contractor for the execution of the works, shall have certain obligations and that the following arrangement shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:-

- i. The Contractor undertakes to acquaint the appropriate officials and the employees of the Contractor with all relevant provisions of the Act, and the regulations promulgated in terms of the Act, and
- ii. The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with, and
- iii. The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and regulations in respect of the work included in the Contract, and
- iv. The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Signed at .....on the ..... day of ..... 20.....

**WITNESS:**

.....

For and on behalf of the **Contractor**

**WITNESS:**

.....

For and on behalf of the **Chief Executive Officer  
South African National Parks**

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

# C1.5: Pro-Forma – Declaration of Ownership of Unused Materials

## DECLARATION OF OWNERSHIP OF UNUSED MATERIAL FOR

### CERTIFICATE OF PAYMENT NO:

I/We, the undersigned, .....  
..... (Name of Contractor)

hereby declare that the materials for which payment is claimed in terms of Clause 6.10.1.5 of the General Conditions of Contract are:

(a) as described

\* (i) on the copy of Invoice No. .... annexed hereto;

\* (ii) as set out in detail below

.....  
.....  
.....  
.....

\*delete whichever is not applicable.

(b) located at

.....  
.....

(c) totally owned by me/us and that no other party has any claim or right in respect of the above materials and that I am/we are free to pass ownership upon receipt of payment for such materials

(c) intended for incorporation into the permanent works of this Contract.

Signed at .....

on this ..... day of ..... 20.....

Witnesses:

1.

2.

Signature: .....

Capacity: .....

On behalf of: .....

Address: .....

.....  
.....

Contractor

Witness for Contractor

Employer

Witness for Employer

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## Part C2: Pricing data

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**C2.1 Pricing Instructions**

**C2.2 Day Work Schedule**

**C2.3 Bill of Quantities**

Document for information purposes ONLY

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Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

# MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING

## CONTRACT No. CI-GK-0190

### C2.1: Pricing Instructions

- 1) The measurement and payment clause of the COLTO and the Standard and Particular Specifications shall be deemed to form part of and included in the Pricing Instruction.
- 2) The units of measurement described in the Bills of Quantities are metric units. Abbreviations used in these Bills of Quantities are as follows:

%	=	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
m <sup>2</sup>	=	square metre
m <sup>2</sup> -pass	=	square metre-pass
m <sup>3</sup>	=	cubic metre
m <sup>3</sup> -km	=	cubic metre-kilometre
MN	=	meganewton
MN.m	=	meganewton-metre
MPa	=	megapascal
No.	=	number
Prov sum	=	Provisional sum
PC sum	=	Prime Cost sum
R/only	=	Rate only
sum	=	lump sum
t	=	ton (1000 kg)
W/day	=	Work day

- 3) Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
- 4) The quantities set out in the Bills of Quantities are the estimated quantities for the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.
- 5) The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
- 6) It will be assumed that prices included in these Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders (refer to [www.stanza.org.za](http://www.stanza.org.za) or [www.iso.org](http://www.iso.org) for information on standards).

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

- 7) 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
- 8) 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.
- 9) 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.
- 10) 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.
- 11) The short descriptions of the items of payment given in these Bills of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
- 12) Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the SANS 1200 Standardised Specification.

**Construction –**

- 13) Attention is drawn to Clause 6.7.1 of the General Conditions of Contract and the Contractor must not order the quantities of materials stated in the Bill of Quantities until he has confirmed from the construction drawings or measurement on Site that such quantities are in fact the correct quantities.

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**C2.2 Day Work Schedule**

**C2.2.1 GENERAL**

Refer to section C3.6.1 for day work schedule.

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**C2.3 Bill of Quantities**

**CONTENTS**

The full BoQ will be available in the Tender Document in a PDF format.

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

Document for information purposes ONLY

Pricing schedule to included here

Document for information purposes ONLY

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Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

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## Part C3: Scope of Work

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- C3.1 Description of the Works**
- C3.2 Engineering**
- C3.3 Procurement**
- C3.4 Construction**
- C3.5 Management**
- C3.6 Annexes**

**Status**

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Standardised Specification, particular specification or any drawings, the order of precedence, unless otherwise specified, is:

Drawings  
Scope of Work (Parts C3.1, C3.4, C3.5 and C3.6)  
Standardised Specifications

---

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

### C3.1 Description of the Works

#### C3.1.1 Employer's objectives

The primary objective is to upgrade a small portion of the road network in Mapungubwe to a surfaced road as well as re-gravelling and maintaining some of the gravel roads. The works that will be carried out under this contract is described below.

#### C3.1.2 Description of the works

This contract will cover the following works:

**(a) Confluence Road (between M01 and M02) (Priority no.1)**

This section of the road will be updated to a surfaced road. The length of this portion is about 2.1km long and 5.8m wide. The works include.

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required)
- Construct a new selected layer of 150mm thick (3.5% cement modified)
- Construct 80mm thick segmental( herringbone pattern) paving blocks with 20mm bedding sand.

**(b) Confluence Road (from M04 for 350m long) (Priority no.2)**

This section starts from M04 for 350m long and 5.8m wide. It will be upgraded to a concrete road since it is at steep incline. The works include:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (3.5% cement modified)
- Construct a new concrete pavement layer (200mm thick)

**(c) Confluence Road (from M02 to confluence) (Priority no.3)**

This section of the Mapungubwe network involves the maintenance of the gravel roads. It is approximately 10km long and 6m wide. The works include:

- In-situ reconstruct the existing layer (150mm thick)
- Make-up material where required.

**(d) Leokwe Access road (Priority no.4)**

The pavement works within this section is about 400m long and includes:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (3.5% cement modified)
- Construct a new concrete pavement layer (200mm thick)

**(e) Tourism road upgrading (Priority no.5)**

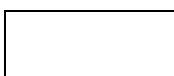
A portion of the road between Confluence and M08 will be upgraded to a concrete pavement. This section is approximately 100m long and 5.5m wide. The works include the following:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (2% cement modified)
- Construct a new concrete pavement layer (200mm thick)

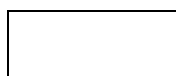
**(f) Vhembe Access road**

This access road will be regravelled as follows:

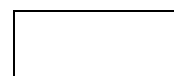
- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (2%



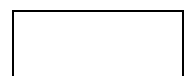
Contractor



Witness for Contractor



Employer



Witness for Employer

cement modified)

- Construct a new gravel wearing course (150mm thick)

### C3.1.3 Other Works

In addition to the above work, the following work will also be covered by the Contractor:

- The establishment on site of the Contractors site facilities at a location as directed by the Employer's Agent.
- The setting out of the road route.
- Accommodation of traffic during construction. The Works will thus be constructed in "half-widths" with stop/go control where achievable. Where required, the road will be closed and the public will be directed to the alternative roads.
- Minor drainage improvements
- Clearing of the site after completion of the Works.

### C3.1.4 Location of the Works and Access

The project is located in the Mapungubwe Park which is in Limpopo province in the Vhembe District Municipality and the Musina Local Municipality.

Access to the Park can be gained only via the main access gate which is located off R572 road. The closest town to the Mapungubwe park is Alldays.

Access to the works shall be allowed only from existing roads within the reserve and no new access roads or diversions of existing roads will be allowed under any circumstances.

### C3.1.5 Temporary Works

The Contractor will be required to always maintain the existing road in operation during the course of the contract. The Contractor shall not provide a bypass for traffic but shall work in "half widths and full closure where required"

Contractor

Witness for Contractor

Employer

Witness for Employer

# Upgrade, gravel maintenance and re-gravelling of various sections of the road network in the Mapungubwe National Park.

CONTRACT No. CI-GK-0190

## C3.2 Engineering

### C3.2.1 Design

- (a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents, unless otherwise stated.
- (b) The Contractor is responsible for the design of the temporary Works such as traffic accommodation signage and signalling and their compatibility with the permanent Works.
- (c) The Contractor shall supply all details necessary to assist the Employer's Agent in the compilation of the as-built drawings.

### C3.2.2 Employer's design

The Employer's design is contained in the Tender Documentation and Drawings. Amendments to the design, if necessary, will be issued during the construction phase.

### C3.2.3 Design brief

Where the Contractor is to supply the design of designated parts of the permanent Works or temporary Works he shall supply full working drawings supported by a professional engineer's design certificate.

### C3.2.4 Drawings

The Contractor shall use only the setting out data and dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Employer's Agent. The Employer's Agent will, at the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of all underground infrastructure shall be given by either co-ordinates or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Employer's Agent's Representative on a regular basis.

All information in possession of the Contractor, required by the Employer's Agent and/or the Employer's Agent's Representative to complete the as-built/record drawings, must be submitted to the Employer's Agent's Representative before a Certificate of Completion will be issued.

The Drawings prepared by the Employer for the permanent Works applicable to the contract are issued with this tender document and will form part of the Contract Documents as **Volume 4**. The Employer reserves the right to issue new and/or amended additional drawings during the Contract.

---

Contractor

Witness for Contractor

Employer

Witness for Employer

### C3.3 Procurement

#### C3.3.1 PREFERENTIAL PROCUREMENT

The works shall be executed in accordance with the conditions associated with the granting of preferences detailed in Form SBD 6.1: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2022, where preferences are granted in respect of B-BBEE contribution. In particular, the Contractor may not sub-contract more than 25% of the value of the contract to sub-contractors that do not have an equal or higher B-BBEE status level than the Contractor, unless the sub-contractors are exempted micro enterprises that have the capability and ability to execute the sub-contract works.

#### C3.3.2 SCOPE OF MANDATORY SUBCONTRACT WORK

See Tender Data

#### C3.3.3 SUBCONTRACTORS

##### C3.3.3.1 Procedure for the selection of sub-contractors / suppliers

Where monetary allowances for provisional sums or prime cost items have been provided in the Bills of Quantities, and where the work is to be executed / supplied by sub-contractors / suppliers, then the following selection process shall be followed in respect of the required sub-contractors / suppliers:

The Contractor shall invite three quotations from suitably qualified sub-contractors / suppliers, the selection of which shall be in consultation with, and to the approval of the Engineer, for the required work or items.

The evaluation of the quotation received must include a preference points system as described in 5.11 of the Tender Data.

##### C3.3.3.2 Attendance on subcontractors

Approval given in terms of subcontracting shall not relieve the Contractor of any responsibility, duty or obligation imposed upon him by the Contract, and the Contractor shall in particular be and remain solely liable and responsible for all acts, omissions, negligence or breaches of contract on the part of the assignee or any of his employees, and for all acts, omissions or negligence of any Sub- Contractor or any of his employees.

---

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

CONTRACT No. CI-GK-0190

**C3.4 Construction**

**C3.4.1 Standardised Specifications**

The COLTO Standard Specifications for Road and Bridge Works for State Road Authorities 1998, prepared by the Committee of Land Transport Officials shall apply.

The Contractor may purchase copies from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.

**C3.4.2 Particular Specifications**

The following particular specifications shall apply to this contract and are Annexed to this Contract

- Annexure A - Health and Safety Specifications for South African National Parks
- Annexure B - Environmental Management Plan
- Annexure C - Code of Conduct for working in the South African National Parks

**C3.4.3 Project Specification Amendments to The Standard Specifications**

Amendments to COLTO Standard Specifications and the Particular Specifications are listed in the Annex to the Scope of Works.

**C3.4.4 Known services**

The Contractor shall make himself acquainted with all existing works. Under no circumstances shall the Contractor alter or in any way interfere with the existing works or underground services unless authorised by the Employer's Agent. Allowance is made in the pricing schedule for the contractor to carry out a "radar" survey of the entire route to locate existing services.

Where existing works are of such a nature that the Employer's Agent may require them to be moved by the Contractor, the cost of such work will be paid for at scheduled rates or on day works, plant and materials basis. The Contractor will be held responsible for damages to any existing works and any damages caused shall be made good at his own cost without delay.

The Contractor is to exercise care when the proposed work is to cross an existing service, or work is to be performed close to an existing service. Prior to commencement of the relevant portion of the proposed works the Contractor with the Employer's Agent or his duly appointed representative shall also perform a visual inspection of the area in question. This inspection will not waive the Contractor of his obligations with respect care of the works referenced in the General Conditions of Contract.

**C3.4.5 Damage to services**

Damage that occurs to unknown services during construction will be paid by the Contractor.

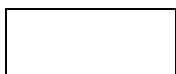
However, all services that have been located and exposed, and are subsequently damaged by the Contractor or his subcontractor, shall be reinstated to the same state as it was before the damage occurred at the time and cost of the Contractor.

**C3.4.6 Reinstatement of services and structures damaged during construction**

The Contractor shall inform the Employer's Agent immediately when a service or structure is damaged. The extent of the damage and a proposal how to reinstate the service or structure shall be submitted to the Employer's Agent on a sketch with dimensions and time frames.

The Contractor shall not be allowed to reinstate any service or structure unless indicated so by the Employer's Agent. The Contractor shall render all reasonable assistance to the service or structure owner with the reinstatement of the service or the structure if required.

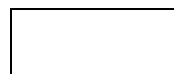
The Contractor shall be liable to reinstate the service or structure to its original state or for the full cost thereof if



Contractor



Witness for Contractor



Employer



Witness for Employer

reinstated by others.

### **C3.4.7 Services and facilities provided by the employer**

#### **C3.4.7.1 Water and Power Supply**

The Contractor shall make his own arrangements with SANParks for the necessary connections and additional reticulation, the cost, if any, of which will be for the Contractors account.

Water shall be used sparingly and if in the sole opinion of the Employer's Agent excessive consumption by the contractor occurs then the cost of such excessive consumption shall be borne by the Contractor.

The Contractor shall make his own arrangements for the supply of electricity that he may require for the execution of the works and the costs of any connections, additional reticulation and the supply of electricity shall be borne by the Contractor.

#### **C3.4.8 Facilities provided by the contractor**

The Contractor shall provide, maintain and remove his own facilities to the satisfaction of the Employer's Agent. The Contractor shall provide the area around his office, stores and sheds (i.e. the "Camp") with adequate security fences to ensure that unauthorised persons do not enter the camp area, and security personnel should be deemed necessary.

The tendered sums as scheduled by the Contractor, whether grouped or individually, shall include all costs for the installation, maintenance and removal of the fencing as specified, in addition to all other facilities specified and as required by the Contractor for his own purposes.

##### **C3.4.8.1 Location of Contractors Camp Site**

The location of the Contractor's camp shall be pointed out at the tender briefing meeting.

The Contractor shall note that the site is within a popular tourist amenity. The Contractor shall comply with all SANParks and Local Authority regulations including those relating to health, the environment and fire. The Contractor shall ensure that all camp facilities, including those for fuelling, comply with all such regulations.

Should the contract period include either the Easter weekend and / or the end of year builders' holidays the camp shall be dis-established in its entirety prior to such periods and re-established at the end of such periods. Provision for this is made in the Bill of Quantities.

The Contractor shall provide sufficient latrine facilities for its workers as required by local regulations and these shall be located in close proximity to the work area.

The camp site shall be properly and neatly fenced using temporary fencing with secure access control. The Contractor shall be responsible for providing and maintaining his own security arrangements for the duration of the Contract.

On completion of the Works, or when ordered by the Employer's Agent, the Contractor shall remove all temporary buildings and latrines and restore the Site to a clean and sanitary condition to the satisfaction of the Employer's Agent and rehabilitate the area in accordance with the EMP.

Access to the site will be in a controlled manner. People visiting the site will have to sign in and out on a daily basis.

##### **C3.4.8.2 Housing**

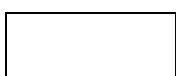
No housing is available nor shall be allowed on site for the Contractor's employees. It is the sole responsibility of the Contractor at his own cost to house his employees and transport them to and from the site.

#### **C3.4.9 Facilities for the Employer's Agent**

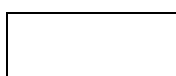
The Contractor shall provide on the Site, for the duration of the Contract and for the exclusive use of the Employer's Agent and/or his Representative (as applicable), the various facilities described hereunder. All such facilities shall be provided promptly on the commencement of the Contract and failure on the part of the Contractor to provide any facility required in terms of this specification shall constitute grounds for the Employer's Agent to withhold payment of the Contractor's tendered Preliminary and General items until the facility has been provided or restored as the case may be.

##### **C3.4.9.1 Office accommodation**

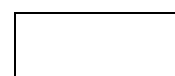
Separate office space is not required by the Employer's Agent. The Contractor shall however provide a suitable office on site wherein site meetings may be held as specified in C3.4.9.2.



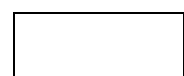
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The Employer's Agent and his Representative shall be allowed free use of all the Contractors site facilities.

The Employer's Agent and the Employer's Agent's Representative shall be allowed free use of survey equipment and an assistant to carry out control work as and when required, and the Contractor shall provide all pegs, concrete, tools and other necessary items as well as all necessary labour for excavation, bush clearing, mixing and placing of concrete, as and when required for the control of the setting out of the Works.

**C3.4.9.3 Site meeting venue**

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of six (6) persons at site meetings. The Employer's Agent shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.

**C3.4.9.4 Contract name boards**

The Contractor shall provide, erect and maintain one (1) contract name board at such a position and location directed by the Employer's Agent, which name board shall, unless otherwise specified elsewhere in the Contract, comply with the Employers standard project board with regard to size, painting, decorating and detail, and the requirements described hereunder.

The Contractor shall keep the contract name board in good state of repair for the duration of the Contract and shall remove it on completion of the Contract.

**C3.4.9.5 Survey equipment and assistants**

Both are required for the Contract. Refer to PSAB 5.5 and 5.6.

**C3.4.9.6 Electricity supply for the Employer's Agent**

All electricity supply to the Employer's Agent's office(s) and laboratory (if applicable), whether provided by the Contractor by way of a reticulated supply from a local authority or other authorised electricity supply, shall be regulated by the Contractor to within limits such as to prevent damage due to fluctuations in the electrical current supply that may occur to any electrical plant and equipment provided by the Contractor or the Employer's Agent.

The Contractor shall be liable for and pay to the Employer's Agent on demand, all costs that the Employer's Agent may incur in the repair or replacement of any electrical equipment provided by the Employer's Agent on the Site. Reliance by the Contractor on the regulation of the electrical supply by the supplier shall not absolve the Contractor of his liabilities in terms of this Sub clause and, where appropriate, the Contractor shall provide and install at his own cost, all such electrical current-regulating equipment as is necessary to prevent damage to the said equipment.

**C3.4.9.7 Site instruction book and Site diary**

The Contractor shall keep a triplicate book for site instructions on the Site at all times and provide a Site diary for daily completion by the Contractor.

**C3.4.10 Laboratory Facilities**

The Contractor shall provide and allow for his own facilities, apparatus and procedures for the testing of materials and the process control testing of materials and workmanship in order to ensure compliance with the requirements of the Specifications. The Employer's Agent shall only carry out control tests.

**C3.4.11 Other facilities and services**

**C3.4.11.1 Waste Disposal**

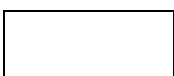
The Contractor shall make his own arrangements for solid and liquid waste disposal off site. No disposal of any waste will be permitted within the nature reserve..

**C3.4.11.2 Telephone Facilities**

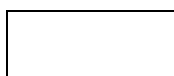
The Contractor shall be responsible for arranging his own telephone facilities and shall be responsible for all costs relating thereto.

**C3.4.11.3 Ablution Facilities**

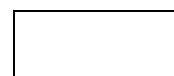
Ablution facilities are not available on site. The Contractor shall therefore make the necessary arrangement to provide these facilities. Chemical serviced toilets shall be the minimum acceptable standard as indicated in the EMP. These must be placed in a position to be approved by the Employer's Agent. The facilities must be to the Employer's Agent's approval and must be maintained in a clean and sanitary condition.



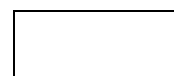
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Witness for Employer

**C3.4.12 Notice boards, signs, barricades and advertisements**

All notices, signs and barricades may be used only if approved by the Employer's Agent. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Employer's Agent shall have the right to instruct the Contractor to move any sign or notice to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

**C3.4.13 Dealing with water**

While generally high-water tables are not anticipated during summer months some the investigatory test pits indicated ingress of water. There are also a number of marshy areas and stream crossings within the work area, in which ground, and surface water will be encountered in trench and other excavations.

The Contractor shall make provision and allow for all dewatering and temporary coffer dams. All costs for this operation for the duration of the contract shall be deemed to be included in the Fixed and Value related charges in Section 1: Preliminary and General in the Pricing Data.

**C3.4.14 Dealing with high winds**

The site is situated in a region where high winds and seasonal rain can be expected. Strong south-easterly winds occur during the summer months with north-westerly winds and rain during the winter..

All heaps of materials either forming part of the excavations or imported for use in construction shall be kept covered during high winds to prevent contamination of surrounding vegetation

**C3.4.15 Alterations, additions, extensions and modifications to existing works.**

The Contractor shall within 20 days or 10% of the construction period after taking possession of the site (whichever is the lesser), satisfy himself that the dimensional accuracy, alignment, levels and setting out of existing structures or components thereof are compatible with the proposed works and shall notify the Employer's Agent of any areas of dissatisfaction.

**C3.4.16 Wayleaves, Permissions and Permits**

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall ensure that any wayleaves, permissions or permits obtained by the Employer's Agent prior to the award of the contract are transferred into the Contractor's name.

The Contractor shall abide by any conditions imposed by such wayleaves, permissions or permits.

The Contractor shall ensure that all wayleaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

**C3.4.17 Construction in restricted areas**

Working space may be sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment or any claim for payment due to these difficulties will be considered.

**C3.4.18 Allowable extent of construction activities**

It is a specific requirement of this contract that in order to limit the impact of construction activities on the existing vegetation abutting the road, **all construction activities shall be limited to no more than 600mm outside the specified extent of any construction work.**

This limitation applies to ALL items of the works including the construction of stone pitching, excavations for which shall take place from within the aforementioned stipulated limits of construction.

If any vegetation outside this limit is damaged by the Contractor, such damage shall be repaired and vegetation

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restored to the Employer's Agent's satisfaction at the entire cost of the Contractor.

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Employer

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# MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING

## CONTRACT No. CI-GK-0190

### C3.5 Management

#### C3.5.1 Standardised management specifications for construction works

None

#### C3.5.2 Particular specifications

The Particular Specifications listed in Clause 3.6 of the Scope of Works apply to this Contract.

#### C3.5.3 Construction Programme and Methods

The programme to be submitted by the Contractor in terms of the General Conditions of Contract shall be in the form of a bar chart with a horizontal time scale and shall clearly show all significant activities, the duration of all activities, the interdependencies (if any) of activities **and the critical path** of the overall programme, clearly related to the items or groups of items in the Bill of Quantities and indicating the quantity of work that will be completed each month and shall ideally be drawn up using a commercially available computer programme. The programme shall take account of and include

- a) all ordinary and special non-working days
- b) allowance for inclement weather as provided for in Clause 5.12.2.2 of Contract Data.
- c) Known physical conditions or artificial obstructions
- d) Searching for, dealing with and carrying out alterations to existing services, and
- e) The accommodation and safeguarding of public access and traffic

The Employer's Agent can, in consultation with the Contractor, review and request the Contractor to adjust the programme during the course of the contract to ensure that the annual budget is met.

#### C3.5.4 Sequence of the works

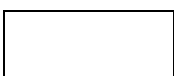
The Contractor shall include the sequence of works in the tender programme submitted with his tender offer. In determining the sequence of the works and in preparation of his Project Programme, the Contractor shall consider the following:

- a) Excavations shall remain open for the shortest possible time.
- b) Least disruption to vehicular traffic on the park's road network.
- c) During the Easter weekend and the December/January builders holiday all equipment and materials shall be removed from the work areas. The Contractors camp site, unless authorized by the Employer's Agent, during this period, shall be dismantled and removed from site for the period in question. The camp shall be re-established on the Wednesday after Easter and / or from the third week of January onwards as applicable. No excavations shall be allowed to remain open during this period.
- d) The sequence of works shall be programmed to ensure that during the periods mentioned in c) above, tourist traffic is not disrupted. The maximum allowable time for a STOP/GO traffic management system will be ten (10) minutes, where it is deemed necessary.

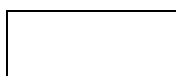
#### C3.5.5 Methods and procedures

The Contractor shall advise in his tender the methods and procedures that he proposes in performing the works. These methods and procedures shall not be deemed as terms of the Contract. The Contractor is also allowed to change his methods and procedures as he sees fit subject to the change being approved by the Employer's Agent. Methods and procedures will not vary the specification and cannot be used to provide qualifications to the proposed agreement. The intention of the method statement is to provide the Employer's Agent and the Employer with information as to how he proposes to perform the said works.

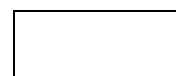
- a) Normal working hours  
Normal working hours shall be from 07h00 until 17h00 on weekdays from Monday to Friday and from 07h00 until 13h00 on Saturdays. Note that the parks access gates are locked after hours and the Contractor shall



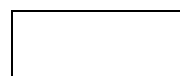
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make provision for transporting his staff off site in good time. The park hours are;

Winter:	April - September	07:00 - sunset
Summer:	October - March	06:00 - sunset

Work on other days or at other times shall only be allowed after agreement of the Employer and written approval has been granted by the Employer's Agent.

- b) Interference with the public  
The Contractor shall ensure that none of his staff interfere in any way with the public visiting the park and shall be courteous at all times.

Any person ignoring this shall be removed permanently from site, all at the expense of the Contractor.

### C3.5.6 Quality plans and control.

Within three weeks of the award of the contract the Contractor shall furnish the Employer's Agent with a Quality Assurance and Control plan that incorporates all of the requirements of this specification.

#### C3.5.6.1 Quality System

The Contractor shall, for the purposes and duration of the Contract, operate and maintain a quality management system complying with the requirements of the ISO 9000-9004 series (as applicable). The Quality System shall take the form of a co-ordinated and formally documented statement and shall include quality management objectives, policies, organisation, procedures, and work instructions that demonstrate the Contractor's implementation of the requirements of ISO 9001 - 2000 Code for Quality Management Systems.

#### C3.5.6.2 Project Quality Plan

The Contractor's Project Quality Plan for the Contract shall indicate how the Contractor's Quality System shall apply to the specific requirements of the Contract. It shall clearly indicate, by way of written description, schedules, flow diagrams and procedures, compliance with ISO 9001 - 2000 and compliance by Sub-Contractors to ensure compliance with ISO 9001, 9002 or 9003 - 2000, as appropriate to the classification of the product or service.

The Project Quality Plan shall identify all documentation concerning implementation of the procedures and will form part of the demonstration of conformance to requirements for the plant materials and equipment to be supplied under this Contract.

The Project Quality Plan shall be subject to the Employer's Agent's approval.

The vocabulary used shall comply with the requirements of ISO 8402-1994.

### C3.5.7 Site usage

The Contractor's employees shall not be allowed to stay on site except for the duration of a working day. The only persons to be allowed on site for the duration of a calendar day shall be the site guard(s) or any personnel required to ensure proper traffic accommodation and control.

Access to the site will be in a controlled manner. People visiting the site will have to sign in and out on a daily basis.

### C3.5.8 Testing, completion, commissioning and correction of defects

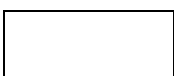
Workmanship, tolerances and frequency of testing are to be in accordance with relevant specifications.

The Employer reserves the right to appoint independent testing laboratories to monitor the results returned by the Contractor for the quality of materials and work performed.

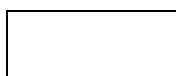
The Contractor shall conduct his own testing as work proceeds to ensure that the necessary requirements and specifications are being complied with.

Once the Contractor is satisfied as to the completion of any stage of his work, he shall arrange for the following:

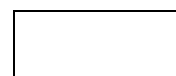
- Necessary measurements (survey, levels, etc.) are taken for computation of quantities.
- Information must be submitted to the Employer's Agent for approval.



