



South African
NATIONAL PARKS

SOUTH AFRICAN NATIONAL PARKS

**Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam,
Tankwa Karoo National Park**

CONTRACT NO: CI-TN-0053-1

TENDER DOCUMENT

September 2020

**ISSUED BY:
Mr. Garret Kobe
Manager SCM: Infrastructure and Special Projects
SOUTH AFRICAN NATIONAL PARKS
P.O. BOX 787
PRETORIA
0001**

NAME OF TENDERER:

**Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo
 National Park
 CONTRACT No. CI-TN-0053-1**

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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

1: The Tender

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Part T1: Tendering procedures

Contractor

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Contractor

Employer

Witness for
Employer

**SBD1
PART A
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE SOUTH AFRICA NATIONAL PARKS

BID NUMBER:	CI-TN-0053-1	CLOSING DATE:	23 October 2020	CLOSING TIME:	11h00
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DESCRIPTION:

**Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1**

T1.1: Tender Notice and Invitation to Tender

The South African National Parks invites tenders for the **Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park.**

Only those tenderers who satisfy the following eligibility criteria and who provide the required evidence in their tender submissions are eligible to submit tenders and have their tenders evaluated:

CIDB:

The following tenderers who are registered with the **CIDB**, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated:

It is estimated that tenderers must have a CIDB contractor grading designation of **3CE** or higher. **2CE** Potentially Emerging enterprises who satisfy criteria stated in the Tender Data may submit tender offers

Joint ventures are eligible to submit tenders provided that:

1. every member of the joint venture is registered with the CIDB;
2. the lead partner has a contractor grading designation in the **3CE or 2CEPE** class of construction work; and
3. 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 **3CE or 2CEPE** class of construction work or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations

Preferences:

Preference are offered to tenderers for Broad-Black Based Empowerment (B-BBEE) Status Level of Contribution in terms of the Preferential Procurement Regulations, 2017;

- 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.

Pre-Qualification:

As part of the eligibility criteria, tenderers shall further be required to satisfy the following functionality (pre-qualification) criteria.

Tenderers are required to demonstrate their ability to undertake the work and provide proof of experience in **Earthworks and Stormwater Control Structure projects and concrete works**. Tenderers are required to score a minimum of 6 points out of a possible 10 points in order to qualify for the tender.

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. The pre-qualification criteria and maximum score in respect of each of the criteria as follows:

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Contractor

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Witness for
Contractor

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Employer

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Witness for
Employer

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		TECHNICAL ENQUIRIES MAY BE DIRECTED TO:	
CONTACT PERSON	G Kobe	CONTACT PERSON	EL Barends
TELEPHONE NUMBER	012 426 5132	TELEPHONE NUMBER	021 900 9067
FACSIMILE NUMBER		FACSIMILE NUMBER	
E-MAIL ADDRESS	Garret.kobe@sanparks.org	E-MAIL ADDRESS	elrich.barends@sanparks.org
SUPPLIER INFORMATION			
NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE NUMBER	CODE	NUMBER	
CELLPHONE NUMBER			
FACSIMILE NUMBER	CODE	NUMBER	
E-MAIL ADDRESS			
VAT REGISTRATION NUMBER			
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:	OR	CENTRAL SUPPLIER DATABASE No: MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]			
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)?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE A BRANCH IN THE RSA?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?		<input type="checkbox"/> YES <input type="checkbox"/> 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.			

Contractor

Witness for Contractor

Employer

Witness for Employer

**PART B
TERMS AND CONDITIONS FOR BIDDING**

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED--(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).
2. TAX COMPLIANCE REQUIREMENTS
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:

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

CONTRACT No. CI-TN-0053-1

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>VOLUME 1 : 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: civilinfo@saice.org.za.</p> <p>VOLUME 2: The Standard Specifications SANS/SABS-1200 as prepared by the South African Bureau of Standards (SABS) are applicable to this Contract. 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: civilinfo@saice.org.za.</p> <p>The tender documents issued by the Employer comprise:</p> <p>VOLUME 3: The Contract Document in which is bound:</p> <p>THE TENDER Part T1: Tendering procedures T1.1 - Tender notice and invitation to tender T1.2 - Tender data Part T2: Returnable documents T2.1 - List of returnable documents T2.2 - Returnable schedules THE CONTRACT Part C1: Agreements and Contract data C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 - Performance Bond</p> <p>Part C2: Pricing data C2.1 - Pricing assumptions C2.2 - Bill of Quantities Part C3: Scope of work C3 - Scope of work and Drawings Part C4: Site information C4 - Site information Part C5 : Drawings C5 - Drawings</p>

Contractor

Witness for Contractor

Employer

Witness for Employer

C.1.4	<p>The employer's agent is :</p> <p>Name: Sarel Bester Ingenieurs BK</p> <p>Address: 62 Lyell Street P.O. Box 21 Ceres 6835 Tel: 023 312 2017 E-mail: charl@sbri.co.za</p>																					
C.2.1	<p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated:</p> <p>Only those tenderers who satisfy the following eligibility criteria and who provide the required evidence in their tender submissions are eligible to submit tenders and have their tenders evaluated:</p> <p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated:</p> <p>a) It is estimated that tenderers must have a cidb contractor grading designation of 3CE or higher. 2CE Potentially Emerging enterprises who satisfy criteria stated in the Tender Data may submit tender offers</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> every member of the joint venture is registered with the CIDB; the lead partner has a contractor grading designation in the 3CE or 2CEPE class of construction work; and 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 3CE or 2CEPE class of construction work or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations 																					
C.2.1	<p>As part of the eligibility criteria, tenderers shall further be required to satisfy the following functionality (pre-qualification) criteria and be required to demonstrate their ability to undertake the work and to provide proof of experience, expertise, personnel, plant and equipment to undertake work of this nature.</p> <p>Tenderers are required to score a minimum of 6 points out of a possible 10 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>The pre-qualification criteria and maximum score in respect of each of the criteria as follows:</p> <table border="1"> <thead> <tr> <th>Pre-qualification criteria</th> <th>Sub-criteria</th> <th>Maximum number of points</th> </tr> </thead> <tbody> <tr> <td colspan="3">Earthworks and Stormwater Control Structure Projects</td> </tr> <tr> <td>Contracts of value between R0.2 million and R0.6 million, inclusive of VAT</td> <td>3 points per contract</td> <td>6</td> </tr> <tr> <td>Contracts of value exceeding R0.6 million</td> <td>2 points per contract</td> <td>2</td> </tr> <tr> <td colspan="3">Concrete works</td> </tr> <tr> <td>Contracts of value exceeding R0.25 million</td> <td>2 points per contract</td> <td>2</td> </tr> <tr> <td colspan="2">Maximum possible score for quality</td> <td>10</td> </tr> </tbody> </table>	Pre-qualification criteria	Sub-criteria	Maximum number of points	Earthworks and Stormwater Control Structure Projects			Contracts of value between R0.2 million and R0.6 million, inclusive of VAT	3 points per contract	6	Contracts of value exceeding R0.6 million	2 points per contract	2	Concrete works			Contracts of value exceeding R0.25 million	2 points per contract	2	Maximum possible score for quality		10
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Maximum possible score for quality		10																				

Contractor

Witness for Contractor

Employer

Witness for Employer

	<p>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 “Completion Certificates” for completed projects, <u>pre-qualification points will only be awarded on letter submitted</u>. Project details shall include telephone contact details of either the client or the engineer for the project.</p> <p>During further evaluation the Employer shall evaluate the remaining responsive tenders using the tender evaluation method and associated evaluation criteria and weightings that are specified in the tender data under C.3.11.1</p>						
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>						
C2.8	<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"> All questions/enquiries must be forwarded in writing not later than 16 October 2020. <p>Questions/enquiries received after 11:00 on 16 October 2020 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: Garret.kobe@sanparks.org</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>Location of tender box:</td> <td>South African National Parks: Technical Services Offices</td> </tr> <tr> <td>Physical address:</td> <td>1st Floor, IPIC Centre, c/o Bottelary Rd & Amandel Drive, Soneike, KUILS RIVER, 7583</td> </tr> <tr> <td>Identification details:</td> <td>Contract no: CI-TN-0053-1: Repair and Rehabilitation to the Spillway of Oudebaaskraal dam, Tankwa Karoo National Park</td> </tr> </table>	Location of tender box:	South African National Parks: Technical Services Offices	Physical address:	1st Floor, IPIC Centre, c/o Bottelary Rd & Amandel Drive, Soneike, KUILS RIVER, 7583	Identification details:	Contract no: CI-TN-0053-1: Repair and Rehabilitation to the Spillway of Oudebaaskraal dam, Tankwa Karoo National Park
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Identification details:	Contract no: CI-TN-0053-1: Repair and Rehabilitation to the Spillway of Oudebaaskraal dam, Tankwa Karoo National Park						
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 with his tender:</p> <ol style="list-style-type: none"> A valid Tax Clearance Certificate issued by the South African Revenue Services or PIN to obtain this information; Proof of Contractor Registration issued by the Construction Industry Development Board Compulsory An original and valid B-BBEE Status Level verification Certificate or certified copy there of 						

Contractor

Witness for Contractor

Employer

Witness for Employer

	<ol style="list-style-type: none"> 4) Proof of registration of Closed Corporation or Company or other legal entities applicable to tender - Certified copy 5) Letter of good standing from the Compensation Commissioner – Compulsory 6) Letter of intent for a Construction Guarantee – Compulsory 7) National Treasury Central Supplier Database (CSD) Registration Report - Compulsory 8) All other certificates as listed in the List of Returnable Documents. 9) Letter of Good Standing from Compensation Commissioner. 10) A copy of Joint Venture Agreement if applicable. 11) Form C1.1 – Form of Offer and Acceptance 12) Form T2.1 – Certificate of Authority for Signature. For JV's a JV 13) Agreement shall be provided (if applicable) 14) Form T2.1 – Certificate of attendance at site inspection. 15) Signature on-site inspection attendance registers. 16) Form T2.1 F - Record of addenda to tender documents. 17) Proof of Companies Intellectual Property Commission (CIPC) certificated indicating Permission to perform Construction Work under Lock-down Level 3
<p>C.3.4.1</p>	<p>The time and location for opening of the tender offers are:</p> <ul style="list-style-type: none"> • 23 October 2020 @ 11:00 hrs. • The tender box situated at South African National Parks: Technical Services Offices, 1st Floor, IPIC Centre, c/o Bottelary Rd & Amandel Drive, Soneike, KUILS RIVER on or before the stated closing time.
<p>C.3.11.1</p>	<p>The procedure for the evaluation of responsive tenders is Method: Financial offer and preferences</p> <p>The total number of tender evaluation points (T_{EV}) will be calculate in accordance with the following formula:</p> $T_{EV} = N_{FO} + N_P$ <p>where;</p> <p>N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with;</p> <p>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</p> <p>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> $PS = 80 \left[1 - \frac{Pt - P \min}{P \min} \right]$ <p>Where-</p> <p>Ps = Points scored for price of tender under consideration;</p> <p>Pt = Price of tender under consideration; and</p> <p>Pmin = Price of lowest acceptable tender.</p> <p>N_P is the number of tender evaluation points awarded for preferences claimed in accordance with;</p> <p>Responsive tenderers who complete SBD 6.1 Preference Points Claim Form in terms of the Preferential Procurement Regulations and who are found to be eligible for the preference so claimed.</p>

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Preference points shall be scored in accordance with the Department: National Treasury's Revised Preferential Procurement Regulations and the Broad-based Black Economic Empowerment Act.

Preference points will be awarded to a tenderer for attaining the B-BBEE Status Level of Contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

Eligibility for preference points will be determined as follows:

- a) Valuation of preference points is based on tenderers' scorecards in accordance with the Construction Sector Codes of Practice promulgated in Gazette 32305 on 5 June 2009.
- b) The applicable code for this tender is the Amended Code of Good Practice (Generic Scorecard) unless in possession of a valid sector certificate
- c) The only Verification Certificates that will be accepted are those issued by Verification Agencies accredited by South African National Accreditation System (SANAS) as contemplated in the B-BBEE Framework for accreditation and verification by all Verification Agencies promulgated in the Government Notice 810 of 31 July 2009.
- d) The Verification Certificate must be current, meaning that it must have been issued more recently than 12 (twelve) months prior to the tender closing date.
- e) If a tenderer has failed to submit an acceptable Verification Certificate, a period of 24 hours will be granted to re-submit a valid Verification Certificate.
- f) Failure to submit any valid Verification Certificate will result in the award of 0 (zero) points for preference.
- g) In the event of a joint venture or consortium, each member of such an association shall comply with the above requirements.
- h) A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate tender.

C.3.13

Tender offers will only be accepted if:

- a) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation;
- b) 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;
- c) the tenderer has not:
 - i) abused the employer's supply chain management system;

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	<p>or</p> <p>ii) failed to perform on any previous contract and has been given a written notice to this effect; and</p> <p>e) has completed the Compulsory Enterprise Questionnaire, SBD4, 6.1, 7.2, 8, 9 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.</p> <p>f) Has submitted the documentation listed in F2.23</p>
C.3.17	Provide to the successful tenderer one copy of the signed contract document.

Contractor

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Employer

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Employer

Annex C

Standard conditions of tender

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:

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Employer

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Employer

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

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.

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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.

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.

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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 Rand 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

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.

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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

C.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.

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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.

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 BBBEE 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 BBBEE 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:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) 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:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer’s or the tenderer’s risks and responsibilities under the contract, or
- c) 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:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or

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c) arithmetic errors in:

- (i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
- (ii) 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:

- a) 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.
- b) 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

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

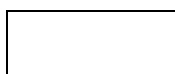
The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated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

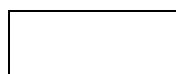
The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	Qualitative interpretation of goal
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating 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:

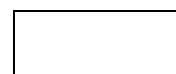
- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether or not tender offers are responsive
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer
-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



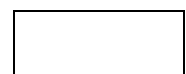
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Employer



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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 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.

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Part T2: Returnable Schedules

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Employer

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Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

CONTRACT No. CI-TN-0053-1

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 only for tender evaluation purposes**
 Resolution of board of directors / members / partners
 Resolution of Board of Directors / Members / Sole Proprietor/ Partners of Partnership (if applicable)
 Special Resolution of Joint Venture Partners
 Compulsory Enterprise Questionnaire
 Record of Addenda to Tender Documents
 Proposed Amendments and Qualifications
 Schedule of Subcontractors
 Capacity of Tenderer
 Site inspection certificate
 Health and Safety Specification acknowledgement receipt

- 2 Other documents that must be submitted for tender evaluation purposes**
 Proof of Contractor Registration issued by the Construction Industry Development Board - Compulsory
 Proof of Contractor Registration issued by the Companies Intellectual Property Commission (CIPC), indicating permission to Perform Construction Work under Lock-down Level 3 – Compulsory
 Proof of registration of Closed Corporation or Company or other legal entities applicable to tender - Certified copy
 An original and valid B-BBEE Status Level verification Certificate or certified copy thereof
 Letter of intent for a Construction Guarantee – Compulsory
 National Treasury Central Supplier Database (CSD) Registration Report – Compulsory
 Tax Clearance Certificate – Certified copy

- 3 Returnable Schedules that will be incorporated into the contract and are compulsory to be completed**
 Form SBD 1: Invitation to Bid
 Form SBD 4: Declaration of Interest
 Form SBD 6.1: Preference points claim form in terms of the preferential procurement regulations, 2017
 Form SBD 8: Declaration of Bidder's Past Supply Chain Management Practices
 Form SBD 9: Certificate of Independent Bid determination

- 4 Other documents that will be incorporated into the contract:**
 Health and Safety Specification for General Construction Activities.
 Code of Conduct for outside organisations working in a National Park.
 Environmental Management Plan for General Construction Activities.

- 5 C1.1 Offer and Acceptance (the offer portion of C1.1)**
- 6 C1.2 Contract Data (Part 2)**
- 7 C2.2 Bills of Quantities**
- 8 DOCUMENTATION FOR FUNCTIONALITY EVALUATION (CV'S, PLANT & EQUIPMENT LIST AND PREVIOUS CONTRACTS INFORMATION)**

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

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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:

- 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)

- *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.

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			

NOTE:

- * Delete which is not applicable
- NB.** This resolution must be signed by all the Directors / Members / Partners of the Tendering 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

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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)

	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)*

Contractor

Witness for Contractor

Employer

Witness for Employer

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:

(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)

Contractor

Witness for Contractor

Employer

Witness for Employer

	Name	Capacity	Signature
1			
2			
3			
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



Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

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, if any:

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: Record in the service of the state

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

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

Contractor

Witness for Contractor

Employer

Witness for Employer

* insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the state

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

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

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

*insert separate page if necessary

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

- i) Authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) Confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of

Contractor

Witness for Contractor

Employer

Witness for Employer

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

Name of Tenderer	Date

Contractor

**Witness for
Contractor**

Employer

**Witness for
Employer**

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

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)*

	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

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

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



**Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1**

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.

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: Letter of Intent/ Appointment must 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: Certificate of Completion must 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								

[Signature Box]

Contractor

[Signature Box]

Witness for Contractor

[Signature Box]

Employer

[Signature Box]

Witness for Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

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.

Name Tenderer's Representative	Position	Signed

Name of Tenderer	Date

Name of Employer's Representative	Signature	Date

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

HEALTH AND SAFETY SPECIFICATION ACKNOWLEDGEMENT RECEIPT

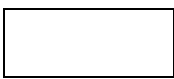
Contractor's Acknowledgement:

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 C6 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

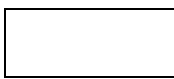
Signature of Contractor

Date

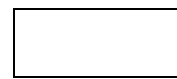
Comments:



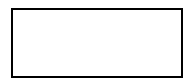
Contractor



Witness for
Contractor



Employer



Witness for
Employer



**SBD 4
DECLARATION OF INTEREST**

- 1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes an advertised competitive bid, a limited bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-
 - o the bidder is employed by the state; and/or
 - o the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

2. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

2.1 Full Name of bidder or his or her representative:

2.2 Identity Number:

2.3 Position occupied in the Company (director, trustee, shareholder², member):

2.4 Registration Number of company, enterprise, close corporation, partnership agreement or trust:

2.5 Tax Reference Number:

2.6 VAT Registration Number:

2.6.1 The names of all directors / trustees / shareholders / members, and their individual identity numbers, tax reference numbers and, if applicable, employee / PERSAL numbers must be indicated in paragraph 3 below.

2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:

Name of state institution at which you or the person connected to the bidder is employed:

Position occupied in the state institution:

Any other particulars:
.....
.....
.....

Contractor

Witness for Contractor

Employer

Witness for Employer

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attach proof of such authority to the bid document? **YES / NO**
Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:
.....
.....
.....

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:
.....
.....
.....

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.9.1 If so, furnish particulars:
.....
.....
.....

2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between the bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.10.1 If so, furnish particulars:
.....
.....
.....

2.11 Do you or any of the directors / trustees /shareholders/ members of the company have any interest in any other related companies whether or not they are bidding for this contract? **YES / NO**

2.11.1 If so, furnish particulars:
.....
.....
.....

Contractor

Witness for Contractor

Employer

Witness for Employer

SBD 6.1

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all bids:
 - the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
 - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).
- 1.2 The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable.
- 1.3 Points for this bid shall be awarded for:
 - (a) Price; and
 - (b) B-BBEE Status Level of Contributor.
 - (c) Quality
- 1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	100

- 1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.
- 1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

Contractor

Witness for Contractor

Employer

Witness for Employer

2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“prices”** includes all applicable taxes less all unconditional discounts;
- (h) **“proof of B-BBEE status level of contributor”** means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (i) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20	or	90/10	
$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$	or	$P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$	

Where

- P_s = Points scored for price of bid under consideration
- P_t = Price of bid under consideration
- P_{min} = Price of lowest acceptable bid

Contractor

Witness for
Contractor

Employer

Witness for
Employer

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

5. BID DECLARATION

5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

6.1 B-BBEE Status Level of Contributor: . =(maximum 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

7.1 Will any portion of the contract be sub-contracted?

(Tick applicable box)

YES		NO	
-----	--	----	--

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(Tick applicable box)

YES		NO	
-----	--	----	--

Contractor

Witness for Contractor

Employer

Witness for Employer

v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations,2017:

Designated Group: An EME or QSE which is at last 51% owned by:	EME	QSE
Black people	√	√
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
 - One person business/sole propriety
 - Close corporation
 - Company
 - (Pty) Limited
- [TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

8.6 COMPANY CLASSIFICATION

- Manufacturer
 - Supplier
 - Professional service provider
 - Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in business:.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

Contractor

Witness for Contractor

Employer

Witness for Employer

- 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 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding process;
 - (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 bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury 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.

WITNESSES

1.

2.

.....
SIGNATURE(S) OF BIDDERS(S)

DATE:

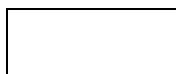
ADDRESS

.....

.....



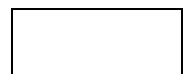
Contractor



Witness for Contractor



Employer



Witness for Employer

SBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Standard Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be disregarded if that bidder, or any of its directors have-
 - a. abused the institution's supply chain management system;
 - b. committed fraud or any other improper conduct in relation to such system; or
 - c. failed to perform on any previous contract.
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's database as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteram partem</i> rule was applied).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? To access this Register enter the National Treasury's website, www.treasury.gov.za , click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		

Contractor

Witness for Contractor

Employer

Witness for Employer



CERTIFICATION

I, THE UNDERSIGNED (FULL NAME).....

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

Contractor

Witness for
Contractor

Employer

Witness for
Employer

SBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *per se* prohibition meaning that it cannot be justified under any grounds.
- 3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
 - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
 - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 4 This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

Contractor

Witness for
Contractor

Employer

Witness for
Employer

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Institution)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. 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 consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.

³ 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.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the

Contractor

Witness for Contractor

Employer

Witness for Employer

products or services to which this bid invitation relates.

- 9. 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.

- 10. 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 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.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

Contractor

**Witness for
Contractor**

Employer

**Witness for
Employer**

2: The Contract

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Part C1: Agreement and contract data

Contractor

Witness for
Contractor

Employer

Witness for
Employer



Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

CONTRACT No. CI-TN-0053-1

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-TN-0053-1: Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

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.

Signature Date

Name

Capacity

for the tenderer

(Name and

address of

organization)

.....

Name and

signature

of witness

Date

Signature box for Contractor

Contractor

Signature box for Witness for Contractor

Witness for Contractor

Signature box for Employer

Employer

Signature box for Witness for Employer

Witness for Employer



Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

Acceptance

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer's offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer's offer shall form an agreement between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1: Agreements and contract data, (which includes this agreement)
- Part C2: Pricing data
- Part C3: Scope of work.
- Part C4: Site information

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

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

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.

Signature Date

Name

Capacity

for the Employer
The South African National Parks
643 Leyds Street
Muckleneuk
0002.

Name and Signature Date

of witness

Contractor

Witness for Contractor

Employer

Witness for Employer

Schedule of Deviations

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.

Contractor	Witness for Contractor	Employer	Witness for Employer

For the Tenderer:

Signature(s)

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

.....

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

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

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.