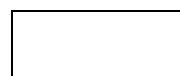
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- The said stage shall be tested by his own laboratory, the Employer's Agent and/or any other party requested by the Employer's Agent. This testing shall take place jointly by all the parties involved and at the direction of the Employer's Agent.
- Only once the measurement information and the results from the required tests have been submitted to and approved by the Employer's Agent, will the Employer's Agent issue a site instruction to proceed with the next stage.
- Both the Contractor and the Employer's Agent will keep the measurement information and all test results for each stage in a filing system that will enable easy access. All samples taken for testing shall be suitably referenced to enable them to be traced. This includes a dimensioned site plan where necessary.
- The Contractor shall arrange for each testing as described above at least 24 hours in advance. Should the Contractor fail to request an inspection timeously and proceed with work without the Employer's Agent's approval, this will be at his own risk.

**C3.5.9 Recording of weather**

The Contractor shall be responsible for keeping accurate records of weather conditions in the Daily Site Diary, to use as substantiation of any claim for extension of time in accordance with GCC, Clause 10.1

The Contractor will inform the Employer's Agent when he is unable to proceed with the works in accordance with the approved contract program. Subject to the approval of the Employer's Agent, the rainfall and other relevant notes will be noted in the Daily Site Diary for the applicable day/s. After the event the Contractor shall provide a revised contract program motivating if the delay affects his schedule to the extent that he will need to motivate for an extension of time in accordance with the relevant GCC Clause 10.1.

The Employer's Agent, together with the Employer, shall be responsible for granting the extension of time.

**C3.5.10 Format of communications**

All instructions to the Contractor will be in writing and shall be deemed to have been received if left with the Contractor or his agent at the site of the works or at the business premises of the Contractor.

The format of the letters, invoices etc., will be determined and agreed at the first site meeting

**C3.5.11 Key personnel**

The Contractor is deemed to have in making his offer, all personnel available to perform the works entirely in the contracted time and cost. In addition he shall comply with the prevailing South African Act 85 of 1993, Occupational Health and Safety Act.

The Tenderer shall state, in the format of a schedule, the posts for which he shall consider key personnel for the Site of Works. The Contractor, once formally requested by the Employer's Agent, shall make available the contact details of all the key personnel on site.

The Employer's Agent and his duly appointed representative will be the key contacts on site.

**C3.5.12 Management meetings**

Monthly Progress Meetings shall be held with the first meeting called the Site Handover meeting. The Contractor will be supplied with an appropriate agenda for the progress meetings and the meetings shall be chaired by the Employer's Agent or his duly appointed representative.

The Contractor shall arrange for the Contractor's Project Manager and the Contractor's Technical Supervisor to attend these meetings when called for by the Employer's Agent.

The Employer's Agent or his duly appointed representative shall be responsible for issuing of the minutes.

**C3.5.13 Forms for contract administration**

The Contract will be managed by, but is not limited to, site instructions, letters, minutes of meetings and quality forms signed by the Employer's Agent or his duly appointed representative.

**C3.5.14 Electronic payments**

The Contractor shall provide his banking details to enable electronic payments to be made; such payments shall be at the direction of SANParks procurement policy.

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### C3.5.15 Daily records

A Daily Site Diary shall be used by the Contractor for recording day by day the state of the weather, the work done each day and full details of any circumstance which may affect the progress of the works. One original sheet and two copies shall be used for each day. The original sheet of each set of 3 pages will be retained by the Employer's Agent or his representative. The Contractor may remove the second sheet but the third sheet shall be retained on the site until completion of the works, when it shall be handed over to the Employer's Agent.

### C3.5.16 Reporting

The Contractor shall submit a monthly progress report to the Employer's Agent at least three days before each monthly site meeting and the report shall provide the following details:

- i) A summary of progress on site over the month preceding the site meeting as a detailed narrative to the contract programme.
- ii) Those activities which are running late in terms of the accepted programme and the Contractor's proposed actions to redress the situation.
- iii) All plant, labour and materials utilised

### C3.5.17 Payment certificates

The monthly payment certificate to be submitted by the Contractor in terms of the General Conditions shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Employer's Agent, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Employer's Agent's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Employer's Agent for the purposes of accurately reflecting the actual quantities and amounts which the Employer's Agent deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Employer's Agent within three (3) normal working days from the date on which the Employer's Agent communicated to the Contractor the adjustments required. The Contractor shall submit to the Employer's Agent two (2) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Employer's Agent the requisite copies of the adjusted statement for the purposes of the Employer's Agent's payment certificate will be added to the times allowed to the Employer's Agent in terms of the General Conditions to submit the signed payment certificate to the Employer and the Contractor and shall also be added to the period in which the Employer is required to make payment to the Contractor.

Payment for particular items scheduled shall conform to the applicable payment clauses of the Pricing Data, Project Specifications and the Particular Specifications.

Where retention money is applicable to a Contract, the retention money shall be deducted on the invoice from the total amount for work done and then the Value Added Tax (VAT) added to calculate the total amount payable on the invoice.

If penalties are payable, they will be deducted prior to the addition of VAT but after the calculation of retention.

### C3.5.18 As Built Data

The Contractor will be given a complete set of prints of the drawings upon which he shall, as the work progresses, record all amendments to and deviations from the drawings as issued to him at the start of the contract and the actual positions and levels of all the works shall be accurately determined and recorded on these as-built drawings.

### C3.5.19 Finishing and Tidying

As the works proceed the work areas shall be progressively and systematically finished off and tidied. Spoil, rubble and other materials shall not be allowed to accumulate.

The contractor shall recover all excess materials used in the works and remove from the park.

### C3.5.20 Occupational Health and Safety Act

In terms of the provisions of Section 37(2) of the Occupational Health and Safety Act, Act No. 85 of 1993 (the Act) the Contractor as an employer in its own right and in its capacity as principal contractor for the execution of the works, shall have certain obligations and the following arrangement shall apply between the Contractor and the Employer to

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ensure compliance by the Contractor with the provisions of the Act:

- a) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Construction Regulations 2014 promulgated in terms of the Act, and
- b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed by the Act and the Construction Regulations 2014 shall be fully complied with, and
- c) The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act or Construction Regulations 2014 pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge, and
- d) The Contractor shall when called upon to do so, enter into and execute an agreement as provided for under Section 37(2) of the Act. The agreement in the relevant form shall be submitted to the Employer together with a letter of good standing from the Compensation Commissioner within fourteen days after receipt of the Letter of Acceptance. The site will not be handed over to the Contractor until the Employer has received the completed Agreement and the letter of good standing.

### C3.5.21 Accommodation of Traffic

The Contractor shall maintain close liaison with the SANPARKS Cape of Good Hope management regarding the effect of the proposed works on vehicular traffic and access to the parks road network.

Where traffic is controlled by "stop / go" systems during construction carried out in "half widths", such control shall be maintained 30 minutes before the park's opening time and 30 minutes after the park's closing time, which times are as follows:

<b>October to March</b> 6am to Sunset	<b>April to September</b> 7am to Sunset
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It is a condition of this contract that traffic is accommodated, and all signage for roadworks is provided, in accordance with the Drawings and the requirements of Volume 2 Chapter 13 of the June 1999 edition of the South African Road Signs Manual.

The Contractor shall make the best possible effort to minimise the extent of roadway required for construction and where a STOP/GO system is in place the maximum delay shall be 10 minutes.

During the Easter weekend and the end of year builder's break, all roads shall be opened to full width and all traffic control signage removed.

### C3.5.22 Safety and Security

The Contractor shall be responsible for the safety and security of his personnel, materials on site and the works in general at all times. The Contractor shall therefore acquaint himself with the current situation in the areas (by liaising with the local police if necessary), and shall provide all security measures, including the employment of accredited security services, as he deems necessary to comply with the requirements of this clause.

The Contractor shall ensure that the general public is at all times protected from the works, Where the normal use by the public of, and access to roadways and all other public areas is not available due to the construction works, adequate notices and signage of such temporary closures and alternative routes shall be provided.

### C3.5.23 Environmental Care

The Contractor shall refer to the SANParks Environmental Management Plan which forms part of the Contracts specifications.

The Contractor's attention is drawn to the extreme environmentally sensitive nature of the site. It is the specific requirement of this Contract that the Contractor shall at all times adhere strictly to the Environmental Management Plan that forms part of the project specification.

No constructional activities of any kind shall be permitted without the express prior written authority of the Employer's Agent. Such written authority shall only be given after the Contractor has provided full details and work methods of the constructional activity he proposes and his staff have completed the awareness programme.

SANParks shall nominate an Environmental Officer for the whole or part of the contract period to monitor the Contractor's compliance with his specified obligations with regard to the Environmental Management Plan.

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**C3.5.24 Financial Management**

This contract has a budget limit and shall be completed within this budget.

The measurements in the Bill of Quantities shall be taken as provisional and Clause 6.11 of the General Conditions of Contract shall not apply to this Contract.

During the course of the contract the Employer's Agent shall determine the extent of work required to remain within budget and shall vary the quantities or areas or items of work accordingly. Any claims or variations that the Contractor requires to submit shall be done timeously and without delay.

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**C3.6 Annexes**

**CONTENTS**

**3.6.1 PROJECT SPECIFICATION AMENDMENTS TO THE STANDARD SPECIFICATIONS**

**3.6.2 PARTICULAR SPECIFICATIONS**

<b>ANNEXURE A</b>	HEALTH AND SAFETY SPECIFICATIONS
<b>ANNEXURE B</b>	ENVIRONMENTAL MANAGEMENT PLAN
<b>ANNEXURE C</b>	CODE OF CONDUCT FOR WORKING IN THE SOUTH AFRICAN NATIONAL PARKS

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Contractor

Witness for Contractor

Employer

Witness for Employer

3.6.1 PROJECT SPECIFICATION AMENDMENTS TO THE STANDARD SPECIFICATIONS

Notes to tenderer:

1. In certain clauses the Standard Specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains some additional specifications required for this particular contract.
2. The number of each clause and each payment item in this part of the project specifications consists of the prefix B followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new series, new clause or a new payment item which does not form part of a series, clause or a payment item in the standard specifications, and which is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the standard specifications.

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SECTION B1200: GENERAL REQUIREMENTS AND PROVISIONS

B1204 PROGRAMME OF WORK

a) General requirements

*Add the following as a continuation of the first paragraph:*

“In drawing up the programme the contractor shall make allowance for the following:

- i) All special non-working days defined in this Contract.
- ii) The expected delays.
- iii) The following embargo hours and days:
  - No work is allowed between 17h00 and 07h00am during weekdays
  - No work is allowed between 13h00 and 07h00am on Saturdays.

*Insert the following paragraph:*

“c) Programme revisions

The programme will be reviewed at the monthly site meetings at which the contractor shall provide sufficient detail that will allow the comparison of completed work per activity against the current programme. The contractor shall indicate what resources and programme changes he intends to implement in order to remedy any activity that has fallen behind. The engineer may demand from the contractor a major revision of the programme. Such a revision shall be submitted for comment within 14 days of the demand.”

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Contractor

Witness for Contractor

Employer

Witness for Employer

**B1205 WORKMANSHIP AND QUALITY CONTROL**

*Insert the following heading after the title:*

**“a) General:**

*Insert the following as sub-clauses after the first paragraph:*

**b) Quality Systems**

The contractor shall implement a quality assurance system that replicates an ISO 9002 and appoint a quality manager who shall ensure that members of the contractor’s staff comply with the requirements of the quality system. The quality system and the methods used to implement it shall be described in a quality plan produced by the contractor. The quality manager shall be resident on site full time.

The contractor shall submit the quality assurance system he proposes using to the engineer, for his approval, within two weeks of the site handover. The system shall record the lines and levels of responsibility and indicate the method by which testing procedures will be conducted. Once accepted by the engineer the contractor shall not deviate from it unless written notification of proposed changes have similarly been submitted and approved.

The system shall provide for a method statement for each construction activity for which a pay item is provided in the Pricing Schedule. Each method statement shall be submitted to the engineer for his approval two weeks prior to commencement of the activity. Where appropriate the contractor shall make use of the employer’s manuals in preparing his method statements. No construction activity shall commence before the engineer has approved the contractor’s quality assurance system.”

**B1207 NOTICES, SIGNS AND ADVERTISEMENTS**

*Delete the third paragraph and replace with the following:*

“All signboards erected in accordance with the drawings shall be removed at the same time as the de-establishment of the contractor’s camp. Payment under subitem 13.01 for the final instalment of 15% of the tendered lump sum shall not be made unless all the advertisements, notices and temporary signs have been removed. A typical signboard layout is shown on the drawings”.

**B1209 PAYMENT**

**b) Rates to be inclusive**

*Add the following to the first paragraph:*

“VAT shall be excluded from the rates.”

*Insert the following after “constructional plant” in lines 6 and 7 of the first paragraph:*

*“(distinguishing between operational costs and hire costs)”.*

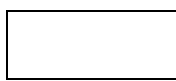
**c) The meanings of certain phrases in payment clauses**

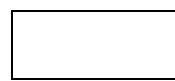
Procuring and furnishing ... (material)

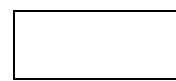
*Add the following:*

“Payment for procuring and furnishing material from commercial sources shall include all transport costs, irrespective of distance hauled”.

  
Contractor

  
Witness for Contractor

  
Employer

  
Witness for Employer

**e) Materials on the site**

Replace "clause 52" in the first line with "sub-clause 14.5"

Add the following sub-clauses:

**"g) Work in confined areas**

Except where provided for in the specification and the Pricing Schedule no extra payment shall be made nor shall any claim for additional payment be considered for construction in confined areas. The omission of standard payitems from the schedule of quantities shall be taken to be deliberate and any additional costs incurred shall be included in the bulk rate.

**h) Split quantities**

Wherever in the Pricing Schedule allowance has been made to price items of work for which a product or material is uncertain and quantities split between pricing items, the Employer reserves the right to choose whichever is the most appropriate or combination thereof, regardless of any adverse effect on the Contractor's costs and no claims for additional compensation shall be entertained."

**B1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS**

Amend the heading of this clause to read:

**"TAKING-OVER CERTIFICATE"**

Replace the 1<sup>st</sup> paragraph with the following:

"Notwithstanding that there might be natural or programmed sections of the works that will result in them being completed in their entirety before other sections, no consideration shall be given to the issuing of Taking-Over Certificates for parts of the works. The use of any completed roadway or parts of the work, whether for unhindered use by the public or for accommodation of traffic while other parts are being constructed, shall not constitute use or occupation by the Employer.

The notice to the engineer, i.t.o clause 10.1 of the Conditions of Contract applying for a Taking-Over Certificate, shall include the contractor's own list of what it considers to be the outstanding minor works that do not substantially affect the use of the Works. As justification that the issue of a Taking-Over Certificate is warranted the contractor shall take note that the following sections of the works are to be completed to the satisfaction of the engineer."

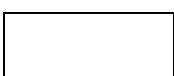
Add the following to sub-clause (e) before the semicolon:

"(including road studs)"

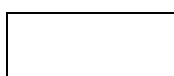
Add the following paragraphs after item (h):

"In addition to the above itemised sections of the works and regardless of the degree of beneficial occupation by the Employer, the outstanding works contained in the lists produced by the contractor and the engineer shall be considered for taking-over only if the following criteria have been met:

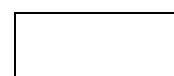
- (i) The estimated cost to complete the listed outstanding work is less than 2% of the tendered value of work plus the cost of any variation or extra work orders, but excluding CPA and VAT.
- (ii) The written lists of outstanding items of work can be completed within 28 days of the lists having been issued.
- (iii) Any information in the contractor's possession, which is required by the engineer and has been requested in writing, has been supplied.



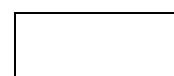
Contractor



Witness for  
Contractor



Employer



Witness for  
Employer

- (iv) The Regional Manager of the Department of Mineral Resources (DMR) has issued written confirmation to the contractor that they are satisfied with the final shaping to all quarries, borrow pits, stockpile areas, and spoil sites used or intended to be used under this contract. In the event this written confirmation is not obtained from DMR, acceptance by the Environmental Assessment Practitioner (EAP) will be sufficient for the issuing of the Taking-Over Certificate. The confirmation from the DMR will be a condition of the issue of the Performance Certificate.
- (v) The Contractor has supplied reasonable evidence that all the labourers have been paid and Subcontractors have received all amounts due in terms of the subcontract agreement provisions.

If any of the listed criteria (i) through (v) are not met at the date of the contractor's notice of application, the engineer is to reject the application without providing any corresponding list of outstanding work. If an application is rejected, the contractor shall rectify what has been identified as deficient before submitting a new notice of application."

**B1229 SABS CEMENT SPECIFICATIONS**

*Delete this clause.*

*Add the following clauses:*

**"B1230 MATERIALS**

**(a) General**

The contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the engineer with certificates showing that the materials do comply with this specification.

Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the engineer's office on the site free of charge.

Where materials are specified under trade names tenders must be based on these materials. Alternative materials may be submitted as alternative tenders and the engineer may, after receipt of tenders, approve the use of equivalent materials. The tender must be clearly marked as an alternative tender, failing which the tender may be rejected.

Unless otherwise specified, all proprietary materials shall be used and placed in strict accordance with the relevant manufacturer's current published instructions. Agrément certified products shall be used and placed in accordance with its Agrément certification criteria.

Unless anything to the contrary is specified, all manufactured articles or materials supplied by the contractor for the permanent works shall be unused.

Any materials excavated or present on the site or within the road reserve, or in borrow areas shall not become the property of the contractor but will be at his disposal only in so far as they are approved for use on the contract, unless otherwise indicated in the project specification.

Existing structures on the site shall remain the property of the Employer and except as and to the extent required elsewhere in the contract, shall not be interfered with by the contractor in any way.

Materials to be included in the works shall not be damaged in any way and, should they be damaged on delivery or by the contractor during handling, transportation, storage, installation or testing they shall be replaced by the contractor at his own expense.

All places where materials are being manufactured or obtained for use in the works, and all the processes in their entirety connected therewith shall be open to inspection by the engineer (or other persons authorised by the engineer) at all reasonable times, and the engineer shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications.

Contractor

Witness for Contractor

Employer

Witness for Employer

The contractor shall satisfy himself that any quarry selected for use provides the necessary mined material in accordance with the specification.

(b) **Banned materials**

No tar fluid products shall be used in the construction works.

**B1231 MIX DESIGNS**

Before commencing with certain construction activities, the contractor shall, except where specified otherwise in the relevant construction sections in the Scope of Works, apply the following procedures with regards to mix designs:

- Taking and submitting samples of the relevant materials.
- Undertake the required mix design(s) or allow the engineer to undertake them.
- Produce, where required, laboratory, production/plant and/or trial mix(es).
- Undertake the required adjustments to the mix design(s) and reproduce required laboratory, production/plant and/or trial mix(es).
- Complete trial section(s) where required.
- Await the engineer's approval of the mix design(s) and trial section(s).

**B1232 MEASUREMENT AND PAYMENT**

<b>Item</b>			<b>Unit</b>
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**B12.01 Protection, removal, realignment and replacement of services**

- (a) Existing Services ..... prime cost (PC) sum
- (b) Handling cost and profit in respect of sub B12.01(a).....percentage (%)

The prime cost items shall be paid in accordance with the general condition of contract. The tendered percentage is a percentage of the amount actually spent under the prime-cost items, which shall include full compensation for the profit in connection with providing the specified service.

**B12.02 Supply and Install Contract Notice boards as instructed by the Engineer (as per drawing)**

The unit of measurement for item B12.02 is the total number of the approved contract sign boards provided and erected by the Contractor in the positions on site indicated by the Engineer. The contract rate for item B12.02 shall include full compensation for all costs associated with providing, erecting and for the later removal of the contract signboards as soon as the Works have been completed.

**SECTION B1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**

**B1302 GENERAL REQUIREMENTS**

**c) Legal and Contractual Requirements and responsibilities to the public**

*Add the following:*

"Legislation imposes mutual obligations on the Employer and contractor in the performance of their duties to society and to the built and natural environment. To assist the contractor in understanding and assessing his obligations, and thus to make allowances for the cost of compliance with this legislation, the following additional specifications are included in the project specifications.

Contractor

Witness for Contractor

Employer

Witness for Employer

Annexure B of the Scope of Works contains the Environmental Management Plan (EMPI) for this project. Its provisions regulate the contractor's construction methods to ensure responsible conduct and treatment of the environment relevant to the project. Payment subitem 13.01(e) makes allowance for the contractor to price for environmental compliance duties as well as the duties of the Designated/dedicated Environmental Officer (DEO) as prescribed in this section.

Annexure A of the Scope of Works contains the specifications that regulate the contractor's construction methods so far as to ensure health and safety of his employees and of the public. New payitem has been made available under this section to allow the contractor to make separate provision for the cost of health and safety measures during the construction process."

**B1303 PAYMENT**

<b>Item</b>	<b>Unit</b>
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**B13.01 The contractor's general obligations**

*Add the following pay subitems:*

- |  |       |
|--|-------|
| “(d) Health and safety obligation..... | month |
| “(e) Environmental obligation .....    | month |

*Add the following paragraphs:*

“Should the combined total tendered for subitems (a), (b), and (c) exceed 20% of the tender sum (excluding CPA, contingencies and VAT), the tenderer shall state his reasons in writing for tendering in this manner.

Payment of the rate per month for subitems B13.01(d) and (e) shall include full compensation for all the contractor's obligations relevant to health and safety legislation (including mine health and safety, where applicable), environmental compliance.

The tendered rates for subitems 13.01(d) and (e) shall apply in the same manner as pay subitem B13.01(c).

**SECTION B1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL**

**B1402 OFFICES AND LABORATORIES**

**b) Offices**

*Amend sub-clause (xii) to read as follows:*

“(xii) A complete telephone service capable of delivering electronic and facsimile data, together with ...”

*Amend sub-clause (xvii) to read as follows:*

“(xvii) A combination colour printer/copier/scanner/facsimile machine for A3 and A4 size documents.”

*Add the following sub-clauses:*

Contractor

Witness for Contractor

Employer

Witness for Employer

(xviii) Plan holders which shall be able to accommodate 30 AO – sized drawings hanging vertically and of a robust construction to withstand continuous use over the duration of the contract.

(xix) An electric refrigerator of specified capacity.

(xx) Floodlights which are to be controlled by a photocell for security purposes at the offices and laboratory.

**B1404 SERVICES**

**b) Water electricity and gas**

*Add the following to the end of the third paragraph:*

“The power supply shall be regulated by a suitable voltage regulator in order to maintain a constant current and voltage level at all times to prevent damage to the office and related machinery during power surges. In the event of damage to the office and related machinery because of a faulty voltage regulator, the contractor shall be liable for payment of all repair or replacement costs of such damaged items.”

*Add the following to the end of the fourth paragraph:*

“An on-site motor-alternator shall supply electricity when power from a recognized power-supply authority is not available.”

**B1405 GENERAL**

*Add the following to paragraph (e):*

“In addition, the offices shall be supplied with approved burglar proofing and the whole site shall be guarded full time during the day and night, as well as over weekends and holidays. The site shall also be fenced with a 2,4m high security fence with a razor-cut wire being used as strands or with a brick wall. The cost of this protection shall be included in item B13.01.”

*Add the following to paragraph (f):*

“The offices and any living accommodation must be separated by at least 200m.”

**B1406 MEASUREMENT AND PAYMENT**

**Item** **Unit**

**B14.01 Office and laboratory accommodation**

*Add the following subitem:*

“(g) Kitchen units .....square metre (m<sup>2</sup>)”

*Add the following to the description of the pay item:*

Contractor

Witness for Contractor

Employer

Witness for Employer

“The tendered rate for subitems (e) and (g) shall include full compensation for the supply, erection and maintenance of the complete unit as specified in clause B1402.”

**Item** **Unit**

**B14.03 Office and laboratory fittings, installations and equipment**

**a) Items measured by number**

*Add the following subitems:*

”(xix) Plan holder ..... number (No)

(xx) Floodlights complete with poles and 500Watt  
minimum globes ..... number (No)

The tendered rate for subitem B14.03(a)(xx) shall include for the operation of the lights from sunset to sunrise for the full duration of the contract.”

**B14.08 Services**

(c) Services for rented houses.....prime cost (PC) sum

*The unit of measurement of this pay-item shall be changed to prime cost sum.*

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Contractor

Witness for Contractor

Employer

Witness for Employer

**Item**

**Unit**

**B14.10 Provision of photostat facilities**

*Amend this payitem description to read "Provision of copying facilities" and in the payment prescription, amend "photocopier" to read "combination colour printer/copier/scanner/facsimile machine".*

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**SECTION B1500: ACCOMMODATION OF TRAFFIC**

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Contractor

Witness for Contractor

Employer

Witness for Employer

**B1501 SCOPE**

*Add the following:*

“It is a requirement of this specification that traffic is accommodated taking into account the provisions of the latest edition of the South African Road Traffic Signs Manual (SARTSM). The latest version for use in the accommodation of traffic is volume 2, chapter 13 of the June 1999 edition. Copies of this publication are available from Government Printers –Tel: (012) 334 4507/8/9 or (012) 334 4510 Fax: (012) 323 9574.

This section also covers the provision of additional information signs for motorists and the release of any notices to the media and public.”

**B1502 GENERAL REQUIREMENTS**

*Insert the following:*

“The whole of the site will be handed over to the contractor at the beginning of the contract. The sequence in which various parts of the site may be occupied by the contractor for the execution of the different items of work shall be subject to the requirements of the contract documents regarding, inter alia, working hours and the number, spacing and length of the work areas which may be occupied at any particular time.

The contractor shall programme his work taking due cognizance of restrictive conditions indicated in Clause B1204. The contractor's tendered rates shall include full compensation for all possible additional costs which may arise from the above and no claims for extra payment as a result of this *modus operandi* will be considered. The contractor shall in particular note that no additional compensation shall be made for work that could be considered as half-width construction.”

**a) Safety**

*Replace the full stop at the end of the first paragraph and continue with the following:*

“... flow of traffic, including the prohibition of his, and his subcontractor's, construction plant from disregarding the stop/go accommodation of traffic control facilities. Failure to comply with this requirement shall be taken as a penalty event in terms of B1502(l).”

*Add the following paragraphs:*

“The contractor shall be responsible for maintaining the existing road surface both within the works area and the advance warning and termination areas in a safe and trafficable condition for the duration of the contract.

The contractor shall within 7 (seven) working days after receipt of a 3rd party claim acknowledge receipt to the claimant. The engineer shall be copied on all correspondence regarding 3rd party claims. The contractor shall at the monthly site meeting report on the status and outcome of the 3rd party claims.

The contractor shall be fully responsible for all the traffic accommodation on site, including for work undertaken by sub-contractors, e.g. at bridges etc.

Traffic shall be accommodated as indicated on the drawings unless an alternative tender incorporating an amended method of traffic accommodation has been accepted.

The contractor may amend the agreed traffic accommodation scheme but only with the approval of the engineer in consultation with the provincial and municipal traffic authorities.

During the non-working hours, or when construction is not taking place on a certain section of road all obstructions to the traffic shall be removed and all signs no longer applicable to the situation shall be removed to an approved safe location or effectively covered.

Contractor

Witness for Contractor

Employer

Witness for Employer

No equipment or vehicles shall be stored or parked in the median or on the road side during non-working hours except if protected or demarcated and only if approved by the engineer.

When requested by the engineer, the contractor shall provide lane closures for the purpose of road inspection. This must be done in advance of the actual programmed time for the work."

**f) Approval of temporary deviations**

*Add the following:*

"If, after any temporary deviation has been constructed, any changes are considered necessary or desirable, the proposal shall be submitted to the engineer for his approval."

**i) Traffic Safety Officer**

*Add the following to the end of the second paragraph:*

"The contractor shall submit a CV of the candidate to the engineer for approval before the candidate is appointed as the traffic safety officer. "

*Insert the following as the opening phrase to sub-sub-clause (i):*

"make himself available to discuss road safety and traffic accommodation matters whenever required by the engineer and shall be responsible..."

*Delete sub-sub-clauses (ii) and (iii) and replace with the following:*

(ii) Record on neat and dimensioned sketches and submit to the engineer the position and sign reference number, where applicable, of each sign, barricade, delineator, cone, amber flicker light, guardrail and permanent or temporary painted road marking feature. The position of each shall be adequately referenced from the marker boards or other surveyed points on the site of the works.

These records shall also show the date and time at which the recorded traffic accommodation features are certified correct by the traffic safety officer, and shall be signed by the traffic safety officer before being submitted to the engineer.