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 12 (twelve) months.
1.1.1.14	The time for achieving Practical Completion will be 16 weeks ; the time will include 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). Work must commence within 14 days after the issuing of the Works Instruction.
1.1.1.15	The name of the Employer is: the Chief Executive Officer, SOUTH AFRICAN NATIONAL PARKS represented by The General Manager: Infrastructure & Special Projects 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: Sarel Bester Ingenieurs BK or their successors duly appointed by the Employer.
1.1.1.26	The Pricing Strategy is a Re-measurement Contract .
1.2.1.2	The Employer’s address for receipt of communications and notices is: Physical address: South African National Parks The General Manager: Infrastructure & Special Projects. 643 Leyds Street Muckleneuk Pretoria 0002 Postal Address: Postal Address: PO Box 787 Pretoria 0001 Telephone: (012) 426 5260

Contractor

Witness for
Contractor

Employer

Witness for
Employer

CLAUSE	DESCRIPTION / WORDING
1.2.1.2	The address of the Employer's Agent is: Physical address: Name: Sarel Bester Ingenieurs BK Address: 62 Lyell Street P.O. Box 21 Ceres 6835 Tel: 023 312 2017 E-mail: charl@sbri.co.za
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 (3) Insurance (Refer to Clause 8.6) (4) Occupational Health and Safety Agreement (C1.4 of the Contract Document) (5) Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer) (6) 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). (7) 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	(a) The time to submit the documentation required before commencement with Works execution is 14 days .
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". Add the following: "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 there are restricted travelling times in the park. <i>No travelling is permitted</i> within Tankwa National Park during the following times: 1 October to 31 March 19:00 – 05:30, 1 April to 30 September 18:00 – 06:30, the Contractor shall make provision for transporting his staff off site in good time. The park seasonal hours are; <div style="text-align: right;"> Winter: April - September 07:00 - 17:00 Summer: October - March 06:00 - 18:00 </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

Contractor

Witness for Contractor

Employer

Witness for Employer

CLAUSE	DESCRIPTION / WORDING																										
	<p>Contractors (www.safcec.org.za).</p> <p>The special non-working days are:</p> <p>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;</p> <p>And any proclaimed statutory day of mourning</p> <p>And any proclaimed statutory election day which is proclaimed as a statutory public holiday</p> <p>And all annual year-end shutdown periods as recommended by the South African Bargaining Council for the Civil Engineering Industry.</p>																										
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.</p> <table border="1"> <thead> <tr> <th>Month</th> <th>"n" Working days</th> </tr> </thead> <tbody> <tr><td>January</td><td>2 days</td></tr> <tr><td>February</td><td>2 days</td></tr> <tr><td>March</td><td>2 days</td></tr> <tr><td>April</td><td>2 days</td></tr> <tr><td>May</td><td>3 days</td></tr> <tr><td>June</td><td>4 days</td></tr> <tr><td>July</td><td>4 days</td></tr> <tr><td>August</td><td>3 days</td></tr> <tr><td>September</td><td>2 days</td></tr> <tr><td>October</td><td>2 days</td></tr> <tr><td>November</td><td>2 days</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 days	February	2 days	March	2 days	April	2 days	May	3 days	June	4 days	July	4 days	August	3 days	September	2 days	October	2 days	November	2 days	December	2 days
Month	"n" Working days																										
January	2 days																										
February	2 days																										
March	2 days																										
April	2 days																										
May	3 days																										
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July	4 days																										
August	3 days																										
September	2 days																										
October	2 days																										
November	2 days																										
December	2 days																										
5.13.1	The penalty for failing to complete the Works is R 1 000 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 5 Years , 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 10% of the Contract Sum. The performance guarantee shall contain the precise wording of the document included in Part C1.3 of the Contract Data: Form of Guarantee .																										
6.8.2	Contract Price Adjustment shall NOT 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>																										

Contractor

Witness for
Contractor

Employer

Witness for
Employer

CLAUSE	DESCRIPTION / WORDING
6.10.1.5	The percentage advance on materials not yet built into the permanent Works is 80% . Proof of ownership is required.
6.10.3	The limit on retention is 10% 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 R100 000 (One hundred thousand rand) .
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 R10 000 000 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.
10.5.3	The number of Adjudication Board Members to be appointed is one .
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	Pro forma – Form of Offer and Acceptance 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	Pro forma - Deed of Guarantee 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.

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

Part 2: Contract Data provided by the Contractor

Clause	Additions
Clause 1.1.1.9:	The name of the Contractor is
Clause 1.2.1.2:	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-TN-0053-1**

: for the

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park.

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 excussion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

PSGA - 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.

PSGA - 2 This guarantee shall be limited to the payment of a sum of money.

PSGA - 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.

PSGA - 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.

PSGA - 5 Our total liability hereunder shall not exceed the sum of

.....(R

PSGA - 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.

Empty box for Contractor signature

Contractor

Empty box for Witness for Contractor signature

Witness for Contractor

Empty box for Employer signature

Employer

Empty box for Witness for Employer signature

Witness for Employer

PSGA - 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

.....

.....

.....

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 aton the day of 20.....

WITNESS:

.....
for and on behalf of **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

(d) 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

Part C2: Pricing data

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

C2.1: Pricing Instructions

- 1) The measurement and payment clause of the SANS 1200 Standardized Specification 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 ²	=	square metre
m ² -pass	=	square metre-pass
m ³	=	cubic metre
m ³ -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 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.
- 5) 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 or www.iso.org for information on standards)
- 6) 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

Contractor

Witness for
Contractor

Employer

Witness for
Employer

-
- 7) 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.
 - 8) 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.
 - 9) 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.
 - 10) 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.
 - 11) Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the SANS 1200 Standardized Specification.

Construction

- 12) 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

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

CONTRACT No. CI-TN-0053-1

C2.2 Bill of Quantities

CONTENTS

SECTION	DESCRIPTION
A	GENERAL REQUIREMENTS AND PROVISIONS
B	SITE CLEARANCE & LANDSCAPING
C	EXCAVATIONS
D	EARTHWORKS
E	CONCRETE, REBAR & ROCK ANCHORS
F	GABION & RENO STRUCTURES
	SUMMARY

Contractor

Witness for
Contractor

Employer

Witness for
Employer

**Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1**

Part C3: Scope of Work

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

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

C3.1 Description of the Works

C3.1.1 Employer's objectives

This Contract form part of the upgrade and maintenance strategy of tourism within the Tankwa Karoo National Park's. The objective of the Tankwa Karoo National Park's is to appoint one contractor to do the repairs and rehabilitation of the Spillway to the Oudebaaskraal dam.

C3.1.2 Description of the works

The repairs and rehabilitation of the Spillway to the Oudebaaskraal dam within the Tankwa Karoo National Park.

C3.1.3 Extent of the Works

The following works is included in the project:

- Excavations
- Earthworks
- Concrete , Rebar & Rock Anchors
- Gabion & Reno Structures work
- Clean-up

The bill of quantities and related specification provides more detailed to the above brief outline of the scope of works.

The above description is not necessarily complete and shall not limit the work to be carried out.

C3.1.4 Location of the Works and Access

The site of the works is located within the boundaries of the Tankwa Karoo National Park. The site location and entrance road can be seen on the Locality Plan.

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

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 Engineer 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 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 Engineer. The Engineer 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 infrastructures 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 Engineer's Representative on a regular basis.

All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as-built/record drawings, must be submitted to the Engineer'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. The Employer reserves the right to issue and/or amended additional drawings during the Contract.

Drawings as per Volume 3B bound into this Tender Document are:

Number	Name
1936-S3-01	Spillway (OGL): Contour Layout Plan, Section positions
1936-S3-02	Spillway Design: Earthworks Contour Layout Plan
1936-S3-03	Longitudinal Sections
1936-S3-04	Longitudinal Sections
1936-S3-05	Longitudinal & Cross Sections
1936-S3-06	Cross Sections
1936-S3-07	Construction Details ~ Gabions & Reno's
1936-S3-08	Construction Details ~ Concrete
1936-S3-09	Rock Anchor Layout

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

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 Policy Framework Act 2017, 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

No mandatory subcontract work is envisaged under this contract

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

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

C3.4 Construction

C3.4.1 Standardised Specifications

SANS 1200 Standard Specifications and the Standard and Particular Specifications are applicable to this contract. It shall however be noted that reference is made in certain of the specifications to other standardised specifications which may or may not be included in this document. Where such specifications are not included, they shall however be deemed to be included in the Contract documents.

C3.4.2 Particular Specifications to Health and Safety, Environmental and Code of Conduct

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

- PROJECT SPECIFICATIONS – PART 1
- PROJECT SPECIFICATIONS – PART 2
- PROJECT SPECIFICATIONS – PART 3

- 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 Variations and Additions to the Standard and the Particular Specifications

Variations and additions to the SANS 1200 Standard Specifications are listed above in C3.4.1b and the Particular Specifications of C 3.4.2 are attached in the Annexures.

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 Engineer.

Where existing works are of such a nature that the Engineer 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 Engineer 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 Employer.

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 Engineer 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 Engineer on a sketch with dimensions and time frames.

Contractor

Witness for Contractor

Employer

Witness for Employer

The Contractor shall not be allowed to reinstate any service or structure unless indicated so by the Engineer. 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 reinstated by others.

C3.4.7 Services and facilities provided by the employer

C3.4.7.1 Water and Power Supply

Water is available for construction from the Oudebaaskraal dam in Tankwa Karoo NP; cost of transporting the water must be included in the contractor’s rates.

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.

C3.4.7.2 Fuel

The Contractor must note that there is no fuelling stations with in the Tankwa Karoo National Park’s boundaries, all fuel for construction must be carted into the park.

C3.4.8 Facilities provided by the Contractor

The Contractor shall provide, maintain and remove his own facilities to the satisfaction of the Engineer. 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 he deem it 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 Contractor’s 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 public amenity. The Contractor shall comply with all SANParks and Local Authority regulations including those relating to health and fire. The Contractor shall ensure that all camp facilities, including those for fuelling, comply with all such regulations. Should the contract include the end of year builders holidays the camp shall be dis-established prior to end of year close-down and re-established at start up the following year. 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 Contractor must note that the site camp is within the Tankwa Karoo NP game area and wild animals will be present in the area – including snake, scorpions, baboons, blacked-baked jackal and leopards. This must be taken into account when planning the site camp. 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 Engineer, the Contractor shall remove all temporary buildings and latrines and restore the Site to a clean and sanitary condition to the satisfaction of the Engineer 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 on site for the Contractor’s employees. It is the sole responsibility of the Contractor at his own cost to house his employees in facilities that must first be approved by SANParks close to the site.

Contractor

Witness for Contractor

Employer

Witness for Employer

C3.4.9 Facilities for the Engineer

C3.4.9.1 Office accommodation

No office facilities are required for the Engineer.

C3.4.9.2 Survey equipment and assistants

Both are required for the Contract.

C3.4.9.3 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 Engineer shall only carry out control tests.

C3.4.11 Other facilities and services

C3.4.11.1 Waste Disposal

The Contractor shall make arrangements for solid and liquid waste disposal with SANParks. Disposal will take place at an approved Site.

C3.4.11.2 Telephone Facilities

There are no telephone facilities and cellular reception in the Tankwa Karoo National Park.

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 Engineer. The facilities must be to the Engineer's approval and must be maintained in a clean and sanitary condition.

C3.4.12 Notice boards, signs, barricades and advertisements

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

The Engineer 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.

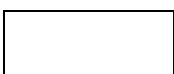
C3.4.13 Dealing with water

The Contractor shall make provision and allow for all dewatering and temporary management of stormwater. All costs for this operation for the duration of the contract shall be deemed to be included in the Fixed and Value related charges.

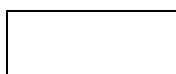
C3.4.14 Dealing with high winds

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

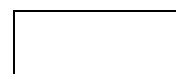
All heaps of materials either forming part of the excavations or imported for use in construction shall be kept covered during high winds to prevent contamination of surrounding in-situ soils.



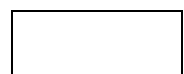
Contractor



Witness for
Contractor



Employer



Witness for
Employer

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 Engineer 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

All working space will be deemed 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 Spoiling areas.

Spoiling area will be made available within the park boundaries, hauling tariffs will be applicable.

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park
CONTRACT No. CI-TN-0053-1

C3.5 Management

C3.5.1 Particular specifications

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

C3.5.2 Construction Programme and Methods

The Contractor must submit a program, time related items will only be paid in correlation to the approved program.

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 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

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

C3.5.3 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) During the December builders holiday all equipment and materials shall be removed from the work areas. The contractors camp site, unless authorized by the Engineer, during this period, shall be dismantled and removed from site for the period in question. The camp shall be re-established from the third week of January onwards. No open excavations shall be allowed during this period.
- c) The sequence of works shall be programmed to ensure that during the December builders holiday the large influx of tourist traffic over this period is not disrupted.

C3.5.4 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 Engineer. 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 Engineer and the Employer with information as to how he proposes to perform the said works.

- a) Normal working hours
Normal working hours shall be between 07h00 until 18h00 (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;

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 Engineer.

Contractor

Witness for
Contractor

Employer

Witness for
Employer

- 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.
- c) The maximum speed for all vehicles in the park is 40km/h, all construction vehicles must adhere to the limit.

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

C3.5.5 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.

C3.5.6 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 Engineer when he is unable to proceed with the works in accordance with the approved contract program. Subject to the approval of the Engineer, 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 Engineer, together with the Employer, shall be responsible for granting the extension of time.

C3.5.7 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 Engineer 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 Engineer.

The Engineer or his duly appointed representative shall be responsible for issuing of the minutes.

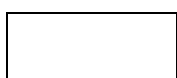
C3.5.8 Payment certificates

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 Engineer, 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.

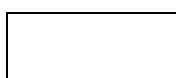
For the purposes of the Engineer’s payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems 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 Engineer within three (3) normal working days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer two (2) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

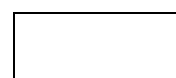
Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer’s payment certificate will be added to the times



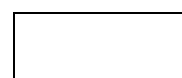
Contractor



Witness for Contractor



Employer



Witness for Employer

allowed to the Engineer 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.

C3.5.9 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.

C3.5.10 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 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.

C3.5.11 Accommodation of Traffic

The Contractor shall maintain close liaison with the SANPARK'S Tankwa Karoo NP management regarding the proposed works on vehicular access on the parks road network.

C3.5.12 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.

[Signature box for Contractor]

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Witness for Contractor

[Signature box for Employer]

Employer

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Witness for Employer

C3.5.13 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 Engineer. 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 staffs 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.

Contractor

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Contractor

Employer

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**Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National
Park
CONTRACT No. CI-TN-0053-1**

C3.6 Annexes

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ANNEXURE B - ENVIRONMENTAL MANAGEMENT PLAN
ANNEXURE C - CODE OF CONDUCT FOR WORKING IN THE SOUTH AFRICAN NATIONAL PARKS

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Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

Project Specifications Part 1

THE WORKS

PS 1: DESCRIPTION AND LOCATION

The contract entails the repair and rehabilitation of the Oudebaaskraal Dam spillway on the remainder of Oubebaaskraal 13, Ceres District, comprising of ±150m³ concrete weir plus ±1500m³ stone filled gabion and wire mattress reinforced structures.

PS 2: SITE CONDITIONS

Tankwa Karoo National Park (farm Oudebaaskraal) is situated ±150 km north-east of the town Ceres in the Ceres Karoo. The dam is instream and located in the catchment area of Tankwa River, within the larger Doring River drainage system in the Western Cape winter rainfall region. The dam is located in the Ecca Series as part of the Karoo Supergroup, which comprises mainly of shale (laminated clay-rich sedimentary rock) with subordinate thin chert and limestone lenses. The site itself is within the primary spillway at the left abutment of the Oudebaaskraal Dam located in the Tankwa River. At the site soils are typical gravelly shales together with the weathered black-grey dolerite dyke visible in the spillway.

The bulk materials required in the project is suitably sized stone for gabion and reno mattress structures plus aggregates for the concrete works. All the stone for the gabion structures must be generated from designated excavation sites forming part of the reshaping of the spillway. All work and borrow areas must be within the footprints of the existing spillway and dam basin. Stone for all the gabion and reno mattress structures will be selected and or produced by the contractor from the excavated material. Materials for concrete will have to be imported from commercial sources.

PS 3: SITE SERVICES

Suitable facilities for a site office will be made available by the landowner only on request. A suitable site for temporary caravan accommodation for the operators, key personnel as well as other staff, may be negotiated and arranged with the park’s manager.

The contractor himself must provide for all the required site services, accommodation and sanitation in terms of local requirements, and he must include the costs thereof in applicable items in the Schedule of Quantities. Should no provision be made in the Schedule of Quantities for such costs, the tenderer has to include such costs in suitable other items as he might choose; no additional compensation for these will be granted.

PS 4: APPLICABLE STANDARDIZED SPECIFICATIONS

The following standardized specifications, as obtainable from the South African Bureau of Standards, Private Bag X191, Pretoria 0001, are part of these contract documents and the agreement, and are available for inspection at the office of the Engineer:

- SANS/SABS 1200AA: General (Small Works)
- SANS/SABS 1200DA: Earthworks (Small Works)
- SANS/SABS 1200DK: Gabions and Pitching
- SANS/SABS 1200GA: Concrete (Small Works)

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PS 5: PARTICULAR SPECIFICATIONS

The following particular specifications are included as part of this document under a separate section, and will be binding as applicable on the contract.

- Specification PA Rock Anchors
- Specification PB Environmental Requirements
- Specification PC Occupational Health & Safety
- Specification PD Construction Work Permit

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Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

Project Specifications Part 2

VARIATIONS AND ADDITIONS TO SABS/SANS 1200

Should any stipulation(s) in the Project Specifications be contradictory, with any stipulation(s) in the standardized specifications, then the stipulation(s) in these Project Specifications do apply.

SANS/SABS 1200AA: GENERAL (SMALL WORKS)

1. Setting out of Works (par 5.1.1)

The engineer shall provide a survey reference system with specific reference marks. The contractor must provide his own temporary markers, position them accordingly and maintain them for the duration of the contract or for parts of the works as and where necessary.

The engineer will provide the basic setting out of the concrete- and gabion structures as well as the excavation geometry of the borrow areas, where after the contractor must set-up and maintain his slope batter boards and markers accordingly. **Note**, the cost of the engineer’s setting out and continued control checks, is for the client’s account which will be invoiced as such.

2. Degrees of Accuracy (par 6.2)

Unless otherwise determined elsewhere, the second degree of accuracy will apply throughout.

SANS/SABS 1200DA: EARTHWORKS (SMALL WORKS)

PSAA - 1 General and Selected Backfill Material (par 3.2.1)

Material used as backfill behind and underneath gabion and reno mattress structures must be well graded fine rockfill with maximum average stone size not exceeding 150mm irrespective of the origin. The grading must be such that the void content and expected settlement is limited to be agreed and approved on site by the engineer.

PSAA - 2 Stone for use in Gabion and Reno Mattress Structures

Stone for the use in gabions and reno mattresses shall come from the designated excavations or borrow areas indicated on the drawings with the hard dolerite allocated for use in the exposed stone filled baskets coming from the upstream side of the spillway weir and hard shale allocated for use in the unexposed stone filled baskets coming from downstream side of the weir. The contractor must plan and provide for suitable ways and methods of excavation with or without crushing in order to generate and produce stone as specified in the *Gabion and Pitching* section below for approval by the engineer.

PSAA - 3 Unsuitable & Surplus Material

Poorly graded material containing an excessive amount of boulders or fines must be evaluated and approved as unsuitable by the engineer before being spoiled at the allocated area adjacent to the embankment toe and training wall next to the site.

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PSAA - 4 Explosives (par 5.1.1.3)

If blasting is required, the intensity should be minimised and controlled to the satisfaction of the engineer in order not to damage or harm the integrity of the spillway foundation. **Note**, blasting will not be allowed or permitted after grouting of rock anchors or after concrete has been casted. Placing loose soil cover over the area to be blasted can be used to contain and minimise flying rock. Blasting should be planned and executed to benefit the production of stone for the gabion works.

PSAA - 5 Freehaul Distance (par 5.2.6.1)

The freehaul distance shall be a radius of 1km from the centre of the spillway weir and all related tariffs should include such transport costs.

SANS/SABS 1200DK – GABIONS AND PITCHING

SPILLWAY GABION CHANNEL SPECIFICATION

The standard specification for the spillway gabion structure will be SANS/SABS 1200DK, with additional and revised clauses as detailed below:

PSDA - 1 Stone Size (par 3.1.1.2)

Add the following:

“The stone shall have a minimum dimension of 125mm and maximum dimension of 250mm. At least 85% by weight of the rock shall have a size equal to or larger than 125mm. No rock shall pass through the mesh.”

PSDA - 2 Gabions (par 3.1.2)

Replace with the following:

“Gabions are baskets to be made of hexagonal woven wire Mesh Type 80 as per SANS 1580. The 2.7mm diameter steel wire used in the manufacture of Gabions is to be heavily galvanised to class A with zinc alloy (Galfan Zn 95Al5) coated wire according to SANS 1580 and SANS 10244-2 and has a tensile strength between 350-575N/mm².

Reno and Castoro mattresses are to be manufactured to SANS 1580 from hexagonal woven steel wire Mesh Type 60, commonly referred to as double twist wire mesh. The steel wire used during the manufacture of the mattress is to be 2.2mm diameter to SANS 675 and zinc alloy (Galfan Zn 95Al5) coated, Class A as per SANS 1580 and SANS 10244-2 and a tensile strength between 350-575N/mm².

PSDA - 3 Geotextile Materials (par 3.1.2)

Replace first two paragraphs with:

“Geotextile is to be made from nonwoven continuous filament needle punched polyester with a tensile strength in machine direction and cross direction of 14kN/m to 16kN/m with an elongation at break of 40%-60% (SANS 10221). The CBR is 2400N (SANS 10221) and energy absorption of 6500N/m (ASTM D4595). O95 is 195µm (ASTM D4571) and transmissivity at 20KPa of 30 l/hr (ASTM D4716). Permeability at 100mm Head is 0.200m/s (SANS 10221). Mass unit weight is 195 g/m² (SANS 10221).

The geotextile, as specified, shall be placed at the back of each gabion layer and extend 0,5m above the lower panel and 0,5m below the higher panel to prevent migration of fines. At vertical joints or where damaged, a minimum overlap of 300mm is required and the overlapping ends shall be tied together to prevent any movement or slipping of the geotextile fabric during construction.”

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PSDA - 4 Assembly (par 5.2.3)

Add the following:

“Sufficient binding and bracing wire for all the tying to be done during construction of the gabions, as specified in clause 5.2.4 below, shall be supplied with the gabions. The binding and bracing wires shall be made from Class A heavily galvanized mild-steel wire, and have diameters of 2,20mm and 3,4mm respectively.”

“The method of constructing the gabion wall, viz. stretching, placing in position, tensioning, supporting on temporary frames, bracing, filling with rock and tying by lacing shall generally be in accordance with the manufacturer’s instructions which have been approved by the Engineer. Nevertheless, a minimum of six internal bracing wires per square metre of face shall be tensioned between the vertical sides of all the outer visible cells to prevent the deformation of cages as they are being filled with rocks.

Tension on the cages shall be released only when fully packed at which point the temporary frames are removed and the lids laced down into place.