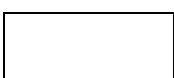
The records shall similarly account for whatever changes are made in the field. Such changes shall record the position of flagmen and stop/go control men and their associated traffic accommodation equipment wherever they are used.

(iii) Personally inspect the position and condition of each traffic accommodation feature on the whole site of works twice per workshift, whether daytime or nightwork, and at least twice a day/night during non-working hours, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the engineer such record sheets by middle of the next working shift. The above inspections must at least take place before the commencement of peak traffic periods. The traffic safety officer shall keep a duplicate book for this specific purpose.

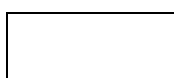
The traffic safety officer shall also submit with this report the daily labour returns of flagmen, stop/go, traffic signal control personnel employed and the traffic data recorded at each traffic control point."

*Add the following sub-sub-clauses:*

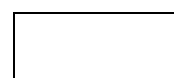
(ix) The traffic safety officer shall be equipped with a cellular telephone and shall have a traffic safety vehicle and sufficient labour at his disposal 24 hours a day, including all prescribed non-working days, and shall not be utilised for other duties. He shall be directly answerable to the contractor's site agent. The traffic safety officer shall have his own vehicle to carry out inspections and at least one assistant to accompany him full time. Furthermore the traffic safety vehicle shall be a truck with a capacity of at least 3 tons and shall be equipped with a high visibility rear panel in accordance with the requirements



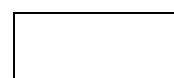
Contractor



Witness for  
Contractor



Employer



Witness for  
Employer

of the SARTSM as well as a truck mounted impact attenuator complying with TL-2 criteria when tested in accordance with NCHRP 350 or N1 criteria when tested in accordance with EN 1317. (Certification of compliance must be on site at all times). The attenuator shall be used when the vehicle is utilized to close traffic lanes or when attending to stationary or broken down vehicles or accident scenes. The words TRAFFIC CONTROL shall be written on a warning sign in highly legible letters, not less than 150 mm high, and the sign shall be mounted on both the traffic safety officer's vehicle and the traffic safety vehicle at least 1,5 m above ground level. The proposed sign and letter dimensions shall be submitted to the engineer for his approval.

The vehicles shall also be equipped with flashing amber LED lights or with flashing amber LED light bars of an approved design. The warning light shall be switched on at all times and the sign shall be displayed when the vehicle is used on site.

The traffic safety officer shall have a direct line of communication at all times with the police and traffic officers responsible for the area within limits of the contract.

- (x) Ensure that all obstructions related to the contractor's activities be removed at the end of each work shift where applicable as instructed by the engineer and that the roads are safe for the travelling public.
- (xi) The traffic safety officer shall, in addition to the duties listed in paragraph 1502 (i), also be responsible to arrange for the removal of stationary or broken down vehicles off the roadway in conjunction with the routine maintenance contractor and/or traffic authorities and implementing actions requested by the traffic authorities with regard to the work to be carried out and be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic.
- (xii) In the event of an accident the traffic officer shall record in a written report the details of the accident, record the position of all temporary road signs, barricades, delineators, flagmen and any other devices used for traffic accommodation. In addition the report shall include a neat dimensional sketch, photographs, identifiable permanent features, and any other relevant information.
- (xiii) At least two separate traffic safety officers and teams shall be employed when construction is carried out during the day and night."

**j) Site personnel**

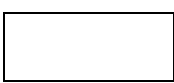
The contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on or near to the travelled way. Any person found not wearing a reflective jacket under these circumstances shall be removed from the site until such time as he is in possession of and wearing a reflective jacket. Reflective safety jackets shall be kept in good condition and any jackets that are, in the opinion of the engineer, ineffective shall be immediately replaced by the contractor.

**k) Penalty events**

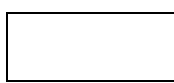
Whenever the following events occur, the contractor shall be subjected to penalty conditions expressed in the Appendix to Tender.

- (i) Non-compliance with accommodation of traffic specifications

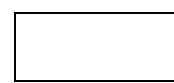
Failure or refusal on the part of the contractor to take the necessary steps to ensure the safety and convenience of the travelling public, accommodation of traffic, plant and personnel in accordance with these specifications or as required by statutory authorities



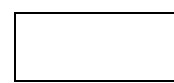
Contractor



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Contractor



Employer



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Employer

or ordered by the engineer, shall be sufficient cause for the engineer to apply penalties as follows:

A fixed penalty per occurrence at the rate provided in the Appendix to Tender, shall be deducted for each and every occurrence of non-compliance with any of the requirements of section 1500 of the standard specifications and section B1500 of the project specifications.

In addition a time-related penalty per hour at the rate provided in the Appendix to Tender, over and above the fixed penalty, shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within the allowable time after the engineer has given an instruction to this effect. The engineer's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

**l) Liaison with relevant Authorities**

Where applicable, the contractor shall liaise on a daily basis with the Employer's relevant Management Centre, informing their operations manager about the expected works and lane closures for the next day, inclusive of all work shifts, in order for the operational manager to take into account the accommodation of traffic impacts in the operations. The daily report shall be submitted to the operations manager not later than 10h00.

For exceptional traffic accommodation impacts, such as lane closures in peak hours, short term contra flow conditions, lane closures over weekend peak periods etc., the operational manager shall be informed seven days prior to the event.

The contractor shall inform the operational manager about all traffic related incidents, as soon as he becomes aware of the incident.

Where required the contractor shall be responsible for acquiring the services of a municipal traffic officer and traffic vehicle (equipped with a blue light) to assist in the accommodation of traffic. The traffic officer and vehicle will be required when lanes are to be closed and/or where directed by the Engineer.

**m) Other requirements**

The following other requirements must be adhered to for the entire contract period:

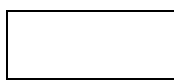
- i) The travelling public shall have the right of way on public roads and the contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.
- ii) The contractor's tendered rates for the relevant items in the schedule of quantities shall include full compensation for all possible additional costs which may arise from the above and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered."

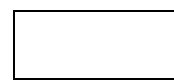
**B1503 TEMPORARY TRAFFIC-CONTROL FACILITIES**

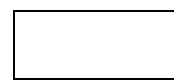
*Replace the first sentence of the first paragraph with the following:*

"The contractor shall provide, erect and maintain the necessary traffic-control devices, road signs, channelisation devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control devices) in accordance with these special provisions and as shown on the drawings and in the SARTSM and remove them when no longer required. It shall be incumbent upon the contractor to see to it that the abovementioned traffic-control devices are present where required at all times and are functioning properly."

  
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Replace the last sentence of the second paragraph with the following:

"Traffic-control facilities no longer required at the site of a deviation or a lane closure shall be moved for re-use. Traffic-control facilities lost or damaged by the contractor shall be replaced at his own cost. Where it can be proved that loss of or damage to such facilities is beyond the contractor's control and not the result of his actions or omissions, the engineer may order the facilities to be replaced and paid for at scheduled rates."

Replace the third paragraph with the following:

"The type of construction, spacing and placement of traffic-control devices shall be in accordance with the SARTSM. The recommended arrangements of the traffic control devices illustrated and/or drawings issued by the engineer shall not be departed from without prior approval of the engineer. The arrangements expected to be most commonly used in the contract are given on the tender drawings.

The details shown for spacing and placement of traffic-control facilities may however, be revised at the discretion of the engineer where deemed necessary to accommodate local site geometry and traffic conditions."

**b) Road signs and barricades**

Add the following:

"The contractor shall be responsible for the protection and maintenance of all signs, and shall at his own cost replace any that have been damaged, lost, or stolen.

All temporary road signs required to remain in position for some time shall be pole mounted as shown on the drawings. All temporary road signs required to be moved more often shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted method of ballasting the sign supports shall consist of durable sandbags filled with sand of adequate mass to prevent signs from being blown over by wind. The cost of the sandbags shall be included in the tendered rates for the various types of temporary road signs."

Add the following sub-clauses:

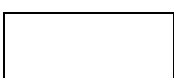
**g) Other traffic control measures ordered by the engineer**

The engineer may instruct the contractor to provide any other road sign, reflective tape, etc. not measured in standard payitems. Such road signs shall conform to the requirements of the SARTSM, or specification provided by the engineer. Similarly, in order to ensure that the travelling public is kept fully informed and warned on matters relating to the accommodation of traffic, construction sign posting and the effect of the construction on the free flow of traffic through the site, the engineer may arrange for advertising in the press and/or for other forms of publicity.

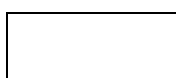
**h) Flagmen**

Flagmen shall be provided where shown on the drawings, required by the specification or where instructed by the Engineer. During the daytime, at least two flagmen shall be provided at each traffic control point in addition to the STOP/GO sign operator, one flagman at the first speed reduction sign and a second roving flagman at least a 100m behind the last vehicle in the queue to indicate to the traffic to stop. At night time all flagmen shall be equipped with a suitably visible strobe, and a torch at each traffic control point as well as the traffic light operator. Where the shoulder of the road is closed to traffic, flagmen shall be provided at the leading ends of closures during daytime. These flagmen shall be provided at the first speed reduction sign to warn the traffic about the closure. No flagmen shall be on duty for a period of more than 10 hours per day.

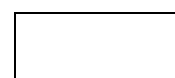
Flagmen shall be adequately trained in the standard flagging techniques as described in the SARTSM (refer to figure 13.23 of detail 13.23.1) and be provided with conspicuous clothing



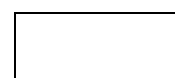
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such as safety jackets utilizing retro-reflective and/or fluorescent panels in red, yellow and/or white.

Flagmen shall have in their possession, at all times, certification that they have attended and passed an accredited course in flagging techniques before being allowed onto the construction site.

Flags shall be made from bright red or red-orange material and shall be square with a minimum side length of 600mm. The flag shall be attached to a staff at least 1,0m in length.

In terms of lateral clearance and safety, flagmen shall stand on the shoulder of the lane of traffic that is being controlled and under no circumstances shall flagmen be permitted to stand within the traffic lane. In order to obtain maximum visual impact for the travelling public, flagmen shall stand-alone."

**B1510 EXISTING ROADS USED AS DIVERSIONS**

*Add the following:*

"The contractor shall indemnify the employer against all proceedings, claims, actions, damages and costs which may arise from or be related to damage to vehicles or property or injury to persons as a result of loose stones or aggregates on the road surface or as a result of bituminous applications during the construction of the works.

The contractor shall arrange his activities so that construction traffic and equipment do not unnecessarily obstruct public traffic or force it to a complete standstill. The flow of public traffic shall always take precedence and the contractor shall not stop or delay public traffic to make way for construction traffic."

**B1517 MEASUREMENT AND PAYMENT**

*Insert the following paragraph after the heading:*

"The contractor's tendered rates for the relevant items in the schedule of quantities shall include full compensation for all possible additional costs which may arise from the above and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered."

**"Item** **Unit**

**B15.01 Accommodating traffic and maintaining temporary deviations:**

- (a) On the national route per carriageway..... kilometre (km)
- (b) On intersecting roads .....kilometre (km)

*Replace the first paragraph with the following:*

"The unit of measurement shall be the kilometre, measured along the centre lines of the road, the ramps from the noses and the cross roads where construction work is carried out. Accommodation of traffic shall be measured once only for each carriageway and intersecting roads, that is no separate payments shall be made for lane and shoulder rehabilitation, asphalt overlay, side drains, etc. Only the net distance of the road shall be measured and overlapping distances during staged construction shall not be measured. A distinction shall be made between accommodation of traffic on the through road and accommodation of traffic on intersecting roads. Accommodation of traffic on the through road shall typically involve closing of the road for blasting purposes, accommodating traffic on deviations where required, temporary lane closures for the seal, etc.

In the second paragraph, replace the comma after "deviations" at the start of the third line with a full stop and delete the remainder of this first sentence. Also delete the whole of the second sentence, which refers to compensation for the traffic safety officer.

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In the third paragraph second sentence, insert a full stop after "use" and delete the remainder of the sentence."

Item	Unit
<b>B15.03</b>	<b>Temporary traffic control facilities</b>

*Amend the payment description according to the following:*

"The unit of measurement shall be a day worked by a flagman. A man-day shall be deemed to comprise of a shift up to 10 hours. No compensation shall be made for flagmen required after the contractual completion date or any extension thereof."

*Amend sub-item (h) to read as follows:*

- (h) Delineators (TW 401 and TW402)
  - (i) Single (size indicated)..... number (No)
  - (ii) Double sided blade (size indicated)..... number (No)

*Add the following sub-item:*

- "n) Other traffic control measures ordered by the engineer
  - (i) Provision of other traffic control measures ..... provisional (Prov) sum
  - (ii) Handling costs and profit in respect of sub-item B15.03(n)(i) ..... percentage (%)

Expenditure under this payment item, (e.g. media releases or other signs to deliver information to the public) shall be made in accordance with sub-clause 13.5 of FIDIC Conditions of Contract for the supply and installation of any additional signs or other traffic control measure ordered by the engineer in accordance with clause B1503(g).

The tendered percentage is a percentage of the actual amount spent under subitem B15.03(n)(i), which shall include full compensation for the handling costs of the contractor, and the profit in connection with providing other signs and traffic control measures ordered by the engineer."

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**SECTION B1600: OVERHAUL**

**B1601 SCOPE**

*Insert in the second line between "excavation" and "or stockpile" the following:*

*" ..., crushing and screening,"*

**B1602 DEFINITIONS**

**(a) Overhaul material**

*(iv) Insert "selected layers" before "subbase" in the first line.*

*Insert the following as a final paragraph*

*"Material procured from commercial sources shall not be regarded as overhaul material."*

**b) Overhaul**

*Replace the sub-clause with:*

*"Regardless that the Standard Specification makes allowance for payment of restricted overhaul payment shall only be made for material hauled in excess of 1 kilometre. Overhaul shall be measured as the product of the volume of material hauled and the overhauled distance.*

**c) Haul distance**

*Add the following paragraph:*

*"Where material from one carriageway of a road is to be used on the opposite carriageway, the haul route shall be on the national route and crossing over at the nearest interchange or approved median crossing point. For this situation, the haul distance shall be measured from the position of obtaining the material, along the carriageway until centre point of the next interchange or approved median crossing point, and then back along the other carriageway. Only the distance on the national road will be measured and additional distances for travelling on the ramps, loops and cross roads will not be considered.*

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Return travel may have to be along other roads but will not be measured separately. Existing municipal streets can be used for haul of material.

**d) Free-haul distance**

*Replace the last sentence with:*

“This distance shall be 1 kilometre in the case of all overhaul materials and this specification shall be deemed to have replaced the ‘free-haul’ distance in all other sections of the standard specifications.”

**B1603 MEASUREMENT AND PAYMENT**

*Amend item 16.02 as follows:*

<b>Item</b>	<b>Unit</b>
<b>B16.02 Overhaul on material hauled in excess of 1 km</b> (ordinary overhaul) .....	cubic metre - kilometre (m <sup>3</sup> km)”

*Delete the first paragraph of the first set of notes and replace it with the following:*

“Only ordinary overhaul for haul in excess of 1.0 km will apply to all types of fill and layerwork materials. No restricted overhaul will be applicable on this contract.”

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**SECTION B1700: CLEARING AND GRUBBING**

**B1701 SCOPE**

*Add the following as a final paragraph:*

“Clearing and grubbing for the construction of site offices shall not be measured separately and shall be deemed to be included in the rates tendered for item B13.01.”

**B1702 DESCRIPTION OF WORK**

**c) Conservation of topsoil**

*Add to the end of the 1st paragraph:*

“The depth of topsoil removed shall be reliant on the terrain, suitability of material and topsoil requirements of the work. Generally the contractor will not be required to remove topsoil to more than an average depth of 400mm unless approved by the engineer before commencing with topsoil removal from any particular area.”

*Replace the second paragraph of this clause with the following:*

“After clearing and grubbing, all topsoil shall be removed to either windrows alongside the construction area or to stockpile. Where ordered by the engineer, any topsoil that shall be required for the topsoiling of new banks and cuts, but which cannot be accommodated within the construction site, shall be loaded and hauled to the designated stockpile area where it shall be placed in temporary stockpiles for later use in the rehabilitation of the site affected by construction activities. Where new borrow pits are to be opened up the topsoil shall first be removed (independently of the overburden) and placed in temporary stockpiles at the edge of the borrow pit. The moving of topsoil from windrow or the loading of topsoil from temporary stockpiles and the placing and spreading thereof on cut or fill slopes or on borrow pit spoil sites, is covered in Section 5800.

Where possible, topsoil shall be removed together with any vegetation in one operation. In such a case payment shall only be made under item B17.07 and no payment for item 17.01 (clearing and grubbing) shall be considered. Where clearing and grubbing, but no topsoil conservation is required, payment shall only be made under item 17.01, i.e. clearing and grubbing of existing gravel shoulders.”

**B1704 MEASUREMENT AND PAYMENT**

*Add the following payment item:*

<b>“Item</b>	<b>Unit</b>
<b>B17.07 Removal and temporary</b>	<b>stockpiling of topsoil:</b>

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- (a) In temporary stockpiles after loading material into trucks including 1,0km freehaul ..... cubic metre (m<sup>3</sup>)

The unit of measurement for items (a) shall be the cubic metre of topsoil removed to windrow or temporary stockpile. The volume of topsoil removed shall be measured in cut, calculated from the difference in cross-sections of the natural ground level before the commencement of clearing to cross-sections taken after the removal of the topsoil.

The contractor shall constantly liaise and agree with the engineer as to the depth of topsoil to be removed. Where, in the opinion of the engineer, material that would normally be classed as topsoil has also been excavated, the excavation shall be backfilled and compacted with selected material at the contractor's expense. Should material that is deemed by the engineer not to be topsoil, be removed and stockpiled together with material classed as topsoil, the contractor shall be responsible for the removal of this unsuitable soil from the stockpile and the replacement of the quantity of topsoil contaminated by the unsuitable material at his cost. The quantity of topsoil to be replaced shall be determined by the engineer.

The rates tendered shall include for the excavation of the topsoil (together with any vegetation normally included in item 17.01) and where required, the loading and hauling thereof to temporary stockpile as well as the maintenance of the stockpile until re-use of the material. The rates tendered shall also include for all supervision required to ensure that only topsoil is removed."

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**SECTION B1800: DAYWORKS**

**B1801 SCOPE**

This section covers the listing of daywork items in accordance with sub-clause 13.6 of the FIDIC Conditions of Contract, for the use in determining payment for work which cannot be quantified in specific units in the Pricing Schedule, or work ordered by the engineer during the construction period which was not foreseen at tender stage and for which no applicable rate exists in the Pricing Schedule.

**B1802 ORDERING OF DAYWORK**

No daywork shall be undertaken unless written authorisation has been obtained from the engineer.

**B1803 MEASUREMENT AND PAYMENT**

<b>Item</b>			<b>Unit</b>
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**B18.01 Personnel**

- (a) Unskilled labour ..... hour (h)
- (b) Semi-skilled labour ..... hour (h)
- (c) Skilled labour ..... hour (h)
- (d) Ganger ..... hour (h)
- (e) Foreman ..... hour (h)

<b>Item</b>			<b>Unit</b>
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**B18.02 Equipment**

- (a) Specify ..... hour (h)

<b>Item</b>			<b>Unit</b>
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**B18.03 Materials**

- (a) Procurement of materials ..... provisional (Prov) sum
- (b) Contractor's handling costs, profit and all other charges  
in respect of sub-item B1803(a) ..... percentage (%)

<b>Item</b>			<b>Unit</b>
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**B18.04 Transport**

- (a) LDV ..... kilometre (km)
- (b) Flatbed truck ..... kilometre (km)

The unit of measurement for items B18.01 and B18.02 shall be the hour for the item of equipment or personnel. Non-working hours for transport breakdown, lack of operator of any other reason shall not be measured. The time shall be taken from the time that the personnel and/or equipment depart until return.

Measurement shall only be for work instructed and directed by the engineer, where the engineer considers no other appropriate rate is applicable in the Pricing Schedule. Prior to the commencement of any work by the personnel described under item B18.01 the contractor must obtain written consent from the engineer regarding their classification in terms of "unskilled", semi-skilled" and "skilled" personnel.

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The tendered rates for labour under B18.01 shall include full compensation to cover overhead charges and profit, leave pay, bonuses, subsistence, allowances, Employer's contributions, additional payment for overtime where applicable, insurances, housing, site supervision, use of small hand tools and appliances, non -mechanical plant and equipment and consumable stores, for all administrative, supervisory, operative and contingent costs, relating to the supply of personnel.

The tendered rates for plant for item B18.02 shall be an all-inclusive hire charge for the use of the vehicle and driver or plant/equipment and operator and shall apply only to vehicles plant and equipment nominated in writing by the engineer, for all administrative, supervisory, operative and contingent cost, and profit relating to the running of the plant.

The unit of measurement for subitem B18.03(a) shall be the amounts actually paid for the procurement of materials to be purchased and shall be made in accordance with the provision of the FIDIC Conditions of Contract. Only the actual quantities of materials used, as verified by the engineer, shall be paid for.

The percentage tendered for subitem B18.03(b) shall be the percentage of the amounts actually paid for the procurement of materials as ordered under subitem B18.03(a) and shall be in full and final compensation in respect of the contractor's handling costs, profit and all other charges in connection with the procurement and supply of the materials to the point of usage.

The unit of measurement for item B18.04 shall be the kilometre distance that the vehicle travelled for transporting personnel and/or plant. All travelling shall be approved by the engineer.

The tendered rate for item B18.04 shall include full compensation for the cost of the vehicle including fuel, maintenance depreciation and running costs.

The abovementioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid.

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**SECTION B3100: BORROW MATERIALS**

**B3103 OBTAINING BORROW MATERIALS**

*Add the following paragraph:*

"The contractor shall adhere to the requirements within the environmental management plan for the preparation of the area to be utilised as a borrow pit. This shall include the removal and storage of the topsoil within the affected area, maintenance of the area during use and the rehabilitation of the area to its natural state on completion. A photographic record shall be kept of all borrow pit areas. Any construction material spoiled within these sites shall be buried to a depth of no less than 300mm below the surface soil. No construction material of any nature shall be left visible after topsoiling. The engineer shall confirm this before grassing commences. The area shall be kept free of all undesirable plant material."

**a) General**

*Add the following:*

"The acquisition and compensation for land from which borrow material is obtained shall be negotiated and paid for by the employer."

**c) Use of borrow materials**

*Delete the last sentence of the second paragraph and replace with the following:*

"Compensation to owners and arrangements with owners for taking material from alternative borrow pits proposed by the contractor shall be the contractor's responsibility and entirely at his own expense and risk. Such borrow pits may be accepted by the engineer only if the material complies in all respects with the specifications, it is the best economic alternative and the contractor can provide proof of compliance with all relevant legislation."

*Add the following new paragraphs to the end of this sub-clause:*

"The engineer shall instruct the contractor as to the applicable usage of borrow pits always employing the best economic alternative (lowest cost in terms of tendered rates) taking cognizance of the following:

- Quality of material;
- Haulage distance;
- Hardness of material;
- Overburden.

Under no circumstances shall the contractor be entitled to any additional compensation in respect of any instruction by the engineer as to the usage of borrow pit material."

**B3108: MEASUREMENT AND PAYMENT**

Item	Unit
<b>B31.01 Excess overburden</b> .....	cubic metre (m <sup>3</sup> )

*Delete the word "stripping" in the 1st sentence of the 2nd paragraph under the payment description as payment for this item of work is covered under payment items 17.01 and B17.07(c).*

*Add the following after the word "stripping" in the 2<sup>nd</sup> line of the first paragraph:*

" , after removal of topsoil"

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**SECTION B3400: PAVEMENT LAYERS OF GRAVEL MATERIAL**

**B3402 MATERIALS**

**a) General**

*Add the following at the end of the second paragraph:*

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"For chemically stabilised layers the material shall conform to the requirements in table B3402/5.

For cold in situ recycled layers the target grading shall be as indicated in table B3402/7"

Add the following after the second paragraph:

"Distinction shall be made between crushed and natural G4, G5 and G6 materials. Where the crushing and/or screening of these materials has been specified, the combined grading shall conform to the grading limits specified for G4 class material in Table B3402/1.

The same shall apply for all materials obtained from commercial sources."

Replace the grading and grading modulus sections in Table 3402/1 with:

Property		TYPE OF MATERIAL				
		G4		G5	G6	
GRADING	Nominal aperture size of sieve (mm)	Percentage passing through sieve by mass		The percentage by mass passing the 2,00mm sieve shall not be less than 20% nor more than 70%	None specified	
		Crushed material produced by multi-stage crushing and screening	Uncrushed material or material produced by single stage crushing			
		53				100
		50				95 - 100
		37,5	100			85 - 100
		28	86 - 95			
		20	73 - 86			65- 86
		14	61 - 76			
		5	37 - 54			35 - 54
		2	29 - 40			25 - 40
0,425	15 - 24	14 - 24				
0,075	6 - 12	8 - 12				
GRADING MODULUS (GM)		-		2,5 ≥ GM ≥ 1,5	2,6 ≥ GM ≥ 1,2	

Note:

Refer to standard COLTO table for COLTO grading if required

Replace Table 3402/5 with:

**"TABLE B3402/5: REQUIREMENTS FOR CHEMICALLY STABILISED LAYERS**

Classification	C1	C2	C3	C4
Material before treatment	At least G2 quality	At least G4 quality	At least G5 quality	At least G6 quality
PI after treatment	Non-plastic	Non-plastic	6 max. *(1)	6 max. *(1)
UCS (MPa) *(2)	6 min.	4 min.	1,5 min	0,75 min.
ITS (kPa) *(3)	-	-	250 min.	200 min.
WDD (% loss) *(4)	5 max.	10 max.	20 max.	30 max.

Note:

\* (1) For materials derived from the basic crystalline rock group, the Plasticity Index after stabilisation shall be non-plastic.

\* (2) Unconfined Compressive Strength @ 100% Mod. AASHTO density

\* (3) Indirect tensile Strength @ 100% Mod. AASHTO density (Rapid Curing)

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\* (4) Wet/Dry Durability according to Method B 8110"

Add the following tables after table B3402/5:

**TABLE B3402/7: TARGET GRADING ENVELOPE FOR COLD IN SITU RECYCLED PAVEMENT LAYERS**

Sieve Size (mm)	Percent Passing		
	Cement / Lime	BSM-Emulsion	BSM-Foam
50	100	100	100
37.5	87 – 100	87 – 100	87 – 100
28	82 – 100	82 -100	82 – 100
20	72 - 100	72 - 100	72 - 100
14	60 -90	60 -90	60 -90
10	51 - 77	51 - 77	51 - 77
7	42 -65	42 -65	42 -65
5	36 - 57	36 - 57	36 - 57
0.425	12 – 26	10- 24	12 – 26
0.075	4 - 10	2 - 9	4 - 10

**b) Compaction requirements**

Replace the description of sub-section (b) with the following:

"The compaction requirements shall be as shown on the 'pavement design and cross section' drawings."

**B3403 CONSTRUCTION**

Add the following subparagraph:

**“(f) Cold in situ recycling and mixing**

Where the in-situ layer consisting of granular or cemented layers, which may include asphalt or bituminous surfacing above granular or cemented support layer is to be recycled, with or without any make-up material, the layer must be constructed according to the method described in B3512."

**B3405 CONSTRUCTION TOLERANCES**

**(a) Level**

Replace the table in the sub-sub-clause with the following:

	$H_{90}$	$H_{max}$
Selected layers	25 mm	33 mm
Sub-base layers	15 mm	20 mm
Base layers	12 mm	15 mm
Shoulders		25 mm"

Add the following:

"Level control for the various pavement layers shall be done at least at the following intervals in the longitudinal direction:

Layer	Interval
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Selected layer, sub-base, shoulders and wearing course	20 m
Base	10 m

**(b) Layer thicknesses**

Replace the table in the sub-sub-clause with the following:

"	$D_{90}$	$D_{max}$	$D_{ave}$
Selected layers	25 mm	35 mm	8 mm
Sub-base layers	18 mm	24 mm	5 mm
Base layers	15 mm	22 mm	5 mm
Shoulders		30 mm	0 mm"

**B3406 QUALITY OF MATERIALS AND WORKMANSHIP**

Replace the second paragraph with the following:

"Test results and measurements will be assessed in accordance with the provisions of Section 8200."