During assembly of the cages all sharp ends of wire shall be twisted towards the inside of the cages to prevent damage to the filter fabric.”

PSDA - 5 Rock Filling (par 5.2.4)

Add the following:

“The Contractor shall construct a trial section of gabion baskets and reno mattresses for the Engineer to inspect. The trial gabion shall be at least 3 (three) cages long and 2 (two) cages high, using 2m x 1m x 1m cages and the trial mattress section shall include at least 1 (one) 6m x 2m x 0.3m mattress and 1 (one) 3m x 1m x 0.3m mattress, both constructed in such a location that they can be seen for reference during the works.

If the trial walls are rejected by the Engineer, the walls shall be demolished entirely and rebuilt as directed by the Engineer. Only after the Engineer’s approval has been given will the Contractor be permitted to proceed with the construction of the spillway channel to match the trial sections in all respects. The Contractor is to take note of this requirement when resourcing and programming the works.”

SANS/SABS 1200GA – CONCRETE (SMALL WORKS)

PSDK -1 Preparation & Finishing (par 4.4.2)

All exposed concrete must have a smooth finish and no cement smearing of surfaces will be allowed after the formwork is removed. All exposed corners of the weir must be chamfered at 25mm. All foundations must be hand cleaned before placing concrete.

PSDK -2 Fixing (par 5.1.2)

No welding or heating of any reinforcing steel is allowed.

PSDK -3 Cover (par 5.1.3)

The minimum cover of reinforcing steel on all sides and all ends must be at least 40 mm inside formwork and 75 mm inside earth excavations.

PSDK -4 Strength Concrete (par 5.4.1.5)

Unless specified otherwise, all concrete must meet the specifications of the 30 MPa (20 mm) standard. Subject to this standard, the following mixing ratios can be used as guideline for any adjustments:

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Low strength (10-15 MPa) 1 bag (50 kg) cement:130 ℓ sand:130 ℓ aggregate (20 mm):40 ℓ water
Medium strength (20-25 MPa) 1 bag (50 kg) cement:100 ℓ sand:100 ℓ aggregate (20 mm):30 ℓ water
High strength (30-35 MPa) 1 bag (50 kg) cement: 70 ℓ sand: 70 ℓ aggregate (20 mm):25 ℓ water

Note: All concrete is subject to a slump value of 90 mm but not exceeding 120mm.

The compressive or crushing strength of mass and dental concrete is 10 MPa. Clean hard stone or boulders may only be used as fillers in the concrete if the largest dimensions (stone size) do not exceed 40% of the smallest dimensions of the concrete element.

PSDK -5 Ready-mixed Concrete (par 5.4.1.6)

Ready-mixed concrete may be used provided it complies with the applicable strength specifications to be verified with cube tests taken on site at time of casting.

PSDK -6 Watertight Concrete (par 5.4.9)

All concrete must be watertight.

PSDK -7 Formwork (par 8.2)

The cost of all shuttering and formwork must be included into the relevant concrete tariffs in the Bill of Quantities unless provided for separately. Provision should be made in the tariffs for forming and sealing movement joints in the concrete weir at 15m spacing sealed with pre-approved type sealant such as ABE, Sika, Sealboss or equivalent products.

PSDK -8 Reinforcement (par 8.3)

The cost of all steel reinforcing must be included in the relevant concrete tariffs in the Bill of Quantities, in accordance with the appropriate steel reinforcing detail or alternatively against the proposed allowed kilograms of reinforcement steel per cubic metre of concrete, unless listed separately.

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Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

Project Specifications Part 3

PARTICULAR SPECIFICATIONS

PA – ROCK ANCHORS & DOWELS

Rock or ground anchors or dowels are to be incorporated to safeguard the stability of the concrete weir as well as the reno mattress structures during flood conditions. It will increase the stability against sliding and overturning. A system of vertical anchors and dowels evenly spaced to bind the concrete weir to the rock foundations as well as dowels holding down the edges of the reno mattresses, will be installed.

General: Install dowels at the locations and to the depths shown on the drawings or as directed by the engineer on site. The contractor must allow in his tendered rate all wastage, health requirements, machinery and materials required to mix the grout to specification or manufacturer’s requirements.

Anchors / Dowels: The anchors or dowels must be of high tensile strength Y-Type rebar steel made up as L-bars with 200mm hooks to be integrated in the respective structures.

Drilling: Drill holes for anchors or dowels vertical at the predefined spacing and layout as shown on the construction drawings. Hole diameters for the anchors or dowels must be a minimum of 1,3 times the diameter of the anchors or dowels.

Preparation: The holes are to be cleaned thoroughly of dust and loose aggregate using compressed air followed by water jetting or in accordance with the adhesive being used.

Installation: Partially fill the dowel hole with self-levelling cement grout. Place and centre the dowel in the drill hole. Inject sufficient grout to fill the remainder of the hole. The protruding part of the anchors or dowels along the edges of the reno mattresses which will not be casted and protected inside concrete must be treated with anti-rust paint before the stone is packed.

Curing: The contractor must allow for a curing time for cement grout of at least 7 days.

PB – ENVIRONMENTAL REQUIREMENTS

The contractor’s attention is focused, with specific reference, on the environmental requirements in terms of Government notices R385, R386 and R387 of 21 April 2006, promulgated as Chapter 5 of the National Environmental Management Act, 1998 (Act 107 of 1998), also known as the "NEMA" process.

Note, although the work is classified as maintenance and repair without the need for an environmental management plan, we do advise that the client appoint an *Environmental Control Officer*, to oversee the process giving practical and reasonable input regarding general environmental requirements as well as monitoring and reporting on such implementation.

PC – OCCUPATIONAL HEALTH & SAFETY

The contractor takes full responsibility for his in-house Health and Safety obligations, in terms of the requirements of the Occupational Health and Safety Act of 1993, (Act 85 of 1993), including the Occupational Health and Safety Amendment Act (Act 181 of 1993) along with the accompanying regulations.

In addition, a Health & Safety Agent will be appointed responsible for Health and Safety on the site, in the interests of the client and to whom the contractor will be accountable in terms of the applicable legislation.

Contractor

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Employer

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PD – CONSTRUCTION WORK PERMIT

The Department of Labour requires a *Construction Work Permit* under the following conditions:

The qualification criteria for projects that require a *Work Permit* is either one of the following:

- (a) when the construction period will exceed 365 days **AND** when it involves more than 3600 person-days of construction work (*typically a project of this nature would be around 3 months equalling approximately 1000-1500 person-days*); **OR**
- (b) when Construction Industry Development Board (CIDB) grading equals grade level 7 or higher (*R40 mill or more*).

At this stage the proposed project does not qualify for a work permit under any of the criteria above.

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Annexure A

Health and Safety Specifications for South African National Parks

Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National
Park

CONTRACT No. CI-TN-0053-1

REVIEWED AS PER COVID-19 REGULATIONS

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**HEALTH & SAFETY
SPECIFICATIONS
FOR**

**REPAIRS AND REHABILITATION TO THE SPILWAY OF OUDEBAASKRAAL
DAM IN TANKWA KAROO NATIONAL PARK
CONTRACT NO: CI-TN-0053-1**

Date: July 2020
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**

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Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

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Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

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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.

Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

[Signature box for Contractor]

Contractor

[Signature box for Witness for Contractor]

Witness for Contractor

[Signature box for Employer]

Employer

[Signature box for Witness for Employer]

Witness for Employer

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;

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"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

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- 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

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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.

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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

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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

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- 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

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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

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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

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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

- A Contractor must ensure that where construction work is done over or in close proximity to water, provision is made for-
 - (a) preventing persons from falling into water; and
 - (b) the rescuing of persons in danger of drowning.
- A Contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

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;

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- 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;

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- 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

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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.

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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

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- 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

The Contractor shall carried out any Blasting that should be required according to the Explosives Regulation, Regulation No. R109, 17 January 2003.

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

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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.

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Witness for Contractor

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Employer

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Witness for Employer

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

6. TRAINING, INSPECTIONS AND RECORDS

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: a) Incidents / Accidents and investigation b) Non conformance c) Health and Safety Training d) HIRA Updates e) Internal & External Audits
General Inspections	As per Health and Safety Specifications & OHSA	Report of Health and Safety Specifications and OHSA compliance: a) Scaffolding b) Lifting Machinery c) Excavations d) Construction vehicle
General Inspections	Monthly	Covering: a) Fire Fighting Equipment b) Portable Electrical Equipment c) Hand Tools d) Ladders
Record Keeping	On-going	Covering: a) General Complaints b) Fines c) General Incidents d) MSDS e) Surveillance Medicals f) Inspection Registers g) Department of Labour Notices

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ANNEXURE A

The contractor shall submit the info below in an Annexure 2 prior to construction commencement.

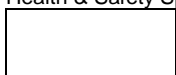
Item No.	Health and Safety Specification Requirement	OHSA Requirement	Submission date
1	Notification of Intention to Commence Construction	Construction Regulation 2014	At least 7 days before commencement on site
2	Construction Work Permit	Construction Regulation 2014	At least 30 days prior to project 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

ANNEXURE B: APPOINTMENTS

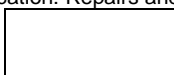
The Contractor shall make the following appointments:

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)

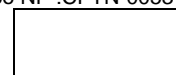
Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1



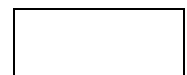
Contractor



Witness for Contractor



Employer



Witness for Employer

7. PROJECT DETAILS

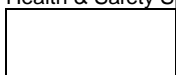
PROJECT DIRECTORY:		
Client	Tankwa Karoo National Park The Park Manager Tankwa Karoo National Park P.O. Box 299 Calvinia 8190 Contact: Mr K Makondo	Tel: 027 341 1927 email: kennet.makondo@sanparks.org
Client Agent	South Africa National Park General Manager: I&SP SANParks PO Box 787 Pretoria, 0001 Contact: Ms. A van Wyk	Tel (w): 012 – 426 5126 Fax (w): 012 – 343 4666 E-mail: antionet.vanwyk@sanparks.org

PROJECT DETAILS:		
Description of Works	Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park.	
Anticipated Construction Duration	4 Months	
Provisional Start Date	Feb 2021	
Completion Date	June 2021	

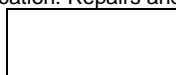
EXISTING ENVIRONMENT:
<p>Hazards particular to this project by virtue of location:</p> <p>Wild Animals: The site is located in the Tankwa Karoo National Park boundary and the park do have dangerous animals e.g. predators, snakes. No labour may work outside there construction vehicle without Park supervision. 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.</p> <p>Members of public and children: All necessary steps to be taken to protect them from any dangers associated with the construction works being undertaken.</p>
<p>Overhead, Above Ground and Underground Services crossing the site:</p> <p>Overhead: Not Applicable</p> <p>Underground: Not Applicable</p> <p>Ground Level: Not Applicable</p> <p>Services Drawings available: Not Applicable</p> <p>Way leaves required: Not Applicable</p> <p>Permits required: Applicable</p> <p>Isolation required: Not Applicable</p>
<p>Existing structures and surrounding land use (with a significant impact on Health and Safety):</p> <p>Category 2 dam as declared by Department of Water and Sanitation.</p>
<p>Existing ground conditions and ground survey report:</p> <p>As indicated on the Geology Map.</p>

EXISTING ENVIRONMENT:		
<p>Hazards particular to this project by virtue of location:</p> <p>Wild Animals: The site is located in the Tankwa Karoo National Park boundary and the park do have dangerous animals e.g. predators, 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.</p> <p>Members of public and children: All necessary steps to be taken to protect them from any dangers associated with the construction works being undertaken.</p>		
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<p>Existing ground conditions and ground survey report:</p> <p>As indicated on the Geology Map.</p>		

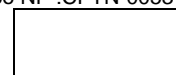
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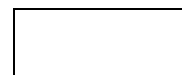
Contractor



Witness for
Contractor



Employer



Witness for
Employer

Existing Traffic Systems:

Conditions: Gravel Roads
Restrictions to access: Applicable
Speed restrictions: Normal road restrictions: 40km/h

PROJECT HEALTH AND SAFETY REQUIREMENTS:**Significant health and safety hazards identified by Designer and Client Agent:**

Accommodation of Traffic (Management Plan): 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.

Members of the Public: 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 & 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.

Wild animals: 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.

Normal construction hazards expected are as follow:

Bricklaying
 Bruch Cutting
 Compacting and filling / Compactors Operations
 Concrete / Concrete pumping
 Confined Spaces
 Electric Tools
 Excavations
 Fire
 Hand Tools
 Hazardous Substances
 Manual Handling of plant/material/equipment
 Members of public
 Noise and Dust
 Plant / Vehicle and Equipment Operations
 Site Establishment
 Snakes
 Animals
 Steel fixing
 Temporary Works
 Transportation of workers

NOTE: Please refer to the end of this Health and Safety Specification for the baseline risk assessment of these risks.

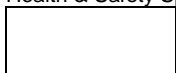
ACTIVITIES REQUIRING APPROVED METHOD STATEMENTS

Excavations
 Casing of Concrete
 Construction of Gabions

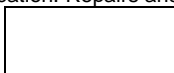
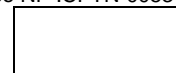
ACTIVITIES REQUIRING PERMITS

Permit to Dig / Permit to Enter Excavations: Not applicable on this project
Permit to Work with Electricity: Not applicable on this project
Confined Space Permit: Not applicable on this project
Hot Works Permit: Not applicable on this project

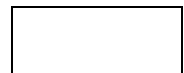
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Permit to work under Power Lines:	Not applicable on this project	
Blasting:	Not applicable on this project	
Temporary Works:	Yes - Authorization in writing by competent person.	
GENERAL ARRANGEMENTS		
Restrictions on times:	Monday - Friday 07:00 to 17:00	Saturday 07:00-13:00
Access to site by Construction Vehicles:	Yes, principal contractor to manage.	
Access to site by Construction workers & Visitors:	Visitors and personnel to report to site office.	
Site camp location and set up:	Restrictions/requirements, storage areas and security to be advised in consultation with principal agent	
Ablution and Welfare:	Contractor to provide as per regulations	
Environmental Conditions:	Contractor must take into account that the Tankwa Karoo National Park is an echo sensitive conservation area and implement control measures to mitigate risk. All regulations in the Environmental management Plan attached to bid document must be adhered too.	
Induction Training:	All workers to receive induction training prior to commencement on site. Special reference to SANParks EMP and Code of Conduct	

PROTECTION OF SITE AGAINST UNAUTHORIZED ACCESS BY PUBLIC	
<p>Excavation Fencing: Note that excavations accessible to public, or adjacent to public roads / through fares, must have (1) barrier / fence of at least 1m in height, and (2) warning illuminates at night or when visibility is poor, or have other suitable precautionary measures if both of these are not practicable. The entire site is to be fenced off with ready fencing. There needs to be access control as well as security personnel on site at all times.</p> <p>Warning Notices: Construction site, Visitors to report to the site office. Pedestrian arrow signage towards the other side of the road, Fire Extinguisher, First Aid, Emergency Assembly area and Emergency telephone numbers. Reflective vests, safety boots and dust masks signage to be displayed.</p>	
PERSONAL PROTECTIVE EQUIPMENT (PPE)	
The Client requires the Contractor to ensure that employees (and other under his/her control) wear the following minimum PPE:	
Overalls:	Yes, required
Safety Harnesses:	Yes, required
Hard Hats:	Yes, required
Safety Footwear:	Yes, required
Reflective Vests:	Yes, required
Goggles / Gloves / ear and respiratory protection	As per job function
Specialist equipment:	As per job function

HAZARDOUS SUBSTANCES	
<p>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:</p>	
Petrol	Cement
Diesel	Silicone

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8. COVID-19 REGULATIONS AND PROCEDURES

This regulation has been categorised as Disaster Management Regulations which will be continuously be reviewed as described below:

COVID – 19

OCCUPATIONAL HEALTH AND SAFETY

REGULATIONS AND PROCEDURES

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- 8. 4. DEFINITIONS, ABBREVIATIONS AND ACRONYMS**
- 8. 5. STANDARD PROVISION**
 - 8. 5.1. RISK ASSESSMENT
 - 8. 5.2. ENGINEERING CONTROLS
 - 8. 5.3. ADMINISTRATIVE CONTROLS
 - 8. 5.4. HEALTHY AND SAFE WORK PRACTICES
 - 8. 5.5. PPE
 - 8. 5.6. PROVISION OF SAFE TRANSPORT FOR EMPLOYEES
- 8. 6. RELATED SYSTEMS DOCUMENTS**

8.1. PURPOSE

To provide guidelines and stipulate measures to be taken in order to protect the health safety of all persons and members of the public entering our work sites or are exposed to our work activities from COVID – 19 risk. These measures includes infection transmission prevention, maintaining a minimum distance between participants at all times, the provision of protective equipment and the implementation of hygiene procedures. These measures are supported by awareness campaigns such as the creation of awareness - raising posters for all participants, as well as training on additional OHS measures and fully Integrating these preventive meas into the workplace.

8.2. APPLICATION

This procedure applies to Environmental Programmes (EP), including all subsidiary programmes, contractor teams, operational staff and visitors to the work site. It exclude facilities.

8.3. LEGISLATIVE REFERENCES

Occupational Health and Safety Act, 1993 (Act 85 of 1993)

Occupational Health and Safety Act, 1993 (Act 85 of 1993): General Administrative Regulations

Occupational Health and Safety Act, 1993 (Act 85 of 1993): Hazardous Biological Agents Regulations

Government Gazette, 2020 (Gazette No. 43257 – Vol. 658): COVID - 19 Occupational Health And Safety Measures In Workplaces – COVID -19 (C19 OHS), 2020

International Labour Organisation: Employment – Intensive Investment Programme (EIIP)

ISO 45001:2018: Operational Control and Planning Component (Clause 8.1)

ISO 9001:2008 (Clause 8.1)

ISO 14001:2004 (Clause 8.1)

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8.4. DEFINITIONS, ABBREVIATIONS AND ACRONYMS

“**COVID - 19**” means the Novel Coronavirus (2019 - nCov) which is an infectious disease caused by a virus, which emerged during 2019 and was declared a global pandemic by the WHO during the year 2020 that has previously not been scientifically identified in humans;

“**Corrective Action**” means a reactive process used to address problems after they have occurred. Corrective action may be triggered by a variety of events, e.g. non-conformance to documented procedures and work instructions, unacceptable monitoring and measurement results, internal or external OHS complaints, etc.

“**HIRA**” means Hazard Identification & Risk Assessment Team;

“**Isolation**” means separating a sick individual with a contagious disease from healthy individuals without contagious disease in such a manner as to prevent the spread of infection or contamination;

“**Medical screening**” means to detect early signs of work - related illness by administering tests to apparently healthy persons. Testing may include such tools as questionnaires, physical examinations, and medical investigations;

“**Non-conformance**” means any deviation from policies, procedures, work instructions, regulations, management system performance requirement etc. that could either directly or indirectly lead to injury, illness, disease, property damage, damage to the workplace environment, environment, or a combination of these;

“**PPE**” means personal protective equipment;

“**Quarantine**” means separating asymptomatic individuals potentially exposed to a disease from non-exposed individuals in such a manner as to prevent the possible spread of infection or contamination;

“**Risk**” means the chance or likelihood of the hazard causing harm or damage to an individual, property and/or the environment;

“**Red card offence**” means a warning action issued to individuals or operations / activity, and to alert all in the vicinity to a REAL HAZARD or danger to persons and environment;

“**Work Site/s**” shall mean any location where work is performed or a service is rendered for and have equipment or infrastructure installed, on behalf of the Department;

“**SOP**” means Standard Operating Procedure;

“**WHO**” means the World Health Organization.

8.5. STANDARD PROVISION

8.5.1. Risk assessment

8.5.1.1. Identification of exposure levels

8.5.1.2. Develop, review and update current risk assessments in respect of COVID - 19 and adapt measures required by this standard operating procedure (SOP) to your specific working condition/s and environment/s (see SHEQ/PROC 8.5.1.Risk Assessment Plan for Implementation & COVID – 19 Walk through Risk Assessment – as per Department of Health);

8.5.1.3. A systematic approach is to be followed to ensure that all significant hazards and risks are identified. This approach will include the identification of all activities, facilities, equipment, materials, substances, operations and products

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- 8.5.1.4. Review and update a site specific COVID -19 Hazard Identification and Risk Assessment (HIRA) for each work site, based on the Baseline HIRA as per COVID – 19 Baseline Risk Assessment);
- 8.5.1.5. Review, update and implement COVID -19 Safe Work Procedure (SWP) for each work site, based on recommended implementation steps in the Generic SWP COVID – 19 SWP);
- 8.5.1.6. The Focal points must provide HIRA information sessions and toolbox talks Safety Toolbox talk/s; to participants everyday prior to work commence, in order for them to be familiar with COVID – 19 risks;
- 8.5.1.7. Evaluate and complete a project continuity risk assessment plan prior the decision on proceeding with a project/work (see [SHEQ/PROC 4.4.6.1/checklist for project continuity](#));
- I. The observations should be discussed through social dialogue with Line function, Service Providers and Contract Teams, to assess the capacity of contractors, site supervisors and participants to implement these preventative measures. Consideration should be given to available resources and capacity (see [SHEQ/PROC 4.4.6.1/Risk Assessment Plan – Annex 2 Responsibility for each action by stakeholders](#));
 - II. If either contractors, site supervisors and participants are unable to meet the requirements of the measures outlined in this procedure and in the COVID – 19 HIRA, whether partially or in their entirety, the work on sites must be suspended. Project suspension may also be triggered by government restrictions or an infection rate within local communities.
- 8.5.1.8. Risk assessment plan must be strictly complied with through monitoring and supervision.
- 8.5.1.9. Non – Conformance to any requirements stipulated in this “SOP” will be treated as a red card offence. **CORRECTIVE MEASURES** will be implemented in accordance with the (see [SHEQ/Sub Procedure/ Zero Tolerance – 4.5.3.1.1](#)).

8.5.1.2. Identification of “high contact” activities

8.5.5.2. The transportation of participants to and from work is regarded as a “high contact” activity. To minimise the risk of transmission of COVID – 19 during this activity, the safe work practises stipulated in this procedure, under section 5.6, shall be implemented, monitored and adhered with at all times;

8.5.5.3. The site Emergency Preparedness/Response Plan (see [PROC 4.4.7](#)) must include and clearly indicate:

- I. register of participants contacts on a daily attendance for the purposes of contact tracing (reduce the spread to other unaffected participants) - (see [SHEQ/PROC 4.4.6.1/register of participants contacts](#));
- II. directory of COVID - 19 hotlines / task force, communication channels on site in the event of COVID - 19 situation and responsibilities, and location of the nearest available and competent medical facilities with sufficient staff;
- III. mitigating measures to prevent the spread of the virus within the community, including health surveillance;
- IV. make arrangements for isolation of any person who develops COVID - 19 symptoms at work, and the area should be accessible only by public health authorities or those with appropriate protective gear;
- V. clarify situations that should trigger suspension or closing of works, agreed by relevant stakeholders;
- VI. potential risks and a contingency plan for the project work if the spread of COVID - 19 increases to the extent that implementation is no longer possible (Include a “force majeure” clause in the contract of agreement).