**SECTION B3500: STABILIZATION**

**B3501 SCOPE**

Add the following as a 3rd paragraph:

"The use of recyclers for cold in situ recycling purposes is also covered in this section, which includes cement, lime, emulsion and foam stabilisation of base and subbase layers consisting of gravel and/or crushed stone material as described in sections 3400 and 3600."

**B3502 MATERIALS**

**a) Chemical stabilizing agents**

Delete sub-clauses (ii) Ordinary Portland cement and (iii) Portland blast-furnace cement and replace with the following:

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"Cement shall comply with the relevant requirements of SANS 50197-1:2000. The use of strength classes greater than 32,5 shall not be permitted. On this contract CEM 32.5N shall be used for stabilization purposes."

**B3503 CHEMICAL STABILIZATION**

**a) Preparing the layer**

*Insert the following before the first paragraph:*

"Moisture content tests shall not be undertaken more than one day in advance of in situ stabilization operations. Care shall be taken to ensure that samples are representative of the in situ material. Checks shall be conducted when wet weather occurs between initial testing and work commencing on any section."

**b) Applying the stabilizing agent**

*Replace the second sentence of the second paragraph with the following:*

"Spreading shall only commence when the engineer is satisfied that the correct quantity of stabilizing agent has been placed on the layer and has given permission that the stabilizing agent may be spread uniformly over the entire surface to be treated."

**h) Curing the stabilized work**

*Add the following to method (ii):*

"The covering material shall be placed by end-tipping, spread, and not compacted until the underlying layer has cured for at least 7 days."

*Add the following to paragraph:*

"Method (iii) and (iv) shall not be applicable."

*Replace the last paragraph with the following:*

"Curing shall be achieved as described under subitem (i) up to the first 24 hours, after which curing shall be achieved as described under subitem (ii)."

No additional payment will be made for curing as described above and all costs of curing shall be included in the tendered rates for item 35.01."

**i) Construction limitations**

*Replace the fourth paragraph starting with "No stabilization ..." with the following:*

"No stabilization shall be done during windy conditions, wet weather or with falling air temperatures (7°C and dropping), or during rising air temperatures (when the air temperature is below 3°C)."

The surface temperature of a compacted stabilized layer shall not be allowed to fall below 1°C during the first three (3) days after stabilization. The contractor shall be responsible for taking the necessary precautions to prevent the layer from freezing.

All stabilized layers damaged by rain, frost or by the formation of ice in the layer shall be removed and replaced by the contractor at his own expense.

The contractor shall make allowance for these requirements in his construction programme."

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In Table 3503/1, delete "8 hours" for Ordinary portland cements and cement blends and replace with "6 hours".

**b) Uniformity of mix (chemical stabilisation)**

The method described under 3506(b)(ii) shall be applied on this contract.

**B3509**

**QUALITY OF MATERIALS AND WORKMANSHIP**

Add the following after the second paragraph:

"The test results and measurements will be judged in accordance with the provisions of Section 8200."

Add the following paragraphs:

"The engineer shall be notified in good time to enable him to conduct tests himself.

Sample preparation and testing for cement stabilization testing shall be done by means of the Rapid Cure Method as described in clause B8110.

The stabilized material sampled from the layer for the compaction of modified AASHTO briquettes, shall be prepared according to SANS 3001; GR54; i.e. discard material coarser than a 37,5 mm test sieve, and compacted according to SANS 3001; GR31.

Any delamination of the completed layer (biscuiting), identified by the hollow sound caused when a chain is dragged over the stabilized layer, shall be removed and repaired prior to the construction of subsequent layers. The repair method shall be approved by the engineer. No payment will be made for repairs.

**(a) Process control for cold in situ recycling**

The contractor shall establish a comprehensive process control system for the recycling work.

The following daily reports shall be submitted as a minimum:

- The production plan;
- The completed pre-start check list;
- Weather conditions and temperature measurements;
- Details of the recycling work completed during the day with the following information for each cut that was made:
  - start and end chainage;
  - depth of cut (including a schedule of dip measurements);
  - width of application of stabilising agent(s);
  - nozzle settings (closures) for each spraybar (where relevant);
  - computer data input;
  - cement/lime spreading check measurements (where relevant); and
  - compaction data in electronic format from the integrated compactometer device fitted to the primary roller (if applicable);
- Where the material is treated with a bitumen stabilising agent, the following shall be included:
  - bitumen emulsion or Pen-grade bitumen consumption;
  - average temperature and pressure measured at the spraybar; and
  - all other details shown in the sample report included in the Appendices of the latest edition of SAPEM and TG2;
- Relevant comments/information concerning the recycling operation. These shall include but shall not be limited to:
  - standing time and the reason(s);
  - sections where in situ pavement conditions changed together with a description of the change (e.g. thick asphalt between km 1+200 and km 1+230 in Cut #2);
  - details of any non-routine tests that were undertaken;
  - any changes in the weather during the day (e.g. strong wind from 13:00); and
  - relevant instructions received and from whom; and
- The location where the daily sample of pulverised material was taken."

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**B3510 MEASUREMENT AND PAYMENT**

**Item** **Unit**  
**B35.02 Chemical stabilizing agent**

*Replace the full stop at the end of the third paragraph with the following:*

" and layer dimensions."

*Add the following new payment items:*

**"Item** **Unit**  
**B35.14 Sampling of in situ material for mix design procedure ..... Number (No)**

The unit of measurement shall be the number of positions for sampling of in situ material for the mix design procedure.

The tendered rate shall include full compensation for all costs to make available, operate and to transport the recycling machine and other equipment to the sampling position. To provide the required traffic accommodation in terms of section B1500. The tendered rate shall further include full compensation for breaking up the pavement for sampling and temporary patching the disturbed road way by adding make-up material, watering, compacting and surfacing with a cold asphalt material. The tendered rate shall also include full compensation for all transport, labour and other incidentals required for the sampling process.

**COLTO SERIES 5000: ANCILLARY ROADWORKS**

**SECTION B5100: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION**

**B5102 MATERIALS**

**a) Stone**

*Replace the 2nd paragraph with the following:*

"Unless suitable stone can be located on site, the stone for pitching shall come from commercial sources but, from whatever source, its use shall be subject to the prior approval of the engineer."

**c) Sand**

**(ii) Sand for bedding**

*Replace this sub-sub-clause with the following:*

Sand for bedding used for paving blocks shall not contain any deleterious impurities and shall comply with the requirements given in table B5102/1.

**TABLE B5102/1**

Sieve size (mm)	Percentage passing
10	100
5	95 – 100
2	73 – 86

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1	43 - 78
0,600	25 - 60
0,300	10 - 30
0,150	5 - 15
0,075	5 - 10

Note:  
Refer to standard COLTO table for COLTO grading if required

**B5106 SEGMENTAL BLOCK PAVING**

**d) Edge beams**

*Add the following paragraph:*

"Where concrete edge beams are constructed the relevant specifications under section 2300 shall apply."

**SECTION B5900: FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS**

**B5901 SCOPE**

*In the first line of the second paragraph, insert the following after 'this section'*

"... distinguishes between new construction and renewal construction. When construction is new, as in the case of new alignments for example, then this section "

**B5902 FINISHING THE ROAD AND ROAD RESERVE**

*Retain the existing paragraphs as sub-clause:*

**"a) New construction"**

*Replace the sixth paragraph with:*

"All materials resulting from the finishing operations shall be disposed of at approved spoil sites."

*Add the following:*

**"b) Renewal construction**

After completing construction work within the site, the contractor shall ensure that all construction generated or related material that may have been swept, windrowed, stockpiled, stored or spread beyond the road surface is removed. This shall be done before any other rehabilitation work is undertaken, including shaping, topsoiling and grassing. Should, during the removal of construction generated or related material, existing vegetation or topsoil be disturbed or destroyed, the contractor shall, at his own cost, re-instate the road reserve to its original state. This shall include ripping, should the construction material have compacted the existing surface.

Culvert in lets and outlets, culvert barrels, and open drains shall be cleared of debris, soil, silt and other material generated from the construction activities.

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The surfacing shall be cleared of all dirt, mud and foreign objects. Dragging, pushing or scraping material across the finished surfacing shall not be permitted.

All junctions, intersections, islands, kerbing and other elements making up the completed works shall be neatly finished off.

The contractor shall ensure that all undesirable plants have been removed from the road reserve and borrow pit areas.

All materials resulting from the finishing operations shall be disposed of at approved spoil sites.”

**COLTO SERIES 7000: SUNDRY STRUCTURES**

**SECTION B7100: CONCRETE PAVEMENTS**

**B7101 SCOPE**

*Add the following paragraphs:*

“The contractor shall take and submit samples of materials and/or mixtures to the engineer who must approve designs before construction work can commence.

This section shall also cover the re-sealing of all joints in the longitudinal weakened plane, transverse and longitudinal contraction and longitudinal construction joints (where directed by the engineer) in the existing concrete pavement.”

**B7102 MATERIALS**

*Add the following paragraph before sub-clause 7102(a):*

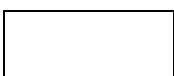
“Materials shall comply with the requirements of Series 7100 except for the following additional/amendments contained in this clause.”

**a) Cement**

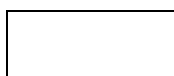
*Add the following to the end of the clause:*

“In order to avoid the possibility of Alkali Silica Reaction (ASR), the following shall be taken into account when designing the mixes:

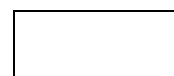
- (i) Where the cementitious contents is less than 350kg/m<sup>3</sup>, the maximum equivalent sodium monoxide content (calculated as Na<sub>2</sub>O) permitted shall be 0.60%, unless a test certificate from the CSIR (Built Environment) is provided stating that the long-term testing has proved the aggregate to be non-reactive.
- (ii) Where the cement content exceeds 350kg/m<sup>3</sup>, the maximum equivalent sodium monoxide content permitted shall be 2.1kg/m<sup>3</sup> of concrete.
- (iii) Where potentially reactive aggregate is used, the maximum cement content shall be 400kg/m<sup>3</sup> and the equivalent sodium oxide (Na<sub>2</sub>O) content permitted shall be 2.4kg/m<sup>3</sup> of concrete.



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- (iv) The contractor shall prior to the use of cement provide test certificates from an approved laboratory confirming the equivalent sodium oxide (Na<sub>2</sub>O) content of the batch of cement to be used.
- (v) Special literature should be consulted e.g. Fulton's Concrete Technology."

**e) Materials for joints**

(iii) Silicone sealant

*Add the following to this sub-sub-clause:*

"A requirement of this contract shall be that the liquid sealant used in the joint grooves shall comply with a performance guarantee which shall be subject to conditions stipulated in the special conditions and project specifications.

The requirements to which the liquid sealant shall conform during the guarantee period shall be in accordance with the functional conditions of the sealant described in Chapter 5 Part F.

Materials used for sealing of joints shall not be older than six (6) months. The age of sealant shall be certified by an approved testing facility.

The silicone sealant must be applied by means of pumping the sealant from a storage contained through compressed air powered pumping equipment and applied to the joint slot by means of nozzles designed to ensure that the slot is filled with sealant as indicated on the drawings. Application of the sealant to the joint slot by hand shall not be permitted."

**B7103 REQUIREMENTS IN RESPECT OF CONCRETE**

**d) Specified strength**

*Add the following as a fifth value:*

"(v) The 28-day compressive strength corresponding to a 28-day flexural strength of 4,2 MPa."

**B7116 WEAKENED PLANE JOINTS**

*Add the following sub-clause:*

**"c) Removal of existing joint seals**

Existing joint seals shall be removed from the existing joints. The joints shall be reamed, cleaned and washed to the requirements of the joint sealant manufacturer. Seals shall be removed immediately prior to the resealing operation and no sections of pavement shall be left unsealed while being trafficked unless written permission has been obtained from the engineer.

The contractor shall submit a complete method statement for approval by the engineer before the resealing of any joints commence. The engineer will have 5 days to study and comment on the method statement before approval shall be given"

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**COLTO SERIES 8000: SUNDRIES**

**SECTION B8100: TESTING MATERIALS AND WORKMANSHIP**

**B8102: TESTING METHODS**

Insert the following as a new first paragraph:

"Where reference is made to TMH test methods in this specification or the standard specifications, it shall be replaced with the relevant current published SANS test method."

**B8108 DETERMINING THE TOTAL APPROXIMATE DRY BULK RELATIVE DENSITY AND THE APPARENT DENSITY**

*Add the following at the end of this clause:*

"For materials where the total water absorption, when determined according to SANS 3001-AG20 (replacing TMH1 Method B14) and SANS 3001-AG21 (replacing TMH1 Method B15), is in excess of 1,5%, the Apparent Density shall be calculated in accordance to the following formula:

$$\frac{(b - a)}{(d - a) + \{ (w - 1.0)/100 \times (b - a) \} - (c - b)}$$

This formula shall be used as an alternative to note (5) regarding soaking period, when so instructed by the engineer."

**B8110 TESTS RELATING TO CHEMICAL STABILISATION**

*Add the following sub-clause:*

**"d) The Wet-Dry Durability Test for cement and/or lime-treated materials using the hand-brush method (SANRAL METHOD)**

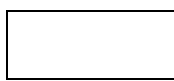
1. Scope

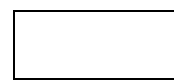
This method covers the procedure for determining the soil-cement losses obtained by repeated wetting, drying and hand brushing of hardened soil-cement specimens (see 5.4).

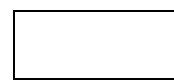
2. Apparatus

2.1 A moisture curing room capable of maintaining a relative humidity of 95 to 100 percent and a temperature of 22 to 25°C, or suitable plastic bags capable of

  
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holding specimens and carriers in an air-tight condition in a water bath as described in 2.2 below.

- 2.2 A suitable water bath with thermostatic control capable of maintaining a temperature of 22 to 25°C.
- 2.3 A balance to weigh up to 10kg, accurate to 0.5g.
- 2.4 A drying oven capable of maintaining temperatures of 71 ± 3°C and 110 ± 5°C.
- 2.5 A wire scratch brush made of 50mm by 1.6mm flat 26-gauge wire bristles assembled in 50 groups of 10 bristles and mounted to form five longitudinal rows and 10 transverse rows on a 200 by 65mm wooden block.

3. Method

3.1 *Preparation of specimens*

Prepare specimens in accordance with the procedure described in the Appendix to method A19 in the TMH 1 with the following exceptions:

Use the material passing the 37.5mm sieve and discard the material remaining on the sieve.

Use the apparatus and compaction method as described in SANS 3001-GR30 (replacing TMH 1 method A7) (100% Modified AASHTO at predetermined OMC).

3.2 *Curing of specimens*

Rapid cure the specimens (see 5.6). Alternatively, and where instructed by the engineer, the specimens may be cured for seven days at a relative humidity of 95% to 100% and a temperature of 22°C to 25°C in a suitable curing room or in plastic bags and a suitable water bath.

3.3 *Wetting, drying and brushing*

After curing, remove the specimens from the curing room or plastic bags, allow to cool and submerge them in water at room temperature for a period of five hours. Remove the specimens from the water and place them in an oven at 71°C for 42 hours.

Remove the specimens from the oven. Give each specimen two firm strokes over the full surface area with the wire scratch brush. The brush must be held parallel to the long axis of the specimen or parallel to the ends as required to cover all areas of the specimen. Apply these strokes to the full height and width of each specimen with a firm stroke corresponding to approximately 13.5 kN force (see note 5.5).

3.4 *Determination of soil-cement losses*

After 12 cycles, dry the specimens to constant mass at 100°C and determine the oven dry mass of the specimens. The data collected will permit the calculation of the soil-cement losses of the specimens after the prescribed 12-cycle test.

4. Calculations

- 4.1 Calculate the soil-cement loss of the specimens as a percentage of the original oven-dry mass of the specimens as follows:

$$L = \frac{W - N}{W} \times 100$$

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Where

L = soil-cement loss (%)

W = original calculated oven-dry mass (g) (calculated according to paragraph 3.5 in the Appendix to method A19 in the TMH 1).

N = final oven-dry mass (g).

4.2 The percentage loss shall be calculated and reported to the nearest 0.1 percent. The results are normally required for stabilisation design purposes and should be reported graphically against relevant cement contents.

5. Notes

5.1 Mass determinations of the specimens before and after brushing are usually made at the end of each cycle during research or special investigations.

5.2 Care is required when assessing results obtained on very coarse graded materials as "plucking" out of the aggregate pieces during the brushing process could result in very high losses of material, which may however not be truly indicative of its potential erosion resistance.

5.3 If it not possible to run the cycle continuously because of Sundays or holidays, or for any other reason, the specimens should be held in the oven during the layover period.

5.4 The test was originally developed to determine wet-dry durability of cement-treated material. It can, however, be used with equal success on material tested with other chemical stabilizers, for example lime, or mixes of lime and milled blast furnace slag, or cement and milled blast furnace slag.

5.5 The pressure of the brushing stroke is determined as follows:

Clamp a specimen in a vertical position on the edge of a platform scale and zero the scale. Apply vertical brushing strokes to the specimen and note the force necessary to register approximately 1.36kg.

5.6 Rapid curing:

Seal each specimen airtight in a suitable container or plastic bag. Carefully place the briquettes on suitable holders or in pans and place in the oven at the relevant temperature and period given below:

Stabilizing agent	Temp (°C)	Time (Hours)
Cement	70 – 75	24 ±0.5
PBFC	70 - 75	24 ±0.5
Lime	60 ±2	45 ±1
Lime / FA	60 ±2	45 ±1
Lime / MBFS	60 ±2	45 ±1

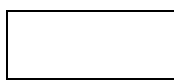
**B8114 GEOTEXTILE AND GEOTEXTILE – SOIL COMPATIBILITY TESTS**

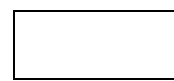
Add the following new sub-clause:

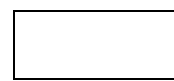
**“c) Other Tests:**

- i. Thickness (mm):  
The thickness of the material shall be specified by the contractor (or supplier).

  
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Thickness and compressibility tests shall be carried out in accordance with Code of Practice SABS 0221:1988. The Testing of Geo-textile, to check that the material supplied conforms to the thickness specified by the contractor.

- ii. Mass per unit area ( $\text{g/m}^2$ ):  
Testing shall be carried out in accordance with Code of Practice SABS 0221.
- iii. Tensile strength ( $\text{kN/m}$ ):  
Testing shall be carried out in accordance with Code of Practice SABS 0221.
- iv. Penetration load ( $\text{kN}$ ):  
Testing shall be carried out in accordance with Code of Practice SABS 0221.
- v. Puncture resistance ( $\text{mm}$ ):  
Testing shall be done in accordance with test procedures laid down by CSIR, Pretoria.
- vi. Permeability ( $\text{l/s/m}^2$ ):  
Testing shall be carried out in accordance with Code of Practice SABS 0221."

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**SECTION B8200: QUALITY CONTROL**

**B8206 JUDGEMENT PLAN B**

Notes (Table 8206/3)

(1) Asphalt base or surfacing: Specification limits for-

(c) **Voids**

*Delete and replace the contents of this subitem with the following:*

$L_s$  = specified values -1,0% points  
 $L'_s$  = specified values +1,0% points"

**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

**3.6.2 PARTICULAR SPECIFICATIONS**

**ANNEXURE A - HEALTH AND SAFETY SPECIFICATIONS FOR SOUTH AFRICAN NATIONAL PARKS**

**ANNEXURE B - ENVIRONMENTAL MANAGEMENT PLAN**

**ANNEXURE C - CODE OF CONDUCT FOR WORKING IN THE SOUTH AFRICAN NATIONAL PARKS**

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# Annexure A

## Health and Safety Specifications for South African National Parks

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**HEALTH & SAFETY  
SPECIFICATIONS  
FOR**

**MAPUNGUBWE NATIONAL PARK ROAD UPGRADING.**

**CONTRACT NO: CI-GK-0190**

**Date: March 2024**  
**Contact person: Zama Mkhonza**

**Address: PO Box 787  
Pretoria, 0001**  
**Tel No: (012) 426 5199**  
**Email Fax: 086 695 9139**  
**Email: [zamakhosi.mkhonza@sanparks.org](mailto:zamakhosi.mkhonza@sanparks.org)**

**CONTENTS**

1. PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION
2. IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION
3. APPLICATION AND INTERPRETATION
4. DEFINITIONS
5. GENERAL REQUIREMENTS
  - 5.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014
  - 5.2 Management and Supervision of Construction Work
  - 5.3 Notification of Intention to Commence Construction Work
  - 5.4 Construction Work Permit
  - 5.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site
  - 5.6 Competency for Contractor's Responsible Persons
  - 5.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)
  - 5.8 Occupational Health and Safety Policy
  - 5.9 Health and Safety Organogram
  - 5.10 Risk Assessments
  - 5.11 Safe Work Procedures
  - 5.12 Health and Safety Representative(s)
  - 5.13 Health and Safety Committee
  - 5.14 Medical Certificate of Fitness
  - 5.15 Health and Safety Training
    - 5.15.1 Induction
    - 5.15.2 Awareness
  - 5.16 Competency
  - 5.17 General Record Keeping
  - 5.18 General Inspection, Monitoring and Reporting
  - 5.19 Emergency Procedures
  - 5.20 First Aid Box and First Aid Equipment
  - 5.21 Accident / Incident Reporting and Investigation
  - 5.22 Hazards and Potential Situations
  - 5.23 Occupational Health and Safety Signage
  - 5.24 Management Of Contractors by Principal Contractor
  - 5.25 Stacking of Materials
  - 5.26 Housekeeping and General Safeguarding on Construction Sites
  - 5.27 Construction Vehicles and Mobile Plant
  - 5.28 Electrical Installations and Machinery on Construction Sites
  - 5.29 Use and Temporary Storage of Flammable Liquids on Construction Sites



- 5.30 Water environments
  - 5.31 Fire precautions on Construction Sites
  - 5.32 Construction Employees' Facilities
  - 5.33 Fall protection
  - 5.34 Temporary works
  - 5.35 Excavation
  - 5.36 Demolition Work
  - 5.37 Tunneling
  - 5.38 Scaffolding
  - 5.39 Bulk mixing plant
  - 5.40 Rope Access Work
  - 5.41 Hazardous Chemical Substances (HCS)
  - 5.42 Hazardous Biological Substances (HBS)
  - 5.43 Noise Induced Hearing Loss
  - 5.44 Explosives and Blasting
  - 5.45 Personal Protective Equipment (PPE)
  - 5.46 Asbestos
  - 5.47 Lead
  - 5.48 Pressure Vessels (Including Gas Bottles)
  - 5.49 Fire Extinguishers and Fire Fighting Equipment
  - 5.50 Lifting Machinery and Tackle
  - 5.51 Ladders and Ladder work
  - 5.52 General Machinery
  - 5.53 Portable Electrical Tools
  - 5.54 High Voltage Electrical Equipment
  - 5.55 Public Health and Safety
  - 5.56 Night Work
  - 5.57 Lighting
  - 5.58 Environmental Conditions and Flora and Fauna
  - 5.59 Occupational Health
  - 5.60 Suspended Platforms
  - 5.61 Material Hoists
  - 5.62 Explosive Actuated Fastening Device
6. TRAINING, INSPECTIONS & RECORDS
- Additional Requirements
  - Annexure A: Task Completion Form
  - Annexure B: Contractors Responsible Persons
7. PROJECT DETAILS
- Project Directory
  - Project Details
  - Existing Environment
- Project Health and Safety Requirements
  - Activities requiring approved Method Statements
  - Activities requiring Permits
  - General Arrangements
  - Protection of sit against Unauthorized access by public
  - Personal Protective Equipment
  - Hazardous Substance
8. BASELINE RISK ASSESMENT
9. HEALTH AND SAFETY SPECIFICATION ACKNOWLEDGEMENT RECEIPT



## 1. PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

The purpose of this site specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Client Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards and expectations that the principal contractor and contractors must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements.

Further, there is no acceptance of liability by the Client which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

## 2. IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with Sub Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all sub-contractors and suppliers for the project.

*The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.*

**The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client prior to commencement with construction work.**

## 3. APPLICATION AND INTERPRETATION

This document is to be read and understood in Conjunction with the following inter alia:

- Occupational Health and Safety Act (Act 85 of 1993)
- SABS codes and standards referred to by the Occupational Health and Safety Act
- Regulations as per the Occupational Health and Safety Act (Act 85 of 1993) with specific reference but not limited to:
  - General Safety Regulations (GN 928, 25 June 2003)
  - General Machinery Regulations (GN R1521, 5 August 1988)
  - Electrical Machinery Regulations (GN R250, 25 March 2011)
  - Electrical Installation Regulations (GN R242, 6 March 2009)
  - Driven Machinery Regulations (GN R1010, 18 July 2003)
  - Hazardous Chemical Substance Regulations (GN R930, 25 June 2003)
  - Hazardous Biological Agents Regulations( GN R 1390, 27 December 2001)
- Basic Conditions of Employment Act (Act 75 of 1997)
- SANParks Environmental Management Plan
- SANParks Code of Conduct of working in a National Park

## 4. DEFINITIONS

**ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO CLIENT AGENT, WHERE SO APPOINTED.**

**Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:**

"agent" means a competent person who acts as a representative for a client;



"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"client" means any person for whom construction work is being performed;

"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"construction site" means a work place where construction work is being performed;

"construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"construction work" means any work in connection with-

- the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work ;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications ;

"designer" means a competent person who-

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter or landscape architect;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;

"fall protection plan" means a documented plan, which includes and provides for -

- all risks relating to working from a fall risk position, considering the nature of work undertaken;
- the procedures and methods to be applied in order to eliminate the risk of falling; and
- a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file " means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;



"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

"structure" means-

- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or

- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support ;

"temporary works" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act , 1993 (Act No. 85 of 1993);

"tunneling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

## 5. GENERAL REQUIREMENTS

### 5.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
  - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
  - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
  - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
  - ensure prior to work commencing on the site that every contractor



- is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
- appoint each contractor in writing for the part of the project on the construction site
- take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
- ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
- stop any contractor from executing construction work which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the client or the client's agent;
- hand over a consolidated health and safety file to the client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the client, the client's agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint

has the necessary competencies and resources to perform the construction work safely;

- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

## 5.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor.



A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately

designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

### 5.3 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

- include excavation work
- Include work at height where there is a risk of falling
- Include the demolition of a structure, or
- Include the use of explosives to perform construction work.

If the construction work involves construction of a single storey dwelling for a client, and such client will be residing in such dwelling upon completion, the contractor must also notify the Provincial Director of the Department of Labour at least 7 days before the works commence.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.

### 5.4 Construction Work Permit

It must be noted that from August 2015 all projects that meet the following criteria will require a construction work permit to be applied for at least 30 days prior to the work being carried out:

- Exceeds 180 days
- Will involve more than 1800 person days of construction work
- Works contract is of a value equal to or exceeding thirteen million rand, or Construction Industry Grading Board (CIDB) grading level 6

It is the client's responsibility to apply for this permit from the Provincial Director and construction work may not commence until the permit has been issued by the Provincial Director.

A copy of this permit will be required to be kept in the principal contractors safety file, and the site specific number issued by the Provincial Director must be displayed at the site entrance.

### 5.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to **Annexure B** at the end of this Health and Safety Specification).



### 5.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

### 5.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

### 5.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the operations.

### 5.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated, when there is a change in the site team.

### 5.10 Risk Assessments

#### Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method

- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the client, client's agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member.

A Contractor must review the relevant risk assessment where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

**Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved**

In general the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;



- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors and subcontractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

### 5.11 Safe Work Procedures

Safe Work Procedures are to form part of the H&S Plan and **must be compiled for all the identified activities.**

The safe work procedures must address the following elements:

- The work method to be followed to conduct work safely
- Mitigation of identified risks
- Reducing and controlling risks and hazards that have been identified
- Responsibilities of competent persons
- Required personal protective equipment
- Correct equipment/tools/machinery to be used
- Reference to relevant registers to be completed
- Reference to applicable risk assessment

### 5.12 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. He / she shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents and non-conformances.

### 5.13 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

### 5.14 Medical Certificate of Fitness

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

### 5.15 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

#### 5.15.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

#### 5.15.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, preferably weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health a safety file as evidence of training

### 5.16 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence.

### 5.17 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

### 5.18 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by **Annexure C** in this Health and Safety Specification, as well as by health and safety legislation.



### 5.19 Emergency Procedures

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service deliver protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and available to site personnel.

### 5.20 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

First Aid box/es must be adequately stocked at all time, accessible and be controlled by a qualified First Aider. If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

### 5.21 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

### 5.22 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

### 5.23 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 db; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage.

### 5.24 Management Of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

### 5.25 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

### 5.26 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and



- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger of possibility of persons being struck by falling objects.

### 5.27 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
- has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
- has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm; and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;

- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms or similar appendages, fully lowered or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.

### 5.28 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

### 5.29 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;



- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids

### 5.30 Water environments

Not applicable on this project..

### 5.31 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
  - only suitably protected electrical installations and equipment, including portable lights, are used;
  - there are no flames or similar means of ignition;
  - there are conspicuous notices prohibiting smoking;
  - oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
  - adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;

- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
  - persons to be evacuated speedily without panic;
  - persons to be accounted for; and
  - plant and processes to be shut down; and
  - a siren is installed and sounded in the event of a fire.

### 5.32 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- changing facilities for each sex;
- and sheltered eating area.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

### 5.33 Fall protection

The Contractor must:

- designate a competent person to be responsible for the preparation of a fall protection plan
- ensure that the fall protection plan contemplated above is implemented, amended where and when necessary and maintained as required; and
- take steps to ensure continued adherence to the fall protection plan.

A fall protection plan contemplated above must include-

- a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- a programme for the training of employees working from a fall risk position and the records thereof;
- the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and



- a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

A contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

A contractor must ensure that all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;

Also that no person is required to work in a fall risk position, unless such work is performed safely as contemplated in above and fall prevention and fall arrest equipment are approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and securely attached to a structure or plant, and the structure of plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and person who could fall, and fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

### 5.34 Temporary works

A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

A contractor must ensure that-

- all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
- all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;
- detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the client, the client's agent or any employee;
- all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any

other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;

- no person may cast concrete, until authorization in writing has been given by the competent person contemplated above;
- if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;
- adequate precautionary measures are taken in order to-
- secure any deck panels against displacement; and
- prevent any person from slipping on temporary works due to the application of release agents;
- as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person
- the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- a temporary works drawing or any other relevant document includes construction sequences and methods statement;
- the temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any work other than its intended purpose.

### 5.35 Excavation

A contractor must-

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
- Evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

A contractor who performs excavation work-



- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where-
- the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
- such an excavation is in stable material: Provided that-
- permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
- where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
- must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
- must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
- must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six meters from the point where any worker within the excavation is working;
- must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
  - must ensure that every excavation, including all bracing and shoring, is inspected-
  - daily, prior to the commencement of each shift;
  - after every blasting operation;
  - after an unexpected fall of ground;
  - after damage to supports; and
  - after rain,

by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the client, the client's agent, any other contractor or any employee;

- must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –
  - adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and
  - provided with warning illuminates or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
- must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;
- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosives legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

#### 5.36 Demolition Work

Not applicable on this project..

#### 5.37 Tunneling

Not applicable on this project.

#### 5.38 Scaffolding

A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.

A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act.

#### 5.39 Bulk mixing plant

A contractor must ensure that the operation of a bulk mixing plant is supervised by a competent person who has been appointed in writing and is –

- 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.

No person supervising or operating a bulk mixing plant may authorize any other person to operate the plant, unless that person is competent to operate a bulk mixing plant.

A contractor must ensure that 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.

A contractor must ensure that all devices to start and stop a bulk mixing plant are provided and that those devices are placed in an easily accessible position and constructed in a manner to prevent accidental starting.

A contractor must ensure that the machinery and plant selected is suitable for the mixing 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.

No person may remove or modify any guard or safety equipment relating to a bulk mixing plant, unless authorized to do so by the appointed person.

A contractor must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with when entering any silo.

A contractor must ensure that a record is kept of all repairs or maintenance to a bulk mixing plant and that the record is available on site to an inspector, the client, the client's agent or any employee.

#### 5.40 Rope Access Work

Not applicable on this project.

#### 5.41 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
  - Limiting the amount of HCS

- Limiting the number of employees
- Limiting the period of exposure
- Substituting the HCS
- Using engineering controls
- Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.

The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

#### 5.42 Hazardous Biological Substances (HBS)

Because of the possible exposure of workers to raw sewage the H&S Plan shall include details of the following:

- The conducting of Risk Assessment specifically aimed at exposure to HBA which shall include the following
  - Nature and dose of HBA
  - Where HBA may be present and in what physical form
  - The nature of work or process
  - Steps in the event of failure of control measures
  - The effect of the HBA
  - The period of exposure
  - Control measures to be implemented
- Monitoring of exposure of workers shall be conducted to establish whether any worker is infected with an HBA associated with working or being exposed to raw sewage, in terms of the following:
  - By an occupational medical practitioner
  - Before entering the site to establish the workers baseline
  - During the period of the contract the risk assessment indicate possible exposure
  - After completion of the contract
- Medical surveillance should such be required after the above-mentioned by an occupational health practitioner.
- Indication on how all records of assessment, monitoring, etc will be kept, taking into account that records have to be kept for a period of 40 years.
- How exposure to HBA is to be controlled
- The provision of personal protective equipment



- What information and training is to be provided to employees regarding the following:
  - The contents of these regulations
  - Potential risks to health
  - Control measures to be implemented
  - The correct use and maintenance of personal protective equipment
  - The results of the risk assessment.

#### 5.43 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
  - Engineering methods considered
  - Admin control (number of employees exposed) considered
  - Personal protective equipment considered/decided on
  - Describe how records are going to be kept for 40 years.

#### 5.44 Explosives and Blasting

Not applicable on this project.

#### 5.45 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision and keep adequate quantities of SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.

#### 5.46 Asbestos

Not applicable on this project.

Should asbestos be identified as a hazard whilst work is carried out, the following must be included in the health and safety plan:

- Notification to the Provincial Director in writing, prior to commencement of asbestos work.
- Proof of a structured medical surveillance programme, drawn up by an occupational medicine practitioner.
- Proof that an occupational health practitioner carried out an initial health evaluation within 14 days after commencement of work.
- Copies of the results of all assessments, exposure monitoring and the written inventory of the location of the asbestos at the workplace.
- Only proof that medical surveillance has been conducted and not the actual records itself since these areas of a confidential nature.
- How records are going to be kept safe for the stipulated period of 40 years.
- Proof that asbestos demolition (if applicable) is going to be done by a registered asbestos contractor and provide proof that a plan of work for such demolition is submitted to an Approved Asbestos Inspection Authority 30 days prior to commencement of the demolition.
- Provide proof that the plan of work was approved by the asbestos AIA and submitted to the provincial director 14 days prior to commencement of demolition work together with the approved standardised procedures for demolition work

#### 5.47 Lead

Not applicable on this project.

Should lead be identified as a hazard whilst work is carried out, the following must be included in the health and safety plan:

- Proof that an occupational health practitioner carried out an initial health evaluation within 14 days after commencement of work.
- Copies of the results of all assessments, exposure monitoring and the written inventory of the location of the lead at the workplace.
- Only proof that medical surveillance has been conducted and not the actual records since these are of a confidential nature.
- How records are going to be kept safe for the stipulated period of 40 years.

#### 5.48 Pressure Vessels (Including Gas Bottles)

Not applicable on this project.

#### 5.49 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers.



The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

Safety signage shall be posted up in all areas where fire extinguishers are located.

#### 5.50 Lifting Machinery and Tackle

Not applicable on this project.

#### 5.51 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

#### 5.52 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

#### 5.53 Portable Electrical Tools

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.

The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

#### 5.54 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

#### 5.55 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from on site activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

#### 5.56 Night Work

Not applicable on this project.

#### 5.57 Lighting

Where poor or lack of illumination is identified as a hazard the lighting regulations must be complied with and the following must be included in the H&S Plan:

- How lighting will be ensured/ provided where daylight is not sufficient and /or after hours are worked.
- Planned maintenance programme for replacing luminaries.
- Proof of illumination levels of artificial illumination equipment.

#### 5.58 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.

#### 5.59 Occupational Health

Exposure of workers to occupational health hazards and risks are very common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin (pores) e.g. painting or use of thinners.



The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.

All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

**5.60 Suspended Platforms**

Not applicable on this project.

**5.61 Material Hoists**

Not applicable on this project.

**5.62 Explosive Actuated Fastening Device**

Not applicable on this project

Document for information purposes ONLY

<b>6. TRAINING, INSPECTIONS AND RECORDS</b>
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The Contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least fortnightly and before hazardous work is carried out	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by employer
Health and Safety Reports	Monthly	Report covering: <ul style="list-style-type: none"> <li>a) Incidents / Accidents and investigation</li> <li>b) Non conformance</li> <li>c) Health and Safety Training</li> <li>d) HIRA Updates</li> <li>e) Internal &amp; External Audits</li> </ul>
General Inspections	As per Health and Safety Specifications & OHSA	Report of Health and Safety Specifications and OHSA compliance: <ul style="list-style-type: none"> <li>a) Scaffolding</li> <li>b) Lifting Machinery</li> <li>c) Excavations</li> <li>d) Construction vehicle</li> </ul>
General Inspections	Monthly	Covering: <ul style="list-style-type: none"> <li>a) Fire Fighting Equipment</li> <li>b) Portable Electrical Equipment</li> <li>c) Hand Tools</li> <li>d) Ladders</li> </ul>
Record Keeping	On-going	Covering: <ul style="list-style-type: none"> <li>a) General Complaints</li> <li>b) Fines</li> <li>c) General Incidents</li> <li>d) MSDS</li> <li>e) Surveillance Medicals</li> <li>f) Inspection Registers</li> <li>g) Department of Labour Notices</li> </ul>

<b>ANNEXURE A</b>
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The contractor shall submit the info below in an Annexure 2 prior to construction commencement.

Item No.	Health and Safety Specification Requirement	OHSA Requirement	Submission date
1	Notification of Intention to Commence Construction	Construction Regulation 2014	At least 7 days before commencement on site
2	Construction Work Permit	Construction Regulation 2014	At least 30 days prior to project commencement
3	Assignment of Responsible Person to Manage Building Work Via Health and Safety Organogram	Construction Regulation 2014	Before commencement on site
4	Competency for Health and Safety Positions	Client / Client Agent requirement	Before commencement on site
5	Letter of Good Standing	Compensation of Occupational Injuries & Disease Act (COIDA) 130 of 1993	Before commencement on site
6	Occupational Health and Safety Policy	Client / Client Agent requirement	Before commencement on site
7	Risk Assessment, Safety Plan, Fall Protection Plan, Demolition Method Statement	Client / Client Agent requirement	Before commencement on site

<b>ANNEXURE B: APPOINTMENTS</b>
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The Contractor shall make the following appointments:

No	Description	No	Description
1	Chief Executive Officer (OSHACT 16(1))	17	Material Hoist Inspector (CR19(8)(a))
2	Contract Director/Manager (OSHACT 16(2))	18	Material Hoist Operator (CR19(6))
3	Construction Manager (CR 8(1))	19	Bulk Mixing Plant Supervisor (CR20(1))
4	Construction Supervisor (CR 8(7))	20	Bulk Mixing Plant Operator (CR20(2))
5	Assistant Construction Supervisor (CR 8(8))	21	Controller of Explosive Actuated Fastening Devices (CR21(2)(g)(1))
6	Construction Safety Officer (CR 8(5))	22	Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
7	Construction risk assessor (CR 9(1))	23	Controller of Temporary Electrical Installations (CR24('c))
8	Fall Protection Competent Person (CR 10(1))	24	Stacking Supervisor (CR28(a))
9	Traffic Safety Officer	25	Fire Extinguishing Equipment Inspector (CR29(h))
10	Safety Representative (where > 20 employees on site)	26	Fire Fighters (CR29(i))
11	Temporary work Designer (CR 12(1))	27	First Aider (GSR 3)
12	Temporary work Supervisor (CR12(2))	28	Fall Protection Plan Developer (CR 10(1)(a))
13	Excavation Supervisor (CR13(1)(a))	29	Incident Investigator (OSHACT 9(2))
14	Demolition Supervisor (CR14(1))	30	Competent Person – Confined Spaces (GAR 5(1))
15	Scaffold Supervisor (CR16(1))	31	Health and Safety technical Committee (CR 31)
16	Suspended Platform Supervisor (CR17(1))	32	General Machinery Competent Person (GMR 2)



**7. PROJECT DETAILS**

PROJECT DIRECTORY:		
Client	<b>Mapungubwe National Park</b> <b>The Park Manager</b> <b>Mapungubwe National Park</b> <b>PO Box 383</b> <b>Musina</b> <b>0900</b> Contact: Mr M Nthangeni	Tel: 058 255 0938 email: mphadeni.nthangeni@sanparks.org
Client Agent	<b>South Africa National Park</b> <b>General Manager: I&amp;SP</b> <b>SANParks</b> <b>PO Box 787</b> <b>Pretoria,</b> <b>0001</b> Contact: Ms. A van Wyk	Tel (w): 012 – 426 5126 Fax (w): 012 – 343 4666 E-mail: antionet.vanwyk@sanparks.org

PROJECT DETAILS:
<b>Description of Works</b> The upgrading and maintenance of gravel road within the Mapungubwe National Park. This Contract forms part of the general upgrading of roads infrastructure with in the Mapungubwe National Park.
<b>Anticipated Construction Duration</b> 9 Months
<b>Provisional Start Date</b> August 2024
<b>Completion Date</b> April 2025

EXISTING ENVIRONMENT:														
<b>Hazards particular to this project by virtue of location:</b> <b>Wild Animals:</b> The site is located in the Mapungubwe National Park boundary and the park do have dangerous animals e.g. predators, elephants, buffalo, snakes. No labour may work outside there construction vehicle without Park supervision. Special care must be taken and lookouts must be posted when working outside of construction vehicle. A lookout for baboons, snakes and scorpions is going to be required to protect the workers. <b>Members of public and children:</b> All necessary steps to be taken to protect them from any dangers associated with the construction works being undertaken. <b>Public Roads:</b> Works will execute on a public road. No complete road closures will be allowed and the accommodation of traffic must be carefully planned.														
<b>Overhead, Above Ground and Underground Services crossing the site:</b> <table> <tr> <td><b>Overhead:</b></td> <td>Not Applicable</td> </tr> <tr> <td><b>Underground:</b></td> <td>Not Applicable</td> </tr> <tr> <td><b>Ground Level:</b></td> <td>Not Applicable</td> </tr> <tr> <td><b>Services Drawings available</b></td> <td>Not Applicable</td> </tr> <tr> <td><b>Way leaves required:</b></td> <td>Not Applicable</td> </tr> <tr> <td><b>Permits required:</b></td> <td>Applicable</td> </tr> <tr> <td><b>Isolation required:</b></td> <td>Not Applicable</td> </tr> </table>	<b>Overhead:</b>	Not Applicable	<b>Underground:</b>	Not Applicable	<b>Ground Level:</b>	Not Applicable	<b>Services Drawings available</b>	Not Applicable	<b>Way leaves required:</b>	Not Applicable	<b>Permits required:</b>	Applicable	<b>Isolation required:</b>	Not Applicable
<b>Overhead:</b>	Not Applicable													
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<b>Ground Level:</b>	Not Applicable													
<b>Services Drawings available</b>	Not Applicable													
<b>Way leaves required:</b>	Not Applicable													
<b>Permits required:</b>	Applicable													
<b>Isolation required:</b>	Not Applicable													
<b>Existing structures and surrounding land use (with a significant impact on Health and Safety):</b> The road is parts of the currently road infrastructure is being used by the Vele Mine as main access to their mine water supply.														
<b>Existing ground conditions and ground survey report:</b> There is a geo technical report available.														

<b>Existing Traffic Systems:</b>	
<b>Conditions:</b>	Gravel Roads
<b>Restrictions to access:</b>	Applicable
<b>Speed restrictions:</b>	Normal road restrictions: 40km/h

<b>PROJECT HEALTH AND SAFETY REQUIREMENTS:</b>
<p><b>Significant health and safety hazards identified by Designer and Client Agent:</b></p> <p><b>Accommodation of Traffic (Management Plan):</b> The Principal Contractor must supply a proper and comprehensive Traffic Management Plan for the various sites within this identification, i.e. the Site camp and surrounds as well as the works area and surrounds.</p> <p><b>Members of the Public:</b> The works is in a very busy area. The Principal Contractor is responsible for the safety of the workers as well as the public. The Principal Contractor will have to have sufficient warning &amp; information signage to assist with the information to the public. The Principal Contractor will be responsible to have sufficient directional signage and to have proper road traffic management in place.</p> <p><b>Wild animals:</b> There are antelope, baboons, snakes and scorpions roaming the area and the principal Contractor will have to ensure that they or the workers do not get killed or hurt during the construction phase.</p> <p><b>Normal construction hazards expected are as follow:</b></p> <ul style="list-style-type: none"> <li>Bricklaying</li> <li>Bruch Cutting</li> <li>Compacting and filling / Compactors Operations</li> <li>Concrete / Concrete pumping</li> <li>Confined Spaces</li> <li>Electric Tools &amp; Electrical Installations</li> <li>Excavations</li> <li>Fire</li> <li>Hand Tools</li> <li>Hazardous Substances</li> <li>Kerb Laying</li> <li>Manual Handling of plant/material/equipment</li> <li>Members of public</li> <li>Noise and Dust</li> <li>Painting</li> <li>Plant / Vehicle and Equipment Operations</li> <li>Road Construction</li> <li>Road Markings/ signage</li> <li>Site Establishment</li> <li>Snakes</li> <li>Animals</li> <li>Steel fixing</li> <li>Temporary Works</li> <li>Traffic Management</li> <li>Transportation of workers</li> </ul> <p><b>NOTE: Please refer to the end of this Health and Safety Specification for the baseline risk assessment of these risks.</b></p>

<b>ACTIVITIES REQUIRING APPROVED METHOD STATEMENTS</b>
<ul style="list-style-type: none"> <li>Road Traffic Management</li> <li>Protection of Public</li> </ul>



**The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:**

Petrol	Cement
Diesel	Silicone

Document for information purposes ONLY



### Baseline Risk Assessment Roads

#### PROJECT: MAPUNGUBWE NATIONAL PARK ROAD UPGRADING.

Risk Rating is measured by determining the Likelihood (L) and Consequence (C) and using the Matrix to determine the Risk Rating (R).

**Risk Ranking below 10 is deemed Tolerable, between 11 and 19 is deemed Medium Risk and above 20 is deemed High Risk**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating			Controls Measures	Other Controls
				L	C	R		
General Onsite Activities	A1	Access to Site	Pedestrian & people equipment interaction causing injury	4	2	12	Occupational Health and Safety Act 24(1)	Area to be secured and barricaded / fenced
			Dust Inhalation	3	1	4	Hazardous Chemical Substances Regulation (36)(37)(38)	Induction Training & PPE
			Unauthorised entry	3	2	8	Occupational Health and Safety Act 12(2)	Site Visit Register, signage, Permit for vehicle access
			Slip,trip,and fall	3	2	8	Occupational Health and Safety Act 12(1)(b)(c)	Induction Training & PPE
	A2	Placing of office/ containers if lifting is involved	Heavy objects swinging out of control causing injury/damage	2	4	14	Driven Machinery 18(11)	Safe work area, Induction Training, Trained operator, Lifting Plan
			Crane/lifting tackle failure causing object to fall	2	4	14	General Machinery Regulations 7(a)9b)	Inspection Register, Trained operator
			Accidental collision with overhead power lines	2	4	14	General Machinery Regulations 7(a)(b)	Assign a flag man, determine safe work area
			Lifting machine/crane falling over	2	4	14	General Machinery Regulations 5(1)(2)	Assign a flag man, determine safe work area
	A3	Hand Loading and offloading of heavy machinery & equipment	Items rolling/slipping falling causing injury	4	2	12	General Machinery Regulations 2(1)	Induction training, PPE
			Incorrect Lifting procedure resulting in injury	3	2	8	General Machinery Regulations 3(2)	Induction training, Proper lifting procedure, PPE
	A4	Machine loading and offloading of heavy machinery & equipment	Failure of machinery causing injury	3	3	13	Driven Machinery 18(1)(a)(b)	Supervision
			Equipment falling	3	3	13	General Machinery Regulations 2(2)	PPE
			Collision of vehicles	3	3	13	General Machinery Regulations 7(a)(b)	Flag men



A5	Traffic	Equipment interaction	3	4	18	Construction Regulation 23(1)(d)(i)(ii)	Traffic management plan
		Pedestrian collision	3	4	18	Construction Regulation 23(2)(c)	Pedestrians Walkways
A6	Lack of employees facilities	Lack of drinking water, dehydration of workers	3	5	22	Construction Regulation 30(1)(a)	Provision of drinking water & Induction training
		Lack of sanitary facilities, unhygienic conditions	3	5	22	Construction Regulation 30(1)(b) and 30(2)	Provision of chemical toilets & proper housekeeping
A7	Stacking & Storage	Fall, slip resulting in potential injury/damage	4	3	17	Construction Regulation 28(d)	Storage plan, induction training and restricted access
		Obstructing critical equipment and walkways	4	3	17	Construction Regulation 27 (a)(c)(g)	Storage plan, induction training and restricted access
		Flammable liquids catching fire	3	3	13	Construction Regulation 25(a)(b)(c)	Storage plan, induction training and fire fighting equipment
		Hazardous storage of materials	3	3	13	Hazardous Chemical Regulation(25)9A(2)	Storage plan, regular inspections
A8	Handling of chemicals and fuels	Exposure	3	3	13	Hazardous Chemical Regulation 9A(1)(a-p)	PPE
		Inhalation	3	3	13	Hazardous Chemical Substances Regulation (36)(37)(38)	
		Burns to Skin	3	3	13	Hazardous Chemical Substances Regulations 9A(2); Material Data Sheet	
A9	Temporary Low voltage Electrical installation	Exposure to live wires-electrocution	2	5	19	Construction Regulation 24(a)(b)	Lockable DB box, Inspection register
		Faulty earth leakage	2	5	19	SANS 10142	Competent person to do installation & inspection
		Short circuit causing fire	2	4	14	Construction Regulation 24(b)	Weekly inspection, Induction Training & Fire fighting equipment
A10	Issue of PPE	Incorrect PPE	4	2	12	General Safety Regulation 2(1)	PPE Register
A11	Usage of PPE	Incorrect use of PPE	4	2	12	General Safety Regulation 3(2)	PPE Register, Induction Training, supervision
		Negligence to use PPE	4	2	12	General Safety Regulation 5	PPE Register, Induction Training, supervision
A12	Adverse storms	Struck by lightning	2	5	19	Induction Training Safe Operation Procedure	Proper warning system



	A13	Adverse heat	Dehydration, Sunburn, heat stroke	3	4	18	Induction Training Safe Operation Procedure	Proper drinking water, PPE
	A14	Working in excessive winds	Exposure to dust	3	4	18	Hazardous Chemical Substances Regulation (36)(37)(38)	PPE
	A15	House keeping	Objects lying around can result in slip/fall	4	2	12	Construction Regulation 27(a)(b)	Regular cleaning of site
			Unhygienic conditions	3	3	13	Construction Regulation 27(d)	Induction Training
			Pollution of area	3	2	8	Construction Regulation 27(e)	Proper waste bins and waste removal
	A16	Fire prevention	Open Fires	3	3	13	Construction Regulation 29(a)	SANParks EMP & Code of conduct
			Inadequate fire fighting equipment	4	3	17	Construction Regulation 29(g)(h)	Inspection register, supervision
			Run away fires	4	4	21	Emergency evacuation plan	SANParks EMP & Code of conduct
			Accidental Fires	3	4	18	Construction Regulation 29(a)(d)(iii)	Designated smoking areas
	A17	Environmental pollution	Pollution of ground,air,workspace	3	2	8	Environmental Regulation 6(d)	SANParks EMP & Code of conduct
			Littering	4	2	12	SANParks Environmental Management Plan	Induction Training, Provide proper trash bins
	A18	Working near hazardous animals incl snakes, spiders & scorpions	Poisons bites/ attack by large animals	3	3	13	SANParks Environmental Management Plan	Induction Training, SANParks ranger where required, Proper treatment in first aid kit
	A19	Working in close proximity of water	Falling into water & drowning	3	4	18	Construction Regulation 26(1)(a)(b)	Safe work area, Induction Training, barricades
			Pollution of water body	3	4	18	SANParks Environmental Management Plan Construction Regulation 26(2)	Induction Training
<b>Plant or vehicle &amp; equipment</b>	B1	Construction vehicles	Equipment Failure	4	4	21	Construction Regulation 23(1)(k)	Vehicle check list and regular maintenance
			Unroadworthy vehicles	3	4	18	Construction Regulation 23(2)(i)(j)(k)	Vehicle check list and regular maintenance
			Speeding/ Operation	3	4	18	Construction Regulation 23(2)(l)	Safe traffic route, imply penalties, traffic calming measures



		Potential accident/collision	4	4	21	General Machinery Regulations 7(a)	Induction Training, Reflective vests, safe work area
		Material/equipment fall from vehicle	4	4	21	Construction Regulations 23(1)(b)(g)(h)	Properly secure all goods
		Vehicle/plant not used for correct purpose	3	3	13	Construction Regulations 23(1)(b)(c)	Supervision, controlled access to vehicle/plant
B2	Mobile Crushers	Crushing of limbs	3	3	13	Safe Operation Procedures (SOP)	PPE
		Spillage / pollution	3	3	13		
		Dust Inhalation	3	3	13		Hazardous Chemical Substances Regulation (36)(37)(38)
B3	Licencing of operators	Unauthorized operation of equipment	3	3	13	Construction Regulation 23(1)(d)(i)(ii)	Valid operator, restricted access to machinery, supervision
		Expired licenses	3	1	6	Construction Regulation 23(1)(d)(i)(ii)	Keep OHS file up to date
B4	Parking of vehicles	Runaway vehicle	3	4	17	Safe Operation Procedures (SOP)	Vehicle check list, use stop block behind tyres
		Parking in unsafe areas	3	1	4	Construction Regulation 23(2)(i)(j)	Demarcate proper parking areas
<b>Transportation</b>	C1	Interaction with other vehicle-collision	4	4	21	Construction Regulation 23(1)(b)(j)	Supervisor
		Equipment not roadworthy	3	1	4		Vehicle checklist, vehicle must meet required standards
		Equipment not licensed	3	1	4	Construction Regulations 23(a)(b)	Supervision and monitor
		Operator of vehicle transporting employees not licensed and authorized	3	1	4	Construction Regulation 23(2)(i)(j)	Supervision and monitor if Driver has Valid PDP
		Vehicle not equipped to transport employees	3	1	4	Construction Regulation 23(d)(i)(j)	Vehicle checklist, vehicle must meet required standards
		Not Adhering traffic legislation	3	1	4	Construction Regulation 23(2)(j)	Supervision, implement fines
	C2	Transportation of material or equipment with people	Material/equipment fall from vehicle	4	4	21	Construction Regulation 23(g)(h)
		Potential accident/collision	4	4	21	Construction Regulation 23(2)(g)(h)(j)	Induction Training, Reflective vests, safe work area