8.5.1.3. Identification of vulnerable participants and special measures for their protection including protection against unfair discrimination or victimization,

8.5.1.4. All participants must undergo pre, periodic and exit medical examinations, at approved Medical Practitioner, and be declared fit to perform their duties. A certificate of fitness must be available on site of all participants;

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- 8.5.1.5. Participant with underlying medical conditions e.g. diabetes, asthma, cardiovascular disease, chronic respiratory disease, chronic renal disease, pregnant workers, HIV diagnosed workers who are virally unsuppressed etc., must indicate this during screening process. Any medical conditions disclosed must be treated with confidentiality;
- 8.5.1.6. Focal points must encourage a healthy lifestyle amongst participants e.g. to take prescribed medication daily;
- 8.5.1.7. If it comes to the attention of the Focal point, that a participant/s with underlying medical conditions refuse to adhere to taking their prescribed medication, they should not be allowed to continue work;
- 8.5.1.8. Where persons with underlying medical conditions so signs of ill health, they should not be allowed to work and requested to remain home until his/her condition improves;
- 8.5.1.9. ensure that the participant is not discriminated against on grounds of having tested positive for COVID-19 in terms of section 6 of the Employment Equity Act, 1998 (Act No.55 of 1998).

8.5.2. Engineering controls

8.5.2.1. Ventilation

- 8.5.2.1.1. Ensure vehicles are adequately ventilated. Keep canopy windows open at all times. Preferable, canopies should be replaced with adequate railings to allow for better ventilation to reduce "confine space" risk;

8.5.2.2. Physical barriers

- 8.5.2.2.1. Transportation is regarded as one of the "high contact" activities, which increases the risk of COVID – transmission. "High contact" areas qualifies for the establishment of physical barriers between participants to reduce this risk;
- 8.5.2.2. Due to the nature of the activity, the use of personal protective equipment (PPE) when seated inside a vehicle will apply. This will serve as a physical barrier between participants. The PPE during transportation shall include:
- 1) face shield;
 - 2) face mask (3 x material layer washable face mask)
 - 3) safety gloves (recommended);
 - 4) long sleeve overalls.

8.5.3. Administrative controls

8.5.3.1. Screening/ reporting of symptoms/ sick leave

- 8.5.3.1.1. Project Coordinator/Responsible Manager, must facilitate for Contractors and participants to undergo screening, and where necessitated, for testing (COVID – 19) at approved Department of Health local Test Centers. A register shall be kept on site of all persons screened and/or tested (see SHEQ/PROC 4.4.6.1/register of participants screened and/or tested);
- 8.5.3.1.2. Early detection and isolation of possible infectious participants is key. A "designated focal point" must complete a health check (screening), using the "self-assessment questionnaire" and measure body temperatures for fever symptoms on all contractors, drivers, operators and participants at the time they report for duty and/or prior to them being allowed access to a vehicle or work site. Non - contact thermometers should be used to measure body temperature. Screening will be accompanied with hand sanitization;
- 8.5.3.1.3. If a participant present with symptoms (sudden onset of at least one of the following: cough, sore throat, fatigue, shortness of breath, **temperature of 37.3 degrees Celsius** or higher) when reporting for duty, he/she must not be permitted to enter the vehicle or work site;
- 8.5.3.1.4. Where possible, establish a suitable central point for contractors and participants to meet for screening and hand sanitization. Where this is not possible, measures must be put in place to ensure all persons entering the site is screened and their hand sanitized before engaging with other team members;

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8.5.3.1.5. Internal health surveillance for COVID - 19 shall be implemented by a responsible Focal point, which will include:

- I. participants must monitor themselves for fever by taking their temperature twice a day and symptoms of COVID - 19 (Method to verify a rise in temperature is as follows; use the back of your hand and place it on your forehead, if the temperature is higher than normal then there might be a rise in temperature);
- II. at end of a shift, Focal point must check with participants whether they have experienced sudden onset of any COVID - 19 symptoms. Should they report any symptoms, s/he, they must be isolated;

8.5.3.2. If a participant present with symptoms when reporting for duty, or during working hours, immediately:

- I. isolate the participant, provide the participant with a FFP1 surgical mask and arrange for the participant to be transported in a manner that does not place other participants or members of the public at risk, either to be self - isolated or for a medical examination or testing; and
- II. assess the risk of transmission, disinfect the area and the participant work area;
- III. refer the participant who may be at risk for screening and take any other appropriate measure to prevent possible transmission;
- IV. ensure that the participant is tested or referred to an identified testing site;
- V. alternatively refer him / her to nearest medical institution dealing with COVID - 19 cases. Call the institution ahead of the visit and inform them of the symptoms.
- VI. place participants on paid sick leave in terms of section 22 of the BCEA; or
- VII. if the participants sick leave entitlement under the section is exhausted, make application for an illness benefit in terms of clause 4 of the Directive issued on 25 March 2020 on the COVID-19 Temporary Employer Relief Scheme under regulation 10(8) of the Regulations promulgated in terms of section 27(2) of the Disaster Management Act;

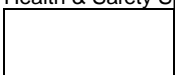
Minimizing contact

8.5.3.3. Social distancing - Transmission of COVID-19 from one person to another is through respiratory droplets (e.g. sneezing, coughing, talking etc.) or physical contact. The risk of transmission must be reduced by implementing the following:

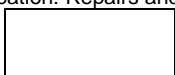
- I. keep a distance of 2 meters between participants;
- II. avoid unnecessary social contact;
- III. contractor must make extra efforts to allocate participants in a manner that allows them to keep a safe distance of 2 meters from each other, with due consideration of productivity. Therefore, it is suggested that group work is avoided and instead each participant is given individual work tasks to secure sufficient spacing;
- IV. hand shaking and other ways of physical greetings must be avoided;
- V. camping: Contractors should take necessary measures, in consultation with the responsible managers, for physical planning of the camp to accommodate the requirements for social distancing and sanitation measures, including the provision of water facilities, crowd management and prevention of large gatherings, with clear upper limits on the number of people allowed at a time in each facility;
- VI. a separate living area should be allotted if a participant develops a mild symptom, and the area should be accessible only by public health authorities or those with appropriate protective gears;
- VII. social distancing measures must be implemented through supervision both in the work site and in the common areas outside the immediate work site through queue control or within the workplace such as canteens and toilets. These measures may include dividing the workforce into groups or staggering break-times to avoid the concentration of participants in common areas.

8.5.3.4. Ensure only authorized persons enter the work site and storeroom areas. Place "no unauthorised entry" signs on doors leading to storerooms;

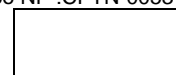
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Contractor



Witness for
Contractor



Employer



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8.5.3.5. Access by third parties to project sites, as well as physical distance between participants should be strictly monitored by the focal points, in order to avoid the risks of contagion;

Rotation and shift work

8.5.3.6. Consider introducing working shifts, or time lags to reduce concentrations of participants in the same space, when applicable and where possible;

Work-at-home strategies

8.5.3.7. If a participant develops a mild symptom similar to that of COVID - 19, the participant should immediately be requested to self-quarantine and stay at home for at least 14 days, and such cases should be reported to health authorities immediately. If a participant develops a serious symptom such as difficulties in breathing or high fever, responsible managers/contractor should immediately contact the nearest designated medical facility for testing (if possible) and arrange logistics. Care should be taken to ensure that risk of contact with other people is minimized as the participant is in transit to home;

8.5.3.8. A person having had face-to-face contact (≤ 2 meters) or was in a closed environment with a COVID - 19 case must go into isolation; this includes, amongst others, all persons living in the same household as a COVID - 19 and, people working closely in the same environment;

8.5.3.9. Participant/s with suspected COVID - 19 infection with mild symptoms and no underlying or immunocompromising conditions may be cared for / isolated in the home environment;

Communication and information strategies

8.5.3.10. Regional OHS Officers, Project Coordinators/ Responsible Managers and Contractors must provide clear and unequivocal messages focusing on what people should do to reduce the risk, or which actions to take if they think they may have COVID - 19. For this purpose, it is essential that awareness-raising posters are displayed throughout the site, or handouts for stakeholders with necessary information, and ideally shared through SNS (Social Network Services) for a wider audience. Awareness raising material may be obtained from your central or local authorities (either general or sector-specific ones).

Role of health and safety committees and representatives

8.5.3.11. Project Coordinators/Responsible Managers and Contractors, in consultation with H&S representatives/Focal points, must ensure the risk exposure to COVID - 19 form part of the monthly OHS meeting agenda;

8.5.3.12. Incidents reports relating to COVID – 19 must be discussed, reviewed and corrective measures proposed at the monthly OHS meeting to ensure continual improvement. (*see SHEQ/PROC 4.5.3.1/Incident Investigation*);

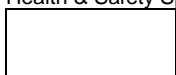
8.5.3.13. Incidents mentioned above must be reported to the EP National OHS meeting (*see SHEQ/PROC 4.5.3.1/Incident Investigation*);

8.5.3.14. COVID – 19 risks, which cannot be managed at project and/or area level must be escalated to the EP National OHS Committee;

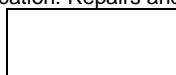
8.5.3.15. Project Coordinator/Responsible Manager, with the assistance of Regional OHS officers, must facilitate the establishment of a team with appointed Focal points for COVID - 19 responses.

- I. team with Focal points should consist of different stakeholders including contractor(s), site supervisor(s), and participant H&S representative(s) with at least one female representative and/or a representative with a disability, if possible.
- II. in cases where a site OHS officer is in place, s/he should take the leading role for the team;
- III. each Focal point shall share and undertake the responsibilities outlined in the attached guideline (*a summary of responsibilities is in the Annex 3 of the guidance*);
- IV. project Coordinator/ Responsible Manager shall instruct and train each focal point to execute their respective roles, with the support of public health authorities when feasible;
- V. a Focal point should hold at least one information update session on the status of COVID - 19 at a specific time during the day;

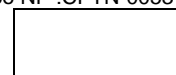
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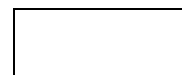
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- VI. a Focal point should hold at least one information update session on the awareness raising material as well as internal "safety toolbox talks" at a specific time during the day;
- VII. the Focal point should also continuously monitor other symptoms such as respiratory symptoms or difficulties in breathing, and ensure that participants are not exposed to potential risks (e.g. travel, contact with sick people, participation in large gatherings);
- VIII. a Focal point should regularly remind and inform participants and contractors of the importance of thoroughly washing their hands with running water and soap for at least 20-30 seconds (40-60 seconds when hands are visibly dirty) at regular intervals. A focal point should also regularly advise participants and contractors to avoid touching eyes, nose, and mouth with unwashed hands;
- IX. focal points must develop suitable safe procedures for the disposal of possibly infected solid wastes (e.g. tissues and other used cleaning consumables and materials) to eliminate these from becoming a potential hazard. Sharp objects must be used with caution to avoid cuts;
- X. early detection is key. A "designated focal point" must complete a health check, using the "checklist for Identification of suspected COVID - 19 case" and measure body temperatures for fever symptoms on all contractors, drivers, operators and participants prior to them getting into a vehicle or being allowed on site. Non-contact thermometers should be used to measure body temperature;

8.5.3.16. Regional OHS Officers, Project Coordinators/Responsible Managers and Contractors, in consultation with H&S representatives, should engage government authorities, to reduce the risk of exposure to COVID - 19 at the work place;

Education and training

8.5.3.17. Train all participants and Focal Points on the effective management and implementation of the OHS Plan and SWP for COVID - 19;

8.5.3.18. Training attendees must be screened prior to them being allowed access to the venue;

8.5.3.19. Training attendees who have been in close contact with a probable/confirmed COVID - 19 case, attended a funeral/ event or visited an outlet which was later confirmed to have an outbreak or people testing positive must declare it and not be allowed to attend the training session (see SHEQ/PROC 4.4.6.1/register of participants contacts);

8.5.3.20. A participant in training and/or meetings (OHS meetings) might be infected, and unknowingly expose others to the virus. Therefore, the organizer of such training and/or meetings must consult central and local government authorities to obtain reliable information on the infection rate of COVID - 19 in the area where the training and/or meeting is expected to be held, and verify the information with public health authorities. When the training and /or meetings takes place, the organizer shall:

- I. abide by the number of participants allowed in a place;
- II. arrange the seating to ensure that there is sufficient space between participants;
- III. and ventilate the room (e.g. opening windows) in case the training and /or meeting takes place inside a building;
- IV. any information pertaining to the training and/or meeting arrangement should be recorded for emergency purposes to be shared with public health authorities;
- V. in addition, alternative options such as online meetings and/or training for awareness-raising session when a large gathering is not feasible should be considered, as well as technical training in smaller groups through mobile training facilities.