	C3	Towing a Trailer	Vehicle accident	4	4	21	Construction Regulations 23(e); Occupational Health and Safety Act 24(1)(c)(iii)(iv)	Awareness, trained operator
			Towing coupler failure	3	3	13	Construction Regulation 22(e)	Inspection Register
<b>Hand Tools</b>	D1	Injury Due to	Incorrect tools used	4	3	17	Hand tool register, Induction Training,	Supervision
			Defective tools	4	3	17	Safe Operation Procedure	Supervision
			Struck by flying debris	3	3	13	Safe Operation Procedure	PPE
	D2	Hand Drills	Clothing being grabbed by rotating drill	3	3	13	Safe Operation procedure, Toolbox Talks Electrical Machinery Regulations 10(3)(4)	PPE, Supervision
			Unsecured work piece rotating with drill	3	3	13		PPE, Supervision
			Shaving flying into eyes	3	3	13		PPE, Supervision
			Accidental injury	4	3	17	Electrical Machinery Regulations 10(4)	PPE, Supervision
			Electrocution	3	5	22	Electrical Machinery Regulations 10(1) (a)(b)	Tool inspection register
	D3	Angle Grinder	Cutting disc cracked and breaks	3	3	13	Safe Operation procedure, Toolbox Talks	PPE, Supervision
			Shaving flying into eyes	3	3	13	Electrical Machinery Regulations 10(3)	PPE, Supervision
			Exposure to noise	3	3	13	Noise Induced Hearing Loss Regulations (7)(1)(a)(b)(c)(d)	PPE
			Vibration	2	2	5	Safe Operation procedure, Toolbox Talks	
			Accidental injury	4	3	17	Safe Operation procedure, Toolbox Talks	PPE, Supervision
			Electrocution	3	5	22	Electrical Machinery Regulations 10(1) (a)(b)	Tool inspection register
D4	Other electrical portable hand tools	Electrocution	3	5	22	Electrical Machinery Regulations 10(1) (a)(b)	Tool inspection register, inspect extension cord	
		Exposure to noise	3	3	13	Noise Induced Hearing Loss Regulations (7)(1)(a)(b)(c)(d)	PPE	



			Vibration	2	2	5	Safe Operation procedure, Toolbox Talks	
			Accidental injury	4	3	17	Safe Operation procedure, Toolbox Talks	PPE, Supervision
			Shaving flying into eyes	3	3	13	Safe Operation procedure	PPE, Supervision
	D5	Explosive actuated fastening device	Malfunction of equipment causing injury/damage	3	3	13	Explosive Regulations 15(a)(b)	Tool inspection register, inspect extension cord
			Accidental injury	3	3	13	Explosive Regulations 15(b)	PPE, Supervision
			Accidental discharge	3	3	13	Explosive Regulations 15(a)(b)	Safety mechanism working, Store in unloaded condition
<b>Site Clearance</b>	E1	Site/Bush Clearing	Moving machinery accident	4	3	17	Construction Regulation 23(2)(b)	Reflective vests, restricted access, induction training
			Injury due to hand tools	4	3	17	Safe Operation Procedures (SOP)	Induction Training, PPE, First Aider
			Snakes/ Spider bites	3	3	13	SANParks Environmental Management Plan	Induction Training, Proper First Aid treatment available
			Dangerous animals in vicinity	3	3	13	SANParks Environmental Management Plan	Induction training, armed rangers escort
			Electrical cables and other services in way of work area	3	4	17	Construction Regulation 24(c)	Properly mark & demarcate existing services
	E2	Removal of waste	Moving machinery accident	4	4	22	Construction Regulation 23(1)(b)(c)	Reflective vests, restricted access, induction training
			Waste material falling of vehicle	3	3	13	Construction Regulations 23(h)	Secure load, stay within maximum vehicle load capacity
			Dust Inhalation	3	2	8	Hazardous Chemical Substances Regulation (36)(37)(38)	Induction Training & PPE
	E3	Demolition	Structure/rubble falling on person	3	3	13	Construction Regulation 14(1); 4(ii)	Induction Training, PPE, demarcate area
			Dust Inhalation	3	2	8	Hazardous Chemical Substances Regulation (36)(37)(38)	Induction Training & PPE
			Presence of lead	2	4	14	Lead Regulations (3)	PPE, Induction Training
			Presence of Asbestos	2	4	14	Asbestos Regulations (4)	PPE, Induction Training



			Hitting electrical cable - electrocution	3	5	22	Construction Regulation 24(a)	Induction training, Site map indicating existing services
			Hitting of gas line - explosion	3	5	22	Construction Regulation 14(1)(2)	Induction training, Site map indicating existing services
<b>Excavation &amp; backfilling</b>	F1	Hand Digging of holes/trenches	Injury due to defective tools	4	3	18	Construction Regulation 13(a)	Hand tool register, Induction Training
			Injury due to improper work method	4	3	18		Induction training, supervision
			Trip/fall into holes	3	3	13		Demarcate area, induction training, PPE
	F2	Machine Digging of holes/trenches	Collapse of trench	3	3	13	Construction Regulation 14(4)( iii)	Excavation inspection register by component person daily
			Collapse of adjacent structure	3	3	13	Construction Regulation 11(1)(a)	Safeguard adjacent structures
			Malfunction of machinery	3	3	13	General Machinery Regulations 2(2)	Machinery Inspection Register
			Unauthorized driver	2	2	5	General Machinery Regulations 2(1)	Trained operator, supervision, restricted access to machinery
			Unnecessary Damage to environment	3	2	9	SANParks Environmental Management Plan	Induction Training, designated work area
	F3	Tipping of material	Material falling on to person	3	3	13	Construction Regulation 23(g)	PPE, Safe Work area, Flag men
			Malfunction of equipment causing injury/damage	3	3	13		
F4	Use of Jackhammer	Exposure to excessive noise	3	3	13	Noise Induced Hearing Loss Regulations 7(1)(a)(b)(c)(d)	PPE	
		Injury due to malfunction of equipment	3	3	13		Inspection Register	
		Exposure to prolonged vibration	3	3	13			
F5	Opening trenches	Risk of collapse	3	3	13	Construction Regulation 13(h)(l)		
		Fall, slip into trench	4	3	17	General Safety Regulations 2(5)(6)	Barricade trench, PPE	
F6	Compaction	Personal Injury	3	3	13	General Safety Regulations 2(5)	PPE, Trained operator	
		Collision of machinery	3	3	13	General Machinery Regulations 4(1)	Induction Training, Reflective vests, safe work area	



			Dust Inhalation	3	2	8	Hazardous Chemical Substances Regulation (36)(37)(38)	Induction Training & PPE
	F7	Borrow Pits	Fall, slip into borrow pit	3	3	13	Construction Regulations 13(1)(a)	Induction Training, PPE, Safe work area
			Unauthorized access	3	2	8	Construction Regulations 13(1)(a)	Notification Boards
			Collision during loading of excavated material onto tipper	3	3	13		Competent operator, vehicles to be fitted with rotating lights & reverse hooters
<b>Temporary Works</b>	G1	Shoring/formwork/ Shuttering	Collapse of equipment	3	3	13	Construction Regulation 12(1)(2)	Built by competent person, PPE
			Injury during assembly/dismantling	3	3	13	Construction Regulations 12(3)(a)	Induction Training, PPE, Supervision
			Failure of equipment	3	3	13		Inspection register
			Collapse/bursting of structure	2	3	9	Construction Regulation 12(3)(c)(f)	Design of structure to be loaded to be approved by competent designer
			Inaccessibility to work area	2	3	9		Adequate safe access provided
			Fall, slip from shoring/formwork	3	3	13	Construction Regulation 10(1)(b);(2)(a)(b)	Fall Protection Plan, PPE, safety nets
			Falling material from height	4	3	17		PPE, safety nets
			Cuts and abrasions from splinters and nails	4	2	12	Construction Regulations 12(2)	PPE
	G2	Stop & Go Procedures - Moving Vehicles	injuries to employees involved in an accidents whiles setting up and taking down Stop/Go procedure	4	4	21	Construction Regulation 12(3)(d)	Visibility jackets, radio communication
			Injuries to employees involved in an accidents - in the midst of Stop/Go activity	4	4	21		
Injuries to road users involved in an accidents - approaching a Stop/Go activity			4	4	21	Construction Regulation 12(3)(d)		
<b>Concrete</b>	H1	Manual Mixing	Cement dust inhalation	3	2	8	Hazardous Chemical Substances Regulations 8(a)(b)(c)	Material Safety Data Sheet, PPE, Supervision



		Hazardous substance contact - dry cement mix	3	3	13	Hazardous Chemical Substances Regulations 9A(2); 2; and Material Data Sheet	PPE, Induction Training	
		Spillage/ pollution	3	3	13		PPE, Concrete mixing sheet	
		Injury during mixing/ cement burns	3	3	13		Induction Training, supervision,PPE	
H2	Concrete Mixer Machine	Poor ventilation causing ill health	3	2	8	General Safety Regulations 5(5)	PPE, additional ventilation	
		Accidental injury through flying objects	3	3	13	Hazardous Chemical Substances Regulations 10(3)	Induction training, supervision	
		Spillage/ pollution	4	3	17		PPE, Concrete mixing sheet	
		Clothing/body parts getting caught in open pulley. V-belts ect	3	3	13		Induction training, inspection register, all moving parts covered with guard	
H3	Bulk Mixing Plant	Unauthorized operation	3	2	8	Construction Regulation 20(1)(a)(b)	Competent Operator, Supervision	
		Malfunction of equipment causing injury/damage	3	3	13		Inspection Register & maintenance register	
H4	Concrete pumping	Cement Burns	3	2	8	Safe Operation Procedures (SOP)	PPE, Induction Training	
		Accidental collision with pump	2	3	9	General Safety Regulations 2(5)	Trained operator, supervision, restricted access to machinery	
		Collapse/bursting of structure	2	3	9	Safe Operation Procedures (SOP)	Design of structure to be loaded to be approved by competent designer	
		Malfunction of equipment causing injury/damage	3	3	13	Safe Operation Procedures (SOP)	Inspection register	
H5	Exposure to Hazardous chemical substances	Exposure	3	3	13	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	PPE	
		Burns to Skin	3	3	13			
		Inhalation	3	3	13			
<b>Working at heights</b>	I1	Climbing up and down equipment	Fall from equipment	4	3	17	General Safety Regulations (6)	Induction, PPE, Fall Protection plan
			Equipment used for incorrect purposes	3	3	13		Induction training, supervision



			Equipment failure resulting in injury/damage	3	3	13		Inspection register
<b>Work in Confined Spaces</b>	J1	Confined Spaces	Lack of oxygen	2	3	9	General Safety Regulations 5(1)	Additional ventilation
			Intoxicating Fumes	2	3	9	General Safety Regulations 5(1)(2)(a)(b)	Respiratory masks
<b>Construction</b>	K1	Bricklaying	Injury due to sharp bladed tools	3	3	13	Occupational Health and Safety Act 14(d)(e)	PPE, Induction Training
			Injury due to hauling of bricks	4	3	17		PPE, Induction Training
			Shards flying into eyes from breaking bricks	4	3	17		PPE, Induction Training
			Bricks falling from height	4	3	17		Safe work area, Induction Training, barricades
	K2	Layer Works	Potential accident/collision of vehicle	4	3	17	Hazardous Chemical Substances Regulations 14(b)	Induction Training, Reflective vests, safe work area
			Hazardous Chemical Exposure	3	3	13	Hazardous Chemical Substances Regulations 10(1)(a)	PPE, Material Data Sheet, induction Training
			Radio active exposure due to None-destructed density testing (Radio Active)	3	3	13	Hazardous Chemical Substances Regulations 5(4)	Induction Training, PPE
			Injury due to vehicle/plant	4	3	17	Occupational Health and Safety Act 24(1)(a)(b)(c)	Induction Training, Reflective vests, safe work area
	K3	Paving brick laying	Injury due to sharp bladed tools	3	3	13	Occupational Health and Safety Act 14(d)(e)	PPE, Induction Training
			Shards flying into eyes from breaking pavers	4	3	17		PPE, Induction Training
			Injury due to hauling of pavers	4	3	17		PPE, Induction Training
	K4	Gabions	Injury due to rock packing	4	3	17	Occupational Health and Safety Act 24(1)(c)(ii)	PPE, Induction Training
			Fall, slip from height	3	3	13	Construction Regulation 10(2)(a)(b)(d)(e)	PPE, Fall Protection Plan, Safe Work area
Cuts and abrasions from sharp material			4	2	12	PPE, Induction Training		
Collapse of structure			2	4	14	Construction Regulation 10(4)(c)(ii)(d)	Design of structure to be approved by competent designer	



		Falling of material onto person	3	3	13		PPE, safe work area, catch nets
K5	Kerb laying	Bodily injury due to handling	4	2	12	Occupational Health and Safety Act 24(1)(a)	PPE, Induction Training
		Falling of kerb onto person	3	2	8		Proper offloading plan, PPE
K6	Road Construction	Risk of being struck by vehicle while working next to road	4	4	21	Occupational Health and Safety Act 24(3)(a)(b)	Traffic Management Plan, Road Signs, reflective vests, Flag man
		Failure of regulating traffic causing collisions	3	4	18		Competent person, supervision
		Injury from road users and public	4	4	21	Construction Regulations Regulations 23(1)(e)(j)	Restrict access to site, Signage
		Noise pollution	3	2	8	Noise Induced Hearing Loss Regulations 7(1)(a)(b)(c)(d)	PPE
		Inhalation of dust	3	2	8	Hazardous Chemical Substances Regulations 8(a)(b)(c)	PPE
K7	Steel Fixing (Re-bar)	Injuries from tie wire	3	3	13	Occupational Health and Safety Act 24(2)	PPE, Induction Training
		Fall from heights	3	3	13		PPE, Fall Protection Plan
		Falling components	3	3	13		PPE, safe work area, catch nets
		Back injuries from manual handling	3	3	13		PPE, limit lifting weight
		Steel structure collapsing	3	3	13		PPE, Supervision



BASELINE RISK ASSESSMENT	
<b>PARK NAME</b>	Mapungubwe National Park
<b>PROJECT NAME</b>	Road Upgrading
<b>CONTRACT NO:</b>	
<b>PROJECT DURATION</b>	9Months
<b>Rev No</b>	
<b>Date Published</b>	04/03/2024
<b>Next Review Date</b>	04/2025
<b>No of Pages</b>	36

<b>Prepared By</b>	JAW Jacobs	<b>Designation</b>	Manager: Road Infrastructure
<b>Signature</b>		<b>Date</b>	04/03/2024
<b>16.2 Appointment</b>	JAW Jacobs	<b>Designation</b>	Manager: Road Infrastructure
<b>Signature</b>		<b>Date</b>	04/03/2024

**Risk Rating Matrix**

		Likelihood				
		5	4	3	2	1
Consequence	5	25	24	22	19	15
	4	23	21	18	14	10
	3	20	17	13	9	6
	2	16	12	8	5	3
	1	11	7	4	2	1

**Actions**

High 20-25	Immediate action to reduce risk. Introduce hard barriers and adequate controls to reduce risk. Control hazards. Monitor regularly
Moderate 11-19	Urgent attention to improve controls and reduce inherent risks. Monitor systems controls & audit quarterly & implementation of controls
Acceptable 1-10	Controls in place. Tolerable risk levels. Ensure monitoring is as per H&S Policy



INITIALS	SURNAME	DESIGNATION	CONTACT DETAILS	HIRA TRAINING	SIGNATURE	DATE
S	Mzileni	<b>Regional:</b> Project Manager		No		
J	Jacobs	<b>Technical Services:</b> Road Engineer	021 741 2561	Yes		
C	Nemadodzi	<b>Technical Manager:</b> MnNP		No		
Z	Mkhonza	<b>CHSO:</b> Coordinator Compliance	012 426 5199	Yes		

**8. HEALTH AND SAFETY SPECIFICATION ACKNOWLEDGEMENT RECEIPT**

**Contractor's Acknowledgement:**

I, \_\_\_\_\_ representing  
\_\_\_\_\_ (Contractors), have  
satisfied myself with the content of this Health and Safety Specification and have made the  
relevant provision under my Preliminary & General Section for any and all costs involved  
to ensure compliance of this Specification and shall we be the successful contractor, we  
shall ensure that our employees and contractors on site comply with the requirements of  
this documents, our safety documentation and health and safety legislation.

Signature of Contractor

Date

Comments:

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Contractor

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## Annexure B

# Environmental Management Plan

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Employer

# Environmental Management Plan

## General Construction Activities in Parks

**Park:** MAPUNGUBWE NATIONAL PARK – ROAD UPGRADING

**Project:** ROAD UPGRADING

CONTRACT No. CI-GK-0190

Prepared by:



**South African National Parks**  
P.O. Box 787  
PRETORIA  
0001

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**1. ENVIRONMENTAL MANAGEMENT PLAN**

**A. DECLARATION**

I the undersigned in my capacity as designated below to hereby undertake to ensure that the conditions and recommendations in terms of the Environmental Management Plan (EMP) for the renovation, upgrading, and construction activities in a National Park are implemented and assume responsibility and accountability in this respect.

I further understand that officials from SANParks may during any phase of the project, conduct an inspection of the development in order to ensure compliance with the conditions and recommendations in the EMP.

**EMPLOYER**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**CONTRACTOR**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Contractor

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Witness for Contractor

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Witness for Employer

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**1. ENVIRONMENTAL MANAGEMENT PLAN**

**1.1 GENERAL**

Definition of an **“Environmental Management Plan”**:

*A plan or programme that seeks to achieve a required end state and describes how activities, that have or could have an adverse impact on the environment, will be mitigated, controlled, and monitored.*

The EMP will address the environmental impacts during the design, construction and operational phases of a project. Due regard must be given to environmental protection during the entire project. In order to achieve this a number of environmental specifications/recommendations are made. These are aimed at ensuring that the contractor maintains adequate control over the project in order to:

- Minimise the extent of impact during construction.
- Ensure appropriate restoration of areas affected by construction.
- Prevent long term environmental degradation.

The contractor must be made aware of the environmental obligations that are stipulated in this document, and declares himself/herself to be conversant of all relevant environmental legislation. The contractor should also be aware that the Park Manager / Environmental Control Officer will monitor the implementation of the procedures.

**1.2 OBJECTIVES OF THE EMP**

The EMP has the following goals:

- Identifying those construction activities that may have a detrimental impact on the environment;
- Detailing the mitigation measures that will need to be taken, and the procedures for their implementation;
- Establishing the reporting system to be undertaken during the construction.

The EMP also serves to highlight specific requirements that will be monitored during the development and should the environmental impacts not have been satisfactory prevented or mitigated, corrective action will have to be taken. The document should, therefore, be seen as a guideline that will assist in minimising the potential environmental impact of activities.

Definition of **“mitigation measures”**:

*Mitigation seeks to find better ways of doing things, by the implementation of practical measures to reduce, limit, and eliminate adverse impacts or enhance project benefits and protect public and individual rights.*

The EMP also defines the arrangements that will be put in place to ensure that the mitigation measures are implemented by including recommendations of the roles and responsibilities of the project proponent, environmental management team and contractors.

**1.3 COMPONENTS OF THE “EMP”**

**1.3.1 Introduction**

This EMP adopted a precautionary approach, or in the case of management recommendations, a philosophy of ‘best practice’. Mitigation measures may then be of a more generic nature without compromising its importance to be implemented.

Therefore the purpose of this EMP is to draft and maintain a detailed management plan that, if put into practise, will effectively prevent/minimise environmental degradation.

**1.3.2 The EMP in Context**

This EMP will form part of a project tender and contract. Pre-construction and construction phase mitigation guidelines and clauses should be written into the construction contract documents as specifications. The contents of this EMP shall be deemed to be included in the rates tendered to execute and complete the works.

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**1.3.3 Flexibility**

The EMP is a dynamic and flexible document subject to review and updating. During the implementation of a project there is always the possibility that unforeseen issues could arise, this EMP should therefore be revised where necessary to mitigate unanticipated impacts.

**1.3.4 EMP Implementation Period**

The EMP will focus on and operate during the whole implementation / construction period and maintenance phase of the projects.

**1.3.5 Roles and Responsibilities**

Supervision and monitoring are fundamental to the successful implementation of an EMP. Therefore, it is vital that monitoring of the extent to which the mitigation measures of this EMP, are adhered to by consultants and contractors, takes place.

All of the issues described and discussed in this document will require monitoring, and it will be the responsibility of SANParks to undertake this monitoring according to the specifications of this EMP.

- To draft and implement a monitoring programme to assess compliance with the EMP.
- To appoint an Environmental Control Officer (ECO) during the Construction Phases.
- To undertake the monitoring of operations during the operational phase. Any problems that are identified or encountered must be reported to SANParks management so that appropriate action may be taken to rectify the situation.

**1.3.5.1 Appointment of an Environmental Control Officer**

The position of Environmental Control Officer has been created to ensure that the mitigation measures and other requirements set forth in the EMP are adhered to.

It is recommended that SANParks appoint an Environmental Control Officer (ECO) during the construction phase of the project. The ECO can be a Section Ranger.

The following guidelines apply to the functions of an ECO:

- The ECO should have the ability to understand the contents of the Environmental Management Plan (EMP) and explain it to the contractor, the site staff, the supervisors and any other relevant personnel or I&AP's.
- The ECO would have to be on site on a regular basis – preferably daily to supervise environmental actions associated with construction activities.
- The ECO should be able to understand, interpret, monitor, audit and implement the EMP. This is his most important function.
- The ECO must then give feedback of the audits to SANParks and Contractors. This must be in the form of a written report .
- The ECO must ensure that the contractor understands what is to be done to rectify and address any problems that have arisen from the audit.

**1.3.6 Feedback to Park Manager and ECO**

Reporting to the Park Manager and ECO should take place during site meetings – in the case of potential “fatal flaws”/crises developing due to implementation of the project, reporting should be done immediately and the potentially adverse activities immediately halted in order that corrective action can be taken.

Reporting on the status of implementation of the EMP and the results of the environmental monitoring programme must be recorded and summarised in a monthly report by the ECO and submitted to the Park Manager.

**1.3.7 Failure to comply with EMP**

Outlined below are a number of steps, relating to increasing severity of environmental problems, which will be implemented. The principle is to keep as many issues within the first few steps as possible.

- **Step 1**

The ECO discusses the problem with the contractor or guilty party, and they work out a solution together. The ECO records the discussion and the solution implemented.

- **Step 2**

The ECO or SANParks observes a more serious infringement, and notifies the guilty party in writing, with a deadline by which the problem must be rectified. All costs will be borne by the contractor.

- **Step 3**

The ECO shall order the contractor to suspend part, or all, the works. The suspension will be enforced until such time as the offending party(ies), procedure or equipment is corrected and/or remedial measures put in place if required. No extension of time will be granted for such delays and all cost will be borne by the contractor.

- **Step 4**

Breach of contract - One of the possible consequences of this is the removal of a contractor and/or equipment from the park and/or the termination of the contract, whether a construction contract or an employment contract. Such measures will not replace any legal proceedings that SANParks may institute against the contractor.

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**2. DESCRIPTION OF MITIGATION MEASURES**

This section of the report serves to prescribe mitigation measures to reduce, limit, eliminate or compensate for impacts, to acceptable/insignificant levels. In setting mitigation measures, the practical implications of executing these measures must be borne in mind. With early planning, both the cost and the impacts can be minimised.

The stipulations of this report should be conveyed to contractors prior to the commencement of construction.

**2.1 PRE-CONSTRUCTION MANAGEMENT PLAN**

The pre-construction or planning management plan is to be used as a guide during the planning, design and detailing of the development components. This part of the plan is to be referenced by all involved in decision making during the planning and design phases.

**2.1.1 EMP TRAINING**

Mitigation / Management Action	Responsible Agent
The Contractor shall arrange for Environmental and Heritage Awareness Training programmes for the personnel on site, to the satisfaction of the Park Manager and ECO, and familiarise his/her/its employees with the contents of this EMP, either in written format or verbally.	ECO & Contractor

**2.1.2 CONTRACT AREAS**

Mitigation / Management Action	Responsible Agent
The ECO must indicate/point out to contractors the areas that they will have in their possession for the duration of the contract (this shall include access roads to be used, construction lay-down areas, materials storage and delivery requirements, contractors' offices, operational demarcation etc.). Aspects pertaining to temporary housing for persons involved in the project shall also be included. A material delivery and storage area should be demarcated. The facility must be planned and laid out in such a way that the total footprint area is minimised.	ECO & Contractor

**2.1.3 SENSITIVE ECOLOGY**

Mitigation / Management Action	Responsible Agent
Prior to the commencement of construction, the proposed site/s and roads, must be inspected by SANParks Scientific Services (where necessary), in order to: <ul style="list-style-type: none"> <li>• Confirm the absence of Red Data Book Species;</li> <li>• Relocate, demarcate or recommend conservation / preservation measures for any identified ecologically "sensitive" and/or protected species and areas, and</li> <li>• Point out and/or demarcate all ecologically "sensitive" areas to the contractors (e.g. red data habitats &amp; species, rivers, streams, drainage lines, wetlands, sensitive soils, steep slopes and areas susceptible to erosion).</li> </ul>	SANParks, ECO & Contractor

**2.1.4 HERITAGE AREAS**

Mitigation / Management Action	Responsible Agent
In known archaeological sensitive areas the South African Heritage Resources Agency (SAHRA) must inspect all above-mentioned contract areas, in order to: <ul style="list-style-type: none"> <li>• Confirm the absence of archaeological sites and/or artefacts;</li> </ul>	SANParks, ECO & Contractor

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<ul style="list-style-type: none"> <li>Relocate, demarcate or recommend further conservation / preservation actions and measures for any identified archaeologically "sensitive" area and/or artefacts prior to the commencing of any work at these sites, and</li> <li>Point out and/or demarcate all archaeologically "sensitive" areas to the contractors.</li> </ul>	
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**2.1.5 ROADS**

Mitigation / Management Action	Responsible Agent
The final alignment of the access routes and internal camp roads shall be planned in conjunction with the Park Manager, SANParks Scientific Services, Section Ranger and ECO and once finalised only the agreed roads must be used.	ECO & Contractor
Roads must be planned to deviate around significant trees and Red Data Species marked out in an approved manner by the ECO.	ECO & Contractor

**2.1.6 SITE ESTABLISHMENT**

Mitigation / Management Action	Responsible Agent
Construction camps and staff accommodation facilities on the site will be required to be established in appropriate locations prior to the commencement of construction, preferably within already disturbed areas. After completion of the contract, these areas will be required to be rehabilitated.	ECO & Contractor
<p><b>Site Plan:</b> Before construction can begin, the Contractor shall submit a site layout plan to the ECO for approval, including:</p> <ul style="list-style-type: none"> <li>Site access (including entry and exit points).</li> <li>All material and equipment storage areas (including storage areas for hazardous substances such as fuel and chemicals).</li> <li>Construction offices and other structures.</li> <li>Security requirements (including temporary and permanent fencing, and lighting) and accommodation areas for security staff.</li> <li>Solid waste collection facilities and waste treatment facilities for litter, kitchen refuse, sewage and workshop-derived effluents.</li> <li>Storm water control measures.</li> <li>Provision of potable water and temporary ablution facilities.</li> <li>Only designated areas may be used for the storage of materials, machinery, equipment and site offices. The site offices should not be sited in close proximity to steep areas, as this will increase soil erosion. Preferred locations would be disturbed areas along routes. Offices (and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles) must be located as far away as possible from any watercourse. Regardless of the chosen site, the Contractor's intended mitigation measures shall be indicated on the plan.</li> </ul>	Contractor
Throughout the period of construction, the contractor shall restrict all activities to within the designated areas on the construction layout plan. Any relaxation or modification of the construction layout plan is to be approved by the ECO.	ECO & Contractor
<p><b>Site Camps:</b> The following restrictions or constraints should be placed on the site camp, and construction staff in general:</p> <ul style="list-style-type: none"> <li>The use of rivers and streams for washing of clothes.</li> <li>The use of welding equipment, oxy-acetylene torches and other bare flames where veld fires constitute a hazard.</li> <li>Indiscriminate disposal of rubbish or construction wastes or rubble.</li> <li>Littering of the site.</li> </ul>	ECO & Contractor

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Mitigation / Management Action	Responsible Agent
<ul style="list-style-type: none"> <li>Spillage of potential pollutants, such as petroleum products.</li> <li>Collection of firewood.</li> <li>Poaching of any description.</li> <li>Use of surrounding veld as toilets.</li> <li>Burning of wastes and cleared vegetation.</li> <li>No concrete structures allowed, if the site camp is within the Park boundaries.</li> </ul>	
<p><b>Vegetation clearing:</b> The natural vegetation encountered on the site is to be conserved and left as intact as possible. Only trees and shrubs directly affected by the works, and such others as may be approved by the ECO in writing, may be felled or cleared. A firebreak shall be cleared and maintained around the perimeter of the site camp/s and office sites where necessary.</p>	ECO & Contractor
<p><b>Water for human consumption:</b> Water for human consumption should be available at the site offices and at other convenient locations on site.</p>	ECO & Contractor
<p><b>Sewage Treatment:</b> Sanitary arrangements should be to the satisfaction of the Park Manager and ECO. In no other ablution facilities are available, chemical toilets must be supplied (1 per 15 persons) and must be regularly cleaned and maintained by the contractor. The positioning of the chemical toilets is to be done in consultation with the ECO. The Contractor should arrange for regular emptying of toilets and will be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the ECO. If necessary, the ablution facilities must be screened from the public view. In remote areas where chemical toilets may not be a viable option, agreement must be reached on alternatives before construction starts.</p>	ECO & Contractor
<p><b>Cooking Fuel:</b> The Contractor shall provide adequate facilities for his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. Collection of firewood is not permitted.</p>	ECO & Contractor
<p><b>Waste Management:</b> Solid waste shall be stored in an appointed area within the site camp in covered drums for collection and disposal. Disposal of solid waste shall be at an approved landfill site – this must be agreed to with the Park Manager. During the construction period, the facilities shall be maintained in a neat and tidy condition, and the site is to be kept free of litter. At all places of work, the Contractor shall provide litter collection facilities for later safe disposal at approved waste disposal sites.</p>	ECO & Contractor

**2.1.7 MATERIALS HANDLING, USE AND STORAGE**

Mitigation / Management Action	Responsible Agent
<p>The Contractor's management and maintenance of his plant and machinery will be strictly monitored according to the criteria given below, regardless of whether it is serviced on the site (i.e. at the place of construction activity or at a formalised workshop) or not.</p>	ECO & Contractor
<p><b>Safety:</b> All the necessary handling and safety equipment required for the safe use of petrochemicals and oils shall be provided by the Contractor to, and used or worn by the staff whose duty it is to manage and maintain the Contractor's and his subcontractor's and supplier's plant, machinery and equipment. Contractor must comply with the Occupational Health and Safety Act (Act 85 of 1993) and Construction Regulations, 2003 as this governs what the contractor has to do/provide for his staff.</p>	ECO & Contractor
<p><b>Hazardous Material Storage:</b> Petrochemicals, oils and identified hazardous substances shall only be stored under controlled conditions. All hazardous materials will be stored in a secured, appointed area that is fenced and has restricted entry. Storage of hazardous products shall only take place using suitable containers</p>	ECO & Contractor

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Mitigation / Management Action	Responsible Agent
approved by the ECO. In addition, hazard signs indicating the nature of the stored materials shall be displayed on the storage facility or containment structure.	
<b>Fuels and Gas Storage:</b> Fuel should be stored in a secure area in a steel tank supplied and maintained by the contractor according to safety procedures. Gas welding cylinders and LPG cylinders should be stored in a secure, well-ventilated area. The contractor must supply sufficient fire fighting equipment in event of an accident and strictly no smoking will be allowed where fuel is stored and used.	ECO & Contractor

**2.1.8 WATER SUPPLY**

Mitigation / Management Action	Responsible Agent
Water supply pipelines will be according to contract specifications, following the most direct, yet most ecologically responsible route agreed to with the engineer and as per contract documentation.	ECO & Contractor
Point out to contractors where they can obtain water (e.g. water for mixing of cement as well as for drinking). Contractors shall not make use of/collect water from any other source than those pointed out to them as suitable for use by them.	ECO

**2.1.9 LIQUID WASTE**

Mitigation / Management Action	Responsible Agent
Under the General Authorisations in terms of Section 39 of the National Water Act (Act No. 36 of 1998), DWAF does not permit the construction of wastewater disposal sites (such as septic tank systems) within the 100 year flood line of any watercourse, or alternatively, within 100 metres of the edge of a water resource.	SANParks
The treatment and disposal of effluent will comply with all applicable legislation and the relevant permit regarding the disposal of purified effluent into the natural environment will have to be obtained from DWAF if so required during construction and operations.	SANParks
The design, installation and operation of septic tanks and soak-aways will conform to Water Act, including all the regulations made under section 26 of the National Water Act.	SANParks

**2.2 CONSTRUCTION MANAGEMENT PLAN**

The Construction Management Plan forms part of the contract documentation. The plan must be read in conjunction with the contract documents including the relevant Bill of Quantities and Specifications.

**2.2.1 VEHICULAR ACCESS AND MOVEMENT OF CONSTRUCTION VEHICLES**

Mitigation / Management Action	Responsible Agent
During construction, use should be made of existing access routes to construction areas where possible. Construct approved vehicle turning areas, avoiding selected ecological sensitive areas or species, and have turning area routes approved by the ECO. Temporary access roads must be rehabilitated after usage as per prior agreement between the Park Manager and Contractor.	ECO & Contractor

**2.2.2 MOVEMENT OF CONSTRUCTION PERSONNEL, LABOURERS AND EQUIPMENT**

Mitigation / Management Action	Responsible Agent
The Contractor must ensure that all construction personnel, labourers and equipment remain within the demarcated construction sites at all times. Where construction personnel and/or equipment wish to move outside the boundaries of the site, the contractor/ labourers must obtain permission from the ECO.	ECO & Contractor

Contractor

Witness for Contractor

Employer

Witness for Employer

**2.2.3 VEGETATION CLEARING**

Mitigation / Management Action	Responsible Agent
The extent of all construction site footprints will be minimised and limited to existing and / or already disturbed areas wherever possible.	ECO & Contractor
The areas needing to be cleared and the degree of clearing required will be determined and demarcated in consultation with the ECO before clearing begins.	ECO & Contractor
The Contractor may not deface, paint or otherwise mark and / or damage natural features / vegetation on the site, unless agreed beforehand with the ECO. Any features / vegetation defaced by the Contractor will be restored to the satisfaction of the ECO.	ECO & Contractor
The ECO must be present during vegetation clearing.	ECO
<b>Plant Search and Rescue:</b> <ul style="list-style-type: none"> <li>Plant search and rescue (i.e. the location and removal of specified plant species, without unnecessary damage, and their transfer to a specified location) and the collection of seed, shall be conducted by the ECO prior to the onset of any site clearing operations, should the ecologist/ SANParks Scientific Services indicate this to be necessary.</li> <li>Sensitive areas and/or species that have been selected for conservation by the ecologist / SANParks Scientific Services, Park Manager or ECO, shall be demarcated with danger tape. No activity shall take place at these areas.</li> <li>De-stumping shall only occur at the request of the ECO. Where roots can act as erosion protection, trees should be cut as close as possible to the ground level.</li> <li>During the clearing of woody vegetation no basal cover or grass and topsoil shall be removed and damage to this layer shall be minimised as far as possible.</li> </ul>	ECO & Contractor
<b>Vegetation Removal and Trimming in Watercourses:</b> No heavy machinery shall be permitted within watercourses for any purpose, except emergency procedures, without the prior approval of the ECO. Clearing of vegetation shall be conducted by hand. All cleared and trimmed vegetation shall be removed from any watercourse to prevent flooding/snagging hazards being created.	ECO & Contractor
<b>Rehabilitation:</b> The Park Manager, ECO, and Contractor must agree on rehabilitation of areas. The Contractor shall be held responsible for rehabilitation for all areas disturbed during construction. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for, or from, road construction has to be stored temporarily or otherwise within the road reserve, or at designated or instructed areas outside the road reserve. This responsibility shall extend until expiry of the Defects Liability Period.	ECO & Contractor

**2.2.4 PROTECTION OF FAUNA**

Mitigation / Management Action	Responsible Agent
<ul style="list-style-type: none"> <li>Under no circumstances shall any animals be handled, removed, killed or be interfered with by the Contractor, his employees, his subcontractors or his subcontractors' employees.</li> <li>The Contractor and his employees shall not bring any domesticated animals onto the site.</li> <li>The Contractor shall ensure that the work site be kept clean, tidy and free of rubbish that would attract animals.</li> <li>No poaching of fauna and flora shall be tolerated by the Contractor or his personnel on Site or elsewhere.</li> </ul>	ECO & Contractor

**2.2.5 HERITAGE AND/OR ARCHAEOLOGICAL SITES**

Mitigation / Management Action	Responsible Agent
Historical and Archaeological Sites: If any artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The Contractor shall take reasonable precautions to	ECO & Contractor

Contractor

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Employer

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Mitigation / Management Action	Responsible Agent
<p>prevent any person from removing or damaging any such article and shall immediately upon discovery thereof inform the ECO of such discovery. The South African Heritage Resources Agency (SAHRA) or the National Monuments Council shall be contacted such that an archaeological consultant can be appointed to excavate and record the site. Work may only resume once clearance is given in writing by the archaeologist.</p> <p>No stones/rock or any material may be removed from any site in the park without approval by the ECO, and after confirmation that materials do not form part of a cultural site.</p>	

**2.2.6 SOIL MANAGEMENT**

Mitigation / Management Action	Responsible Agent
<p><b>Topsoil:</b> The Contractor is required to strip topsoil together with grass / groundcover from <u>all</u> areas where permanent or temporary structures are located, construction related activities occur, and access roads are to be constructed, etc. This must be read together with the contract specifications &amp; conditions. Topsoil must be stockpiled for later use.</p>	ECO & Contractor
<p>Topsoil is to be handled twice only - once to strip and stockpile, and secondly to replace, level, shape and scarify.</p>	ECO & Contractor
<p>Topsoil stockpiles are not to exceed 1.5 m in height and should be protected to prevent erosion where needed.</p>	ECO & Contractor
<p>Topsoil stockpiles are to be maintained in a weed free condition. The ECO can assist with guidance as to which plants are weeds and require removal.</p>	ECO & Contractor
<p>Topsoil is to be replaced by direct return where feasible (i.e. replaced immediately on the area where construction is complete), rather than stockpiling it for extended periods.</p>	ECO & Contractor
<p><b>Spoil Material:</b> The location of spoil stockpile sites shall be agreed upon by the ECO prior to the onset of any operations that will generate spoil materials. No spoil material shall be dumped outside the defined site. The Contractor shall ensure that the material does not blow or wash away. If the spoil material is in danger of being washed or blown away, the contractor shall cover it with a suitable material, such as hessian or plastic.</p>	ECO & Contractor

**2.2.7 EROSION CONTROL**

Mitigation / Management Action	Responsible Agent
<p>The Contractor shall protect all areas susceptible to erosion and shall take measures, to the approval of the ECO. The Contractor shall not allow erosion to develop on a large scale before effecting repairs and all erosion damage shall be repaired as soon as possible.</p>	ECO & Contractor
<p>The specifics of erosion protection work will vary from situation to situation. These specifics should be cleared with the Park Manager and/or ECO and comply with the contract specifications.</p>	ECO & Contractor
<p>Where required, cut-off trenches can be installed to divert substantial run-off and prevent erosion.</p>	ECO & Contractor
<p>During construction, areas susceptible to erosion must be protected by installing temporary or permanent drainage works and energy dispersion mechanisms and could include – to be agreed to by SANParks and Contractor and with considerations of implications on costs:</p> <ul style="list-style-type: none"> <li>• Vegetation,</li> <li>• Mitre drains (afleivore),</li> <li>• Benches (grondwalle),</li> <li>• Benches consisting of sandbags,</li> <li>• Packing branches and rocks in small gullies and disturbed areas.</li> </ul>	ECO & Contractor

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Storm water drainage measures are required on site to control runoff and prevent erosion.	ECO & Contractor
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**2.2.8 SLOPE PROTECTION**

Mitigation / Management Action	Responsible Agent
Cut and fill slopes shall be shaped and trimmed to approximate the natural condition and contours as closely as possible and, where possible, be undulating. Levels incongruous to the surrounding landscape, shall be reshaped as per contract specifications.	ECO & Contractor
Slopes that need protection shall be identified by the ECO and the specifications needed must be established using the latest approved methods and technology.	ECO & Contractor

**2.2.9 ACCESS ROADS**

Mitigation / Management Action	Responsible Agent
Construction staff may only use authorised paths and roads.	ECO & Contractor
The proclaimed speed limit in the Park must be strictly adhered to.	ECO & Contractor
ECO will monitor the conduct of drivers and report any negative impact to the contractor immediately.	ECO & Contractor
Construction roads must follow existing roads and tracks and should not be wider than necessary with a maximum width of 3 m. Should a wider road be required, this will require the approval of the ECO.	ECO & Contractor
If two-way traffic movement is to take place, passing bays are to be used where specified by the ECO to prevent access / detours into the surrounding areas. The drivers delivering construction materials to site are to be made aware of this. They may not drive off the road in order to allow another vehicle to pass.	ECO & Contractor
Continual use of dirt access roads by heavy machinery and increased transport loads means they will have to be carefully monitored and regularly graded as soon as potholes or rutting occurs.	ECO & Contractor
Upon completion of the construction period, the Contractor will ensure that the access roads are returned to a state no worse than prior to construction commencing.	ECO & Contractor

**2.2.10 EXCAVATION, BACKFILLING AND TRENCHING**

Mitigation / Management Action	Responsible Agent
Where at all possible, excavations must not stand open longer than 2 days, and should preferably be opened and closed on the same day. They should not be permitted to stand open longer than a week under any circumstances. Excavations must be marked with tape to clearly demarcate the area and warn against access.	ECO & Contractor
Excavations must not be undertaken until such time that all required materials / services etc. are available on-site, to facilitate immediate laying of such services or the construction of subsurface infrastructure.	ECO & Contractor
Any such excavations should ideally be undertaken within the confines of an established construction site - i.e. a site that is either protected with a peripheral fence, or a site that has a regular / continual human presence. Failing this, regular daily inspections are essential.	ECO & Contractor
If need be, spread the rocks in as natural looking manner as possible in the veld.	ECO & Contractor
Excess rocks and sand as a result of excavation activities is not to be dumped along next to construction site – rocks to be spread in a natural looking manner in the surrounding area.	ECO & Contractor

Contractor

Witness for Contractor

Employer

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Mitigation / Management Action	Responsible Agent
Removed soil is to be used to backfill areas where required (i.e. such as existing and un-rehabilitated gravel pits).	ECO & Contractor
Excavated material is to be stockpiled along the trench within the working servitude, unless otherwise authorised.	ECO & Contractor
Deficiency of backfill material will not be made up by excavation within the protected area. Where backfill material is deficient, it must be made up by importation from an approved borrow pit area.	ECO & Contractor

**2.2.11 LEVELLING**

Mitigation / Management Action	Responsible Agent
Excess sand and soil resulting from levelling activities of the work area should be stored in low heaps either on the access road or already disturbed area.	Contractor
Excess topsoil is to be spread evenly over the area in a manner that blends in with the natural topography.	ECO & Contractor
Once heavy machinery has cleared the bulk of these material stockpiles, the disturbed areas should be levelled and cleared of any foreign material manually e.g. with spades. It is unacceptable to leave foreign material behind with the knowledge that it will become hidden amongst the rejuvenating vegetation with time.	ECO & Contractor

**2.2.12 SAND EXTRACTION**

Mitigation / Management Action	Responsible Agent
This is a specialised and potentially environmentally impacting activity, which must be undertaken with the approval and overall management of the Park.	Contractor / SANParks
Regular inspections must be undertaken by the local Section Ranger and ECO to monitor and audit the effects and impacts of such removals.	ECO & Contractor
On completion of the sand-winning activity, the river bed will be rehabilitated to the satisfaction of the ECO and Section Ranger.	ECO & Contractor

**2.2.13 STOCKPILING, HANDLING AND STORAGE OF BUILDING MATERIALS**

Mitigation / Management Action	Responsible Agent
Stockpiles and storage yards will be demarcated in areas already disturbed or where they will cause minimal disturbance.	ECO & Contractor
Clearly indicate which activities are to take place in which areas within the site e.g. the mixing of cement, stockpiling of materials etc. Limit these activities to single sites only. This may not always be possible for example for heaps of topsoil, but should definitely be the case for other building materials.	ECO & Contractor
Stockpiles of expensive materials such as cement bags should be such that they can easily be removed from the site over weekends or during rainy weather.	Contractor
Specific sites should be allocated for construction waste e.g. empty cement bags, discarded planks, etc. A low temporary fence may be erected around such a site in order to contain the waste and assist the effective removal thereof from the site.	ECO & Contractor
Old cement mixing bags will be placed in wind and spill proof containers as soon as they are empty. The Contractor will not allow closed, open or empty bags to lie around the site.	ECO & Contractor
The Contractor will ensure that all operations that involve the use of cement and concrete are carefully controlled.	ECO & Contractor
Concrete mixing may only take place in the construction camp or in agreed specific areas on	ECO &

Contractor

Witness for Contractor

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site.	Contractor
Concrete may not be mixed directly on the ground. No mixed concrete may be deposited directly onto the ground prior to placing. A board or other suitable platform / surface is to be provided onto which the mixed concrete can be deposited whilst it waits placing.	ECO & Contractor
All visible remains of excess concrete will be deposited in a designated area awaiting removal to an approved landfill site.	ECO & Contractor

#### 2.2.14 SERVICING AND RE-FUELLING OF CONSTRUCTION EQUIPMENT

Mitigation / Management Action	Responsible Agent
All maintenance and repair work will be carried out at the main construction camp within an area designated for this purpose, equipped with necessary pollution containment measures.	ECO & Contractor
The ground under the servicing and refuelling areas must be protected against pollution caused by spills and / or tank overfills (bundled / lined).	ECO & Contractor
The Contractor may only change oil or lubricant at agreed and designated locations, except if there is a breakdown or emergency repair, and then any accidental spillages must be cleaned up / removed immediately.	ECO & Contractor
In such instances the Contractor will ensure that he has drip trays available to collect any oil or fluid.	ECO & Contractor
Construction vehicles are to be maintained in an acceptable state of repair. No vehicles or equipment with leaks or causing spills will be permitted to operate at any of the construction sites. These will be sent immediately back to the maintenance yard for repair.	ECO & Contractor
All equipment that leaks must be repaired immediately or must be removed from site.	ECO & Contractor
Fuels required during construction must be stored in a central depot at the construction camp. This storage area should be located on a slab and be contained within a bund capable of containing at least the volume of one of the containers.	ECO & Contractor
Temporary fuel storage tanks and transfer areas also need to be located on an impervious surface adequately bundled to contain accidental spills. Appropriate run-off containment measures must be in place.	Contractor

#### 2.2.15 SOLID WASTE MANAGEMENT

Mitigation / Management Action	Responsible Agent
An adequate number of 'scavenger proof' refuse bins must be provided at the construction sites and at the construction camps.	ECO & Contractor
These bins must be provided with lids and an external closing mechanism to prevent their contents blowing out and must be scavenger-proof to prevent baboons and other animals that may be attracted to the waste.	ECO & Contractor
The Contractor will ensure that all personnel immediately deposit waste in the waste bins provided.	ECO & Contractor
All refuse and solid waste generated at all work sites will be stored in appropriate scavenger proof containment vessels at the relevant site and removed to the main construction camp, where the waste will be sorted and stored within a fenced waste storage area.	ECO & Contractor
All waste must be transported in an appropriate manner (e.g. plastic rubbish bags).	ECO & Contractor
The Contractor may not dispose of any waste and / or construction debris by burning, or by burying.	ECO & Contractor
Discard all construction waste at a registered waste management facility / landfill site, particularly those wastes or products that could impact on surface or groundwater quality by leaching into or coming into contact with water.	ECO & Contractor

Contractor

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Contractor

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The contractor will maintain 'good housekeeping' practises as ensure that all work sites and construction camp are kept tidy and litter free.	ECO & Contractor
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**2.2.15 LIQUID WASTE MANAGEMENT**

Mitigation / Management Action	Responsible Agent
The Contractor must take reasonable precautions to prevent the pollution of the ground and / or water resources on and adjacent to the site as a result of his activities.	Contractor
The Contractor may discharge 'clean' silt laden water overland and allow this water to filter into the ground. However, he must ensure that he does not cause erosion as a result of any overland discharge.	ECO & Contractor
No natural watercourse is to be used for the cleaning of tools or any other apparatus. This includes for purposes of bathing, or the washing of clothes etc.	ECO & Contractor
All washing operations will take place off-site at a location where wastewater can be disposed of in an acceptable manner.	ECO & Contractor
Trucks delivering concrete may not be washed on site or anywhere inside the park.	ECO & Contractor
No spills may be hosed down into a storm water drain or sewer, or into the surrounding natural environment.	ECO & Contractor
Adequate ablution facilities are to be provided at each construction site, conveniently located near to work areas to avoid localised water pollution from camp sewerage.	ECO & Contractor
All soil contaminated, for example by leaking machines, refuelling spills etc. is to be excavated to the depth of contaminant penetration, placed in 200 litre drums and removed to an appropriate landfill site.	ECO & Contractor

**2.2.16 HAZARDOUS MATERIALS**

Mitigation / Management Action	Responsible Agent
The Contractor must comply with all national, regional and local legislation with regard to the storage, transport, use and disposal of petroleum, chemical, harmful and hazardous substances and materials.	Contractor
The Contractor will furthermore be responsible for the training and education of all personnel on site who will be handling the material about its proper use, handling and disposal.	Contractor
The Contractor will be responsible for establishing an emergency procedure for dealing with spills or releases of petroleum.	Contractor
Storage of all hazardous material is to be safe, tamper proof and under strict control.	ECO & Contractor
Petroleum, chemical, harmful and hazardous waste throughout the site must be stored in appropriate, well maintained containers.	Contractor
Exercise extreme care with the handling of diesel and other toxic solvents so that spillage is minimised.	ECO & Contractor
Any accidental chemical / fuel spills to be corrected immediately.	ECO & Contractor
Timber products should be treated off-site prior to use in construction.	ECO & Contractor
Periodic on-site application of timber treatment products (for maintenance purposes) should take place with due care for the nature of the product (toxicity) and for potential spillages that may occur. Areas where timber is to be treated should have secondary containment measures instituted, such as the placement of a plastic layer (some form of covering) over soils, beneath the timber structures to prevent contamination of the soil surface.	ECO & Contractor

Contractor

Witness for Contractor

Employer

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**2.2.17 RUN-OFF FROM CONSTRUCTION CAMPS**

Mitigation / Management Action	Responsible Agent
The Contractor must ensure that rainwater containing pollutants does not run-off into natural areas and thus result in a pollution threat.	ECO / Contractor
A drainage diversion system is to be installed to divert runoff from areas of potential pollution, e.g. batching area, vehicle maintenance area, workshops, chemical and fuel stores, etc.	ECO / Contractor

**2.2.18 FIRE**

Mitigation / Management Action	Responsible Agent
The Contractor must take all the necessary precautions to ensure that fires are not started as a result of activities on site.	Contractor
No fuels or chemicals may be stored under trees.	ECO / Contractor
Gas and liquid fuel may not be stored in the same storage area.	ECO / Contractor
The Contractor must ensure that there is adequate fire-fighting equipment at the fuel stores.	ECO / Contractor
No open fires for heating or cooking will be permitted on site, unless otherwise agreed and then only in designated areas.	Contractor
The Contractor will supply all living quarters, site offices, kitchen areas, workshop areas, material stores and any other areas identified with suitable, tested and approved fire fighting equipment.	Contractor
The construction site must be protected against fire, and a sufficient fire break must be constructed, on advice by the Section Ranger, around each construction site and the construction camp where necessary..	ECO / Contractor

**2.2.19 DUST**

Mitigation / Management Action	Responsible Agent
The Contractor shall take precautions to the satisfaction of the ECO to limit the production of dust and damage caused by dust.	ECO / Contractor

**2.2.20 NOISE**

Mitigation / Management Action	Responsible Agent
Machinery and vehicle silencer units are to be maintained in good working order. Offending machinery and / or vehicles will be banned from use on site until they have been repaired.	Contractor
Noise levels must be kept within acceptable limits for a protected area, and must not be of such nature as to detract from the natural experience of other visitors to the protected area.	Contractor
The contractor shall take into consideration that the project areas are located within a natural environment and that noise could be a major disturbance/nuisance for the fauna and visitors to the park. Project management should endeavour to keep noise generating activities associated with construction activities to a minimum and within working hours.	Contractor

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

**2.2.21 VISUAL**

Mitigation / Management Action	Responsible Agent
Security lighting must be placed such that it is not a nuisance to residents and visitors to the area. Shields may be required to prevent lights from being visible from other parts of the protected area.	ECO / Contractor
Care will be taken when positioning the lights to ensure the least visual impact, while still providing a safe work environment for construction staff.	ECO / Contractor
Should any construction activities take place where Park tourists can see the construction activities, then clear signboards must be erected to inform the tourists of the activity taking place. SANParks to provide boards. Contractor to erect boards as required.	Contractor
The Contractor shall not establish any activities which, in the opinion of the ECO, are likely to adversely affect the scenic quality of the area. The ECO may direct the Contractor to refrain from such activities or to take ameliorative actions to reduce the adverse effects of such activities.	ECO / Contractor
No painting or marking of natural features shall take place. Marking for surveying and other purposes shall only be done with pegs and beacons.	ECO / Contractor
All packed rock and exposed rock cuttings shall be treated in order to blend their colour with the colours of the natural weathered rocks of the adjacent environment.	ECO / Contractor

**2.2.22 SITE CLEAN-UP AND REHABILITATION**

Mitigation / Management Action	Responsible Agent
The Contractor must ensure that all temporary structures, materials, waste and facilities used for construction activities are removed upon completion of the project.	Contractor / ECO
Fully rehabilitate (e.g. clear and clean area, rake, pack branches etc.) all disturbed areas and protect them from erosion.	Contractor / ECO
Only indigenous plants which are able to establish easily and will need less maintenance because they have already adapted to the local conditions should be considered.	Contractor / ECO
Before final decisions about the choice of plant species are taken the Section Ranger should be approached for their advice.	Contractor / ECO

**2.3 MONITORING OF EMP IMPLEMENTATION**

The correct and successful implementation of impact mitigation measures in order to reduce adverse impacts on environmental conditions needs to be ensured by a proper monitoring programme.

Monitoring of the general implementation of/adherence to the EMP, shall be the responsibility of the ECO. Reporting on adherence/compliance to stipulations as communicated to contractors, shall take place during scheduled site meetings.

**2.3.1 Monitoring Form:**

A list of environmental issues addressed in the EMP is drawn up. A tick box monitoring form is compiled which makes provision for compliance or non-compliance to the EMP requirements for each environmental issue. This monitoring form makes room for a brief description of the non-compliance(s). The issues identified on the monitoring form must be discussed in detail with the contractor and the Park Manager. A reasonable date of completion of the remedial action must be jointly agreed upon, between the contractor, ECO and Park Manager. This monitoring form must be signed by all parties and a copy be provided to the Park Manager.

The following Monitoring Form may serve as an **example** or point of departure.

<b>Name:</b> Ref: _____ Date: _____	
<b>Project:</b>	

**ENVIRONMENTAL MONITORING CHECKLIST**  
 (NC = NON-COMPLIANCE, C = COMPLIANCE, NA = NOT APPLICABLE)

Item No.		Rating	Item No.		Rating
1.	Vehicular access and movement of construction vehicles		12.	Sand extraction	
2.	Movement of construction personnel, labourers and equipment		13.	Stockpiling, handling and storage of building materials	
3.	Vegetation clearing		14.	Servicing and re-fuelling of construction equipment	
4.	Protection of fauna		15.	Liquid waste management	
5.	Cultural and/or archaeological sites		16.	Hazardous materials	
6.	Soil management		17.	Run-off from construction camps	
7.	Erosion control		18.	Fire	
8.	Slope protection		19.	Dust	
9.	Access roads		20.	Noise	
10.	Excavation, backfilling and trenching		21.	Visual	
11.	Levelling		22.	Site clean-up and rehabilitation	
A.	<u>Others</u>				

**Remedial Action on Non-compliance: (Action and Time Plan)**


<b>Close out:</b> Environmental Control Officer  Name _____  Date _____	<b>Response required by:</b> Contractor  Name _____  Date _____
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Comments:

Records:

PARK MANAGER                     
  CONTRACTOR                     
  PROJECT MANAGER

Contractor	Witness for Contractor	Page 184 of 200	Employer	Witness for Employer

## Annexure C

### Code of Conduct for working in the South African National Parks

Document for information purposes ONLY

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer



**South African**  
NATIONAL PARKS

**SOUTH AFRICAN NATIONAL PARKS**

**CODE OF CONDUCT FOR WORKING  
IN A NATIONAL PARK**

**OUTSIDE ORGANISATIONS WORKING TEMPORARILY  
IN A NATIONAL PARK**

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

## CODE OF CONDUCT FOR PERSONNEL FROM OTHER ORGANISATIONS TEMPORARILY WORKING IN NATIONAL PARKS

### 1. INTRODUCTION

You will presently begin an important task in a national park, which is an area controlled by South African National Parks (SANParks). For obvious reasons your task must be completed in the shortest possible time and to accomplish this, there has to be co-operation at all levels between yourselves and personnel from SANParks.

In the past, you and your sub-ordinates worked in uncontrolled areas, but you are presently in a controlled area and furthermore in a national park.

As the name implies, the main objective with a national park is the protection, conservation and utilization of our heritage, in such a way to allow future generations to enjoy, appreciate and admire nature in its unspoiled state. This great endeavour can only be achieved if every individual who works in a national park admits to and accepts nature conservation as part of their heritage (daily life). Certain procedures were followed in the past to accomplish your tasks, but now you must accept that adaptations will have to be made to complete your task in a national park without disturbing the natural environment.

You will also be subjected to certain necessary restrictions during your stay and operations in a national park. Certain expectations will be made in accordance with your work commitments. Restrictions will be kept to a minimum, those that are enforced must please be respected and seen in a positive light to promote co-operation and to prevent any unpleasantness.

Depending on where you are resident while working in a national park, you are requested to discuss any problems you may encounter, with the Park Manager, (*Section Ranger or the person in charge of Visitor Services*). You can be assured that these officials will do everything in their power to ensure that you have a pleasant and productive stay in the national park.

Please study and commit yourself to the attached Code of Conduct.

Any uncertainties must be cleared up with a SANParks' official.

We wish you a pleasant and productive stay in our national parks.

### 2. PRINCIPLES WITH RESPECT TO BEHAVIOUR AND DISCIPLINE

All persons resident or working in a national park, are subject to the National Environmental Management Protected Areas Act 57 of 2003.

The following principles should be complied with at all times in a national park:

- 2.1 No prospecting or mining is allowed on any land forming part of a national park or protected area.
- 2.2 No person, except an employee authorised by SANParks may:
  - 2.2.1 Enter or reside in a national park without permission;
  - 2.2.2 Be in possession of an unsealed weapon, explosives, traps or poison in the park or convey the same into a park;
  - 2.2.3 Hunt or kill an animal, collect, damage or destroy a bird's nest or it's eggs;
  - 2.2.4 Purposely or negligently cause a veld fire or damage any object of geological, archaeological, historical, ethnological or of any other scientific value to SANParks;
  - 2.2.5 Bring any animal or pet into a national park or allow domestic animals to stray into a national park, if found it will be confiscated and destroyed by an official;
  - 2.2.6 Remove any animal (dead or alive) or parts thereof from the park (unless lawfully brought into the park);
  - 2.2.7 Cut down trees or remove plants from a park or in any way damage any tree, plant or seeds;
  - 2.2.8 Feed animals in national parks;
  - 2.2.9 Drive a vehicle without a licence or allow a minor to drive a vehicle under his control;

Contractor

Witness for  
Contractor

Employer

Witness for  
Employer

- 2.2.10 Spend the night anywhere in a national park, (other than in a designated area) except in a rest camp or private home, without the permission of SANParks;
- 2.2.11 Enter a national park in an:
  - Unlicensed (or unregistered) vehicles;
  - Enter or use any closed road (no entry);
- 2.2.12 Vehicles may not be driven recklessly or negligently in a national park.
- 2.2.13 All drivers must consider other drivers and all animals.
- 2.2.14 No person under the influence of alcohol or drugs may drive a vehicle in a national park or be in the driver's seat of a vehicle with the engine running.
- 2.2.15 Without special permission, no person may organize or perform public entertainment or fund-raising campaigns.
- 2.2.16 Angling in rivers or dams is prohibited.
- 2.2.17 Angling, where permitted, is only allowed from sunrise to sunset.
- 2.2.18 Swimming is prohibited at designated angling areas.
- 2.2.19 No person may damage property or endanger property belonging to SANParks.
- 2.2.20 No person may use a radio or musical instruments in such a way as to cause a disturbance to others.
- 2.2.21 No person may dispose of any article or rubble other than in containers provided by SANParks.
- 2.2.22 No person may remove sand, stone or wood without the permission of SANParks.
- 2.2.23 Unless issued with an official late permit, no one may travel from a rest camp or entry gate after gate closing times. Permits are issued by the Park Manager or designated person after acceptance of a legitimate motivation.
- 2.2.24 The proclaimed speed limit in a national park must be strictly adhered to, except if and when concessionary speed limits have been approved.

**3. RESPONSIBILITIES TOWARDS NATURE CONSERVATION**

- 3.1 Antiquities or objects of historical value which you may discover during your operation in a national park, are and remain the property of SANParks. These items must be handed the Park Manager or designated person as soon as possible. Any person found possession of such articles, either to keep or sell, will be liable to prosecution.
- 3.1 No firewood may be collected or removed without the permission of a Nature Conservation official. Under no circumstances will permission be granted to remove firewood from the park unless proof of sale from one of the shops can be produced.
- 3.2 Stone, sand and/or soil may not be remove from any area, unless permission has been granted by the Park Manager or designated person. These products may only be removed from sites specified by the Park Manager.
- 3.3 On request, the Park Manager or local Section Ranger will point out to the foreman, the sites allowed for removal of stone, sand and/or water for building or other purposes. No water may be taken from existing boreholes unless the Park Manager or designated person gives permission.
- 3.4 The removal, cutting down or damage to any living plant in a national park is illegal and may only be done with permission. Where the construction of roads, buildings etc. necessitates the destroying of indigenous trees, shrubs or plants, it must be kept to an absolute minimum.
- 3.5 Gravel pits must, where at all possible, not be visible from any road. After construction, these gravel pits must be rehabilitated as per contract document and/or Environmental Management Plan.
- 3.6 No animals may be killed in the park.
- 3.7 Other than SANParks employees, personnel resident in a park, but not employed by SANParks, may only kill an animal in an emergency, to protect a life or property or when specifically authorized to do so by SANParks. A report of all animals killed and the circumstance surrounding if, must be sent to the Park Manager or designated person as soon as possible.

Contractor

Witness for Contractor

Employer

Witness for Employer

**NB:** Snakes may only be killed in residences, rest camps and living quarters if it cannot be captured and removed by a knowledgeable person. Under no circumstances may poisonous or non-poisonous snakes be killed in the bush or elsewhere. Residents in a park are encouraged to study the poisonous and non-poisonous snake species for their own protection.

**4. FIREARMS**

Only authorized persons are allowed to possess firearms in a park. Firearms will only be allowed in exceptional circumstances, where an employee may need it in the execution of his duties and will be subject to certain strict conditions.

**5. LITTER**

All residents and work teams are expected to have proper respect towards the scenic beauty of a national park and not litter tins, paper etc. as well as construction debris, where new roads, bridges, dams or buildings are being constructed. It is the duty of the contractor and/or his supervisors to ensure that after completion of the projects, all litter is carted away. Under no circumstances may this litter be dumped in the bush or anywhere else. It is your responsibility to find out from the Park Manager or designated person if and where litter may be dumped. Littering is a serious offence and perpetrators can be prosecuted.

**NB:** After completion of any project, a contractor is required to obtain a report from the Park Manager declaring his satisfaction with the condition of the terrain and immediate surroundings.

**6. PETS**

No dogs or other pets are allowed in a national park without written permission of the Executive Director: Parks.

**7. PERSONNEL RELATIONS**

7.1 Park Managers or any designated person are officials of the SANParks and are responsible for the enforcement of the Protected Areas Act 57, 2003 in their respective parks. To uphold the organisation's authority, they have to be aware of all activities and especially extraordinary activities in their park. It is therefore not only a matter of courtesy but of necessity to report all activities to the Park Manager. It is very important that all new building activities, the construction of new roads, etc., be reported by the supervisor to the Park Manager. It is just as important to report the use of firebreak roads as well as unscheduled night trips to the Park Manager.

7.2 No person residing or working in a rest camp may leave the rest camp gate after gate closing times, without the Park Manager's or designated person's permission.

**8. TRAVELLING TIMES AND TRANSPORT MATTERS**

8.1 All private and official trips within a national park, must be undertaken during daylight hours and permission to travel after-hours will only be given in emergencies, by the Park Manager or designated person.

8.2 No person (employee or visitor) may transport passengers on the back of an open vehicle within a national park, unless in the execution of official duties.

**9. ROAD RULES AND SPEED LIMITS**

**9.1 Road Rules**

All personnel, whether in an official or private capacity, must ensure that their driving sets an example to other drivers. Although all people working in a park with the necessary approval, may drive at a faster speed than the tourists, they must do this as unobtrusively as possible by approaching another vehicle at a decreased speed, passing it and then accelerating slowly to the required speed. As soon as an oncoming vehicle is in sight, speed must once again be decreased until the vehicle is out of sight.

**9.2 Speed limit for personnel**

All employees of SANParks, as well as employees from outside organisations with written consent working in a national park, may travel at a maximum speed of 50 km/h during the day and 50km/h at night regardless of the speed limit. These speed limits are applicable to all official trips and may only be exceeded in emergencies. Personnel and/or their spouses may also drive at 50 km/h during the day, whilst in their private vehicles en route to the entrance gate closest to their residence. During private trips in the rest of the park, the designated speed limit has to be adhered to as well as in all the rest camps and personnel villages.

[Signature box]

Contractor

[Signature box]

Witness for Contractor

[Signature box]

Employer

[Signature box]

Witness for Employer

Please take note that all transgressors of this privilege will be prosecuted in the same way as tourists who disregard the speed limit.

**10. CONTROL AT ENTRANCE AND REST CAMP GATES**

When entering or leaving an entrance gate of a national park, you must identify yourself to the tourist officer in charge. No one may leave a rest camp after hours unless the Park Manager or designated person has granted permission and any one arriving after hours at a rest camp must report to the Park Manager or designated person.

**11. ENTRANCE TO NO-ENTRY ROADS**

**Fire-break and patrol roads**

Please take note that no one may drive along a fire-break or patrol road with a no-entry sign in their private capacity or along any road which has been closed in any way. Only the Park Manager or designated person may give permission to do so. When a fire-break or patrol road has to be used officially the Park Manager or designated person must preferably be given prior notice of the date and the route. If it is not possible to notify him, it must be done immediately on completion of the trip.

**12. GUEST PRIVILEGES**

Arrangements regarding guests must be made by the site supervisor with the Park Manager or designated person.

Only immediate family members (parents and children) will be allowed free access to a national park with the permission of the Park Manager or designated person.

**13. GENERAL DISCIPLINE**

It is the responsibility of every supervisor in a park to ensure that the following rules and regulations are brought to the attention of every employee under their supervision and to see that it is adhered to.

- 13.1 Every employee residing in living quarters in a rest camp or on a designated site must:
  - 13.1.1 Obey all reasonable and lawful rules given by the Park Manager or designated person;
  - 13.1.2 Reside only in specific quarters/designated site reserved for them;
  - 13.1.3 Maintain cleanliness and sanitation in his place of residence.
- 13.2 No person residing, working or officially present in a park, is allowed to:
  - 13.2.1 Accommodate any unauthorized person, assist him or give him permission to enter or live in any designated living areas;
  - 13.2.2 Behave in such a way as to be detrimental to maintaining discipline, order for health in such living areas;
- 13.3 Without written permission from the Park Manager or designated person;
  - 13.3.1 Keep live animals or poultry;
  - 13.3.2 Excavate or have excavations made
  - 13.3.3 Build or make any alterations to existing building;
- 13.4 In any way, either directly or indirectly, hinder any employee, Security Officer, Ranger or anyone authorised by the Park Manager, in the execution of their duties; inspections or any investigations deemed necessary or purposely hinder, obstruct, mislead or refuse to divulge information when requested to, or refuse to assist in any way or heed legitimate request or command.
- 13.5 Purposely disturb the peace by making a noise, shouting, screaming, arguing, causing violence or acting violently or improperly.
- 13.6 Enter or leave a Park or living quarters other than through the official gates.
- 13.7 Gamble in any way.
- 13.8 Defecate in a place or manner as to offend any other person.
- 13.9 Dispose of rubble or leftovers in any place other than in bins provided.
- 13.10 Aimlessly loiter or hang around near or in a rest camp or personnel accommodation at any time.

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- 13.11 Introduce, brew or be in possession of alcohol.
- 13.12 Be in possession of habit forming drugs.
- 13.13 Be in possession of any fresh meat, especially raw venison or other animal products and, if required legally, it may not be transported out of the park without the necessary veterinary permits.
- 13.14 Hitch-hike in a national park.
- 13.15 Possess a firearm or any dangerous weapon without the necessary permission or permit.
- 13.16 Where work teams reside and work in the field, wander away from the work site or living quarters.
- 13.17 Temporary work teams (supervisors excluded) are not allowed to receive visitors in a national park.
- 13.18 It is the contractor's responsibility to ascertain the rules and regulations laid down by SANParks.

**14. MALARIA AND MALARIA CONTROL**

Some of the national parks, e.g. Kruger National Park and Mapungubwe National Park are in an endemic malaria area and the residents are constantly exposed to the disease and must be aware of the fact.

Malaria is a potentially dangerous disease and if not treated timeously and correctly, can be fatal. It is therefore extremely important that all residents, their children and their employees take adequate preventative measure to protect themselves from disease. Malaria is a disease caused by small parasites, which destroy red blood corpuscles of an affected person. Parasites are transmitted from person to person by the *Anopheles* mosquitoes. Various types of malaria occur of which *plasmodium falciparum* is the most common and also the most dangerous.

The possibility of contracting the disease can be reduced by avoiding mosquito bites and taking prophylactics which prevent the development of parasites in the body. Please contact the local physician for precautionary measures or if you think you have malaria.

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**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

**CONTRACT No. CI-GK-0190**

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**Part C4: Site Information**

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## MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING

### CONTRACT No. CI-GK-0190

#### C4. Site Information

##### C4.1 DESCRIPTION OF THE SITE AND ACCESS

The project is located in the Limpopo province in the **Vhembe District Municipality** and the **Musina Local Municipality**. A small part of the buffer zone in the south-western corner is situated in the **Capricorn District Municipality** and the **Blouberg Local Municipality**. The closest town to the Mapungubwe National park is Alldays.

The Mapungubwe National Park has roughly 45 km of gravel road/off road track which takes between 5 to 6 hours to drive through. However, the sections that are under this contract are approximately 12.6km long in total.

Access to the Park can be gained only via the main access gate which is located off R572 road. The closest town to the Mapungubwe park is Alldays.

##### C4.2 EXISTING PAVEMENT STRUCTURE

The existing gravel roads comprise of the following pavement structure:

- The top 100 mm to 200 mm consists of imported material.
- The second layer of material classified as a G4, G8 and G6 for the various test pits.
- The material from all three test pits tested as non-plastic.
- The grading modulus (GM) of the tested material varied between 1.90 and 2.18

A summary of the material test results and profiles are shown in the table and the figure below:

**Table 4.2-1: Material test results**

Test pit no.	Depth	Atterberg Limits			G.M	% Passing 0.075 mm sieve	CBR at Mod AASHTO density			COLTO	Stabilisation at 2.5%
		LL	PI	LS			100%	95%	93%		
TP 01	0.15 – 0.30	0	NP	0	2.18	11	111	57	44	G4B	C4
TP 02	0.10 – 0.60	0	NP	0	2.11	11	22	12	10	G8	N/A
TP 03	0.00 – 0.20	0	NP	0	1.90	14	57	27	20	G6	N/A



Figure 4.2-1: Profiles for road test pits

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Test pit no.	Depth	Atterberg Limits			G.M	% Passing 0.075 mm sieve	CBR at Mod AASHTO density			COLTO	Stabilisation at 2.5%
		LL	PI	LS			100%	95%	93%		
TP 01	0.15 - 0.30	0	NP	0	2.18	11	111	57	44	G4B	C4
TP 02	0.10 - 0.60	0	NP	0	2.11	11	22	12	10	G8	N/A
TP 03	0.00 - 0.20	0	NP	0	1.90	14	57	27	20	G6	N/A
Borrow pit TP1	N/A	26	9	5.5	2.52	6	66	44	37	G7	C4
Borrow pit TP2	N/A	0	NP	0	2.61	8	90	45	34	G7	C4

### C4.3 NEW PAVEMENT STRUCTURES

This contract will cover the following works:

#### (a) Confluence Road (between M01 and M02) (Priority no.1)

This section of the road will be updated to a surfaced road. The length of this portion is about 2.1km long and 5.8m wide. The works include:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required)
- Construct a new selected layer of 150mm thick (3.5% cement modified)
- Construct 80mm thick segmental paving blocks with 20mm bedding sand.

#### (b) Confluence Road (from M04 for 350m long) (Priority no.2)

This section starts from M04 for 350m long and 5.8m wide. It will be upgraded to a concrete road since it is at steep incline. The works include:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (2% cement modified)
- Construct a new concrete pavement layer (200mm thick)

#### (c) Confluence Road (from M02 to confluence) (Priority no.3)

This section of the Mapungubwe network involves the maintenance of the gravel roads. It is approximately 10km long and 6m wide. The works include:

- In-situ reconstruct the existing layer (150mm thick)
- Make-up material where required.

#### (d) Leokwe Access road (Priority no.4)

The pavement works within this section is about 400m long and includes:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (3.5% cement modified)
- Construct a new concrete pavement layer (200mm thick)

#### (e) Tourism road upgrading (Priority no.5)

A portion of the road between Confluence and M08 will be upgraded to a concrete pavement. This section is approximately 100m long and 5.5m wide. The works include the following:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (2% cement modified)

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- Construct a new concrete pavement layer (200mm thick)

**(f) Vhembe Access road**

This access road will be regravelled as follows:

- In-situ reconstruct the existing 150mm thick layer (with make-up material where required) (2% cement modified)
- Construct a new gravel wearing course (150mm thick)

**C4.3 MATERIALS**

**(a) Gravel materials**

Gravel materials for layerworks will be sourced from the two borrow pits in the Mapungubwe National Park.

- Borrow Pit 1 is closer to M18
- Borrow Pit 2 is next to the Confluence.

Material test results from the borrow pits are indicated in the table below:

Test pit no.	Depth	Atterberg Limits			G.M	% Passing 0.075 mm sieve	CBR at Mod AASHTO density			COLTO	Stabilisation at 2.5%
		LL	PI	LS			100%	95%	93%		
<b>Borrow pit TP1</b>	N/A	26	9	5.5	2.52	6	66	44	37	G7	C4
<b>Borrow pit TP2</b>	N/A	0	NP	0	2.61	8	90	45	34	G7	C4

**(b) Concrete**

Concrete will be sourced from a commercial source.

**(c) Water**

The Contractor shall make his own arrangements with SANParks for the necessary connections and additional reticulation, the cost, if any, of which will be for the Contractors account

**C4.3 WEATHER AND WORKING CONDITIONS**

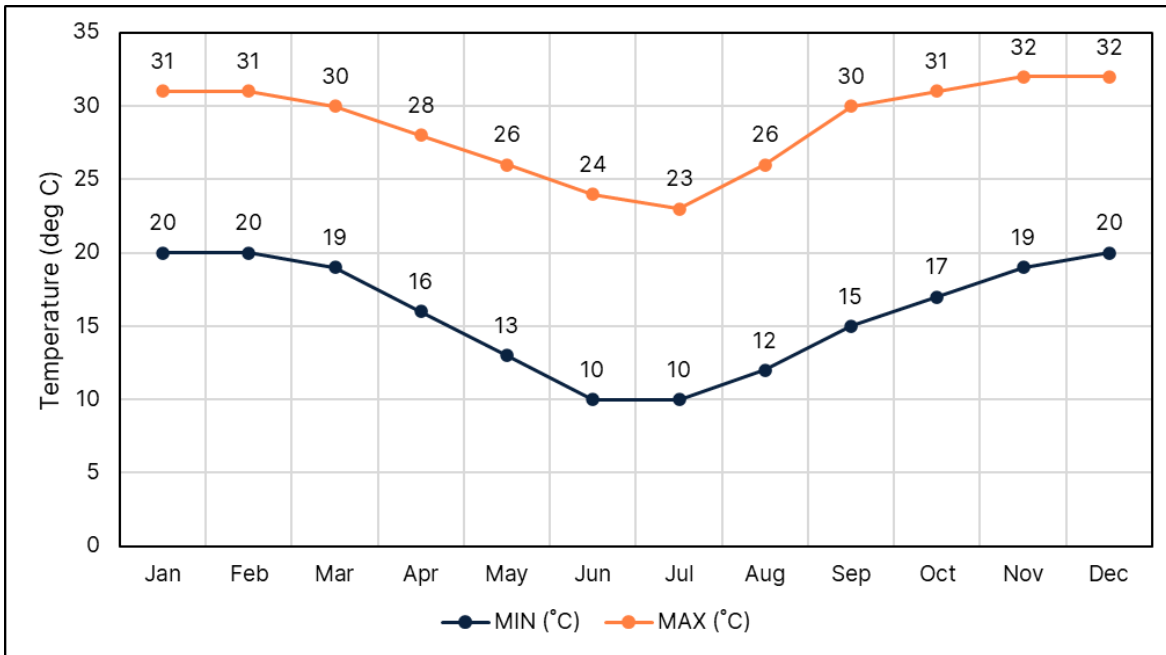
The Limpopo province experiences a continental climate, characterised by warm summers and cool winters. The historic temperatures and precipitation are presented in the figure below. Temperatures range from 10°C to 24°C in winter and 19°C to 32°C in summer.

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Mapungubwe receives approximately 152 mm of rain per annum. The area receives the lowest rainfall in August, with 0 mm of rain expected. The highest rainfall occurs in December with an average of 34 mm.

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**C4.4 ILLUSTRATIVE PRORAMME**

	Distance (m)	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7								
		w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4					
<b>A. Mobilisation (Establishment) period</b>																																		
<b>B. Block paving (half-width construction)</b>																																		
<b>B.1</b>	<b>Main gate T-junction (M01) to Mapangubwe hill turn-off.</b>	2 100																																
	<b>1<sup>st</sup> Half-width</b>																																	
	- 150mm in-situ reconstruction & levelling																																	
	- 150mm new base, imported G7 stabilised 3.5% & compacted @ 93% MDD.																																	
	- Concrete edge & centre beam (150mm x 300mm)																																	
	- 20mm sand bedding, 80mm S-A Paving blocks (25MPa, herringbone pattern)																																	
	<b>2<sup>nd</sup> Half-width</b>																																	
	- 150mm in-situ reconstruction & levelling																																	
	- 150mm new base, imported G7 stabilised 3.5% & compacted @ 93% MDD.																																	
	- Concrete edge & centre beam (150mm x 300mm)																																	
	- 20mm sand bedding, 80mm S-A Paving blocks (25MPa, herringbone pattern)																																	
<b>B.2</b>	<b>Zhizo road extension at M15.</b>	75																																
<b>C. Concrete roads (half-width construction)</b>																																		
C.1	Confluence road (steep incline) from M04	350																																
C.2	Confluence road (steep incline) 0.5km from M01.	100																																
C.3	Leokwe access road	400																																
C.4	Tourist road upgrading extension at steep incline from Confluence to M08	100																																
C.5	Various small concrete extentions.	50																																
<b>D. Re-gravelling</b>																																		
D.1	Vhembe access road from T-junction to camp	1 700																																
D.2	Schroda road from M13 to M16	2 000																																
D.3	Little Muck access road from R572 gate to rest camp	5 200																																
<b>E. Gravel maintenance</b>																																		
E.1	Confluence road from M02 to Confluence (Borrow pit A)	10 000																																
E.2	Tourism roads (Borrow pit B)	25 000																																
<b>F. Concrete drift</b>																																		
F.1	Little Muck access road (concrete drainage drifts)	12																																

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# LOCALITY PLAN



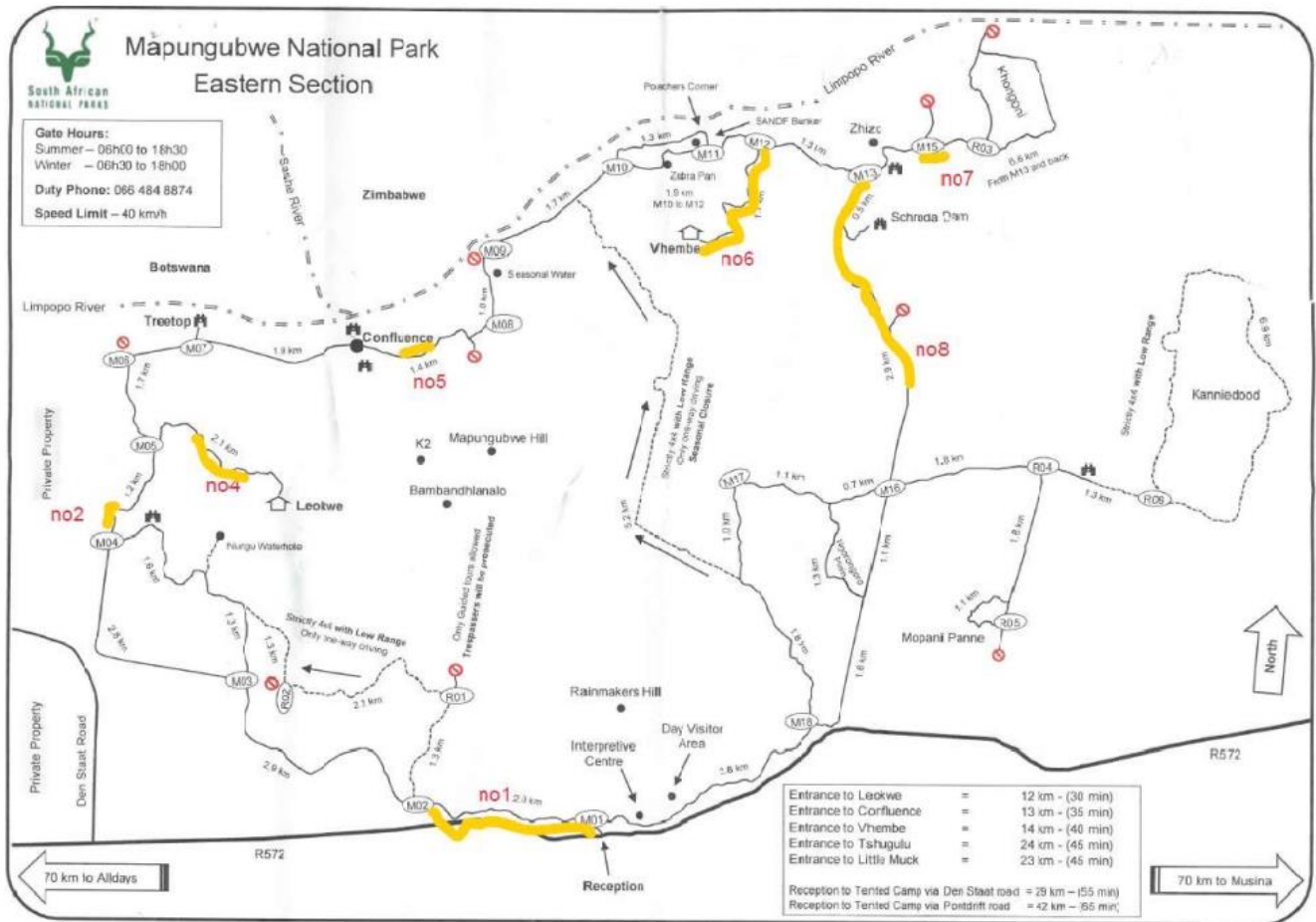
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**MAPUNGUBWE NATIONAL PARK - ROAD UPGRADING**

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**Part C5: Drawings**

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