Reporting of incidents for regulatory purposes

8.5.3.21. Participants must be informed to alert their contractor or Focal point immediately, if they suspect they have been exposed to COVID – 19 (symptoms: body aches, loss of smell or loss of taste, nausea, vomiting, diarrhoea, fatigue, weakness or tiredness);

8.5.3.22. If a participant is diagnosed with COVID – 19, the Responsible Manager must investigate the cause including any control failure and review its risk assessment to ensure that the necessary controls and PPE requirements are in place;

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8.5.3.23. An incident investigation reports shall be completed, indicating all possible causes and corrective actions taken or proposed. Incident reports shall be submitted to the relevant OHS Committees as well as the office of the DD: Health and Safety (see *SHEQ/PROC 4.5.3.1/Incident Investigation*);.

8.5.3.24. Service Providers/Contractors must **register with the Compensation Fund and be in possession of a "Good Standing"** certificate. Alternatively, the Service Providers/Contractors must have Health Insurance, which provides health cover equivalent to that offered by the Compensation Fund;

8.5.3.25. If there is evidence that the worker contracted COVID-19 as a result of occupational exposure, lodge a claim for compensation in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993) in accordance with Notice 193 published on 3 March 2020.

8.5.3.26. Reporting for purposes of public health, contact tracing, screening, testing and surveillance;

8.5.3.27. If a participant is diagnosed with COVID – 19, the Responsible Manager shall inform the Department of Health and the Department of Employment and Labour.

8.5.4. Healthy and safe work practices

8.5.4.1. Disinfectants, sanitisers and personal hygiene

8.5.4.1.1. Preventative supplies shall be included in the Bill of Quantities (BoQ) for contractors to pre – procure and enforce the provision. Supplies items shall be in sufficient quantities based on the number of participants and duration of the contract and shall include;

8.5.4.1.2. **Hands must be kept clean.** Hands must be sanitized / washed with soap and water as follows:

- ✓ hand must be sanitized:
 - 1) before entering a vehicle or work site.
- ✓ Alternatively, hands may be washed with water and soap (for 20 seconds) where possible;
- ✓ during operations hands must be wash with soup and water,
 - 2) before and after eating,
 - 3) before and after treating a cut or wound,
 - 4) after using toilet,
 - 5) after using tools,
 - 6) after blowing nose, coughing, or sneezing,
 - 7) after touching an animal, animal feed, or animal waste,
 - 8) after touching waste and
 - 9) after being out in the public. *Refrain from using hand sanitizers during operation due its flammable nature;*
- ✓ remove gloves and wash hands with soap and water,
 - 1) before eating,
 - 2) before treating a cut or wound,
 - 3) before touching your face;
- ✓ mouth must be covered with a tissue paper when coughing and sneezing. Once used, throw the tissue away in a closed bag or container;
- ✓ avoid touching your face, eyes, nose, and mouth with unwashed hands at all times.

Other

8.5.4.1.3. In areas where centralized safe water supplies are not available, basic water treatment technologies such as boiling or appropriate water filtration/purification equipment must be considered;

I. separate cups and water bottles for drinking water should also be prepared for each participant, and these items should be washed thoroughly after use. Clean all utensils before eating;

II. replace existing water containers, with water containers fitted with a tap. Reasons are:

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- ✓ less surface areas will be touched;
- ✓ sealed water containers poses less risk of water contamination vs opening a container to pour water;
- ✓ taps allow for easy rinsing with clean running water.

III. Water containers must be placed as follows:

- ✓ 1 x 10L hand washing container with tap and a 1 x sanitizer must be located within 5m of toilets. Where portable toilets are used, the seat must be sanitized after each use;
- ✓ 1 x 10L hand wash container with tap must be located at the working area to wash your hands when required;
- ✓ 1 x 25L hand wash container with tap to be located at the eating/resting area for hand washing and drinking water.
- ✓ 1 x 25L container to be kept on site for access water requirements.

IV. paper towels must be provided to dry hands after washing – the use of fabric toweling is prohibited;

8.5.4.1.4. **Avoid sharing PPE, tools and equipment.** Where the sharing of tools and equipment are unavoidable, hands must be washed before and after using shared tools and equipment;

8.5.4.1.5. All surfaces of PPE, hand tools and equipment that are directly touched by multiple participants should be wiped down and/or washed with water and detergents/ jik, before work begins, regularly during the working period and at the end of every day and stored in a safe location.

- These include safety helmets and boots, visibility vests, gloves, goggles, and ear muffs/plugs, knapsacks, containers, storage containers, toolboxes, vehicle door handles among others.
- Medical reusable / 3 x material layer reusable masks must be washed with water and soap every day after work is complete.
- The tools and equipment registers can be utilized to monitor and record the washing processes Any waste of consumable products should be disposed of in designated disposal bags;
- Tools and equipment must be washed with a brush, water and detergents starting from the top, working towards the bottom. Do not use disinfectant on tools and equipment as it is not effective when exposed to dirt.
- Domestic safety gloves must be worn during the washing process to protect the skin from hazardous chemical substances;
- Cleaning products and disinfectants that are environmentally preferable and has a lesser or reduced effect on human health must be used on for cleaning tools and equipment – select products with Safer Choice, Green Seal, Ecology and Design for the Environment labels);
- Used water for washing should not be disposed of on site. It must be put in a sealed container and disposed of in approved municipal drainage systems;
- A Material Safety Data Sheet (MSDS) must be available for all disinfectants and detergents, and participants must be trained on the risk associated with and the correct use of these;
- Do not under any circumstances share phones, combs, food, drink, eating utensils; clothing, PPE, books and blankets;
- Clean your electronic devices (phones, tablets, laptops, keyboards) with approved wipes or cleaning products;

8.5.4.1.6. **When administering a first aid case, the first aider must:**

- I. wash/or sanitize hands before and after administering the first aid;
- II. the patient must wash hands as well in case they touch the first aider;
- III. the first aider must use latex gloves and dispose them in a correct and safe manner;
- IV. face mask must be worn at all times by both the first aider and the patient during this process;
- V. CPR should be administered as per normal using the mouthpiece;
- VI. all First Aid boxes must have FFP1 medical surgical masks available that are to be used when a participant shows symptoms associated with COVID-19.

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8.5.4.1.7. All participants returning to work after isolation or quarantine period, should follow general work restrictions that include:

- I. undergo medical evaluation by a Health Practitioner to confirm they are fit to work;
- II. wear a face mask at all times while at work;
- III. implement social distancing measures as appropriate;
- IV. adherence to hand hygiene, respiratory hygiene, and cough etiquette;
- V. continued self-monitoring for symptoms;
- VI. seek medical re - evaluation if respiratory symptoms recur or worse.

8.5.5. PPE

In addition to the existing prescribed **PPE requirements**, contractors and participants must be issued with:

- 8.5.5.1. a face mask (3 x material layer washable face mask - an issue of a minimum of 2 masks per contractor and per participant);
- 8.5.5.2. a pair of working leather gloves;
- 8.5.5.3. a face shield (an issue of a minimum of 2 face shields per contractor and per participant).

Other requirements

- 8.5.5.1. Face mask (3 x material layer washable face mask) must be worn at all times, unless replaced with other respiratory equipment required by existing HIRA e.g. dust masks and HCS respirators with filters. The required HCS respirators and dust mask must be worn and should not be substituted with the (3 x material layer washable face mask);
- 8.5.5.2. Face mask (3 x material layer washable face mask) and face shield must be worn at all times during transport;
- 8.5.5.3. Proof of PPE issue must be recorded in the PPE issue register;
- 8.5.5.4. Additional 10 face masks (3 x material layer washable face mask) must be kept on site as replacements in the event of masks becoming wet, soiled or damaged;
- 8.5.5.5. 10 face masks (FFP1) must be kept on site. Possibly infected participants must be isolated and provided with a face mask (FFP1);
- 8.5.5.6. Contractors and participants must be informed, instructed and trained on the correct use of face masks / shields;
- 8.5.5.7. Focal points must ensure that participants masks are clean and dry when they report for duty;
- 8.5.5.8. First aiders must be provided with PPE:
 - 1) Safety shield;
 - 2) Face mask (FFP1) - an issue of a minimum of 2 masks);
 - 3) Non - sterile medical gloves;
 - 4) Long sleeve overalls.

8.5.6. Provision of safe transport for employees

8.5.6.1. Personal hygiene

- 8.5.6.2. Where possible, request and allow participants to walk to the work site;
- 8.5.6.3. Where a vehicle is used for transport purposes, the vehicle must be sanitized (deep clean) prior to loading participants. Areas of sanitization will include the steering wheel, switchers, gear shifter, handbrake, mirrors, door handles and loading zone;

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- 8.5.6.4. Clean mattress covers must be provided daily and washed at the end of every work day. Alternatively, replace mattresses with secured benches as it is easier to sanitize;
- 8.5.6.5. All occupants must wash /sanitize hands before accessing the vehicle;
- 8.5.6.6. Sneeze and cough inside a tissue or arm when inside a vehicle.

8.5.6.1.2. Social distancing

Arrangements to minimise exposure associated with commuting will include:

- 8.5.6.2. A maximum of 2 participants may be seated in the vehicle cabin (includes the driver);
- 8.5.6.3. Do not load vehicles to full capacity or overload vehicles. Social distance in vehicles must be in accordance with the "National Road Traffic Act" (NRTA) and/or any amendments made to the NRTA through the "Disaster Management Act";
- 8.5.6.4. Ensure that the vehicle is adequately ventilated. Keep canopy windows open at all times. Preferable, adequate railings should be fitted to reduce "confine space" risk;

PPE (driver/conductor of employer-provided transport)

- 8.5.6.5. **During transportation the contractor**, driver and participants must wear the following PPE when seated inside a vehicle:
- 1) Face shield
 - 2) Face mask (3 x material layer washable face mask);
 - 3) safety gloves (recommended);
 - 4) Long sleeve overalls. This is to ensure a certain level of physical barriers between participants;

8.6. RELATED SYSTEMS DOCUMENTS

COVID – 19 OHS Risk Assessment Plan for Implementation

COVID – 19 Checklist for Project Continuity

COVID – 19 Walk – through Risk Assessment

COVID – 19 Self - Assessment Questionnaire

COVID – 19 Baseline Risk Assessment

COVID – 19 Safe Work Procedure

COVID – 19 Register of participant contacts

COVID – 19 Focal Point Appointment letter

COVID – 19 Toolbox and Safety Talk

COVID – 19 Personal Hygiene

COVID – 19 Poster on how to remove gloves

COVID – 19 Preventative supplies and re-issue register

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COVID-19 SELF-ASSESSMENT QUESTIONNAIRES

The Organisation has developed this questionnaire based on information required by the Department of Health to assess risk and determine those participants eligible for COVID - 19 testing. The questionnaire must be completed (by a Focal Point) daily for each participant prior to them being allowed access to a vehicle and/or site.

Please tick the applicable box.

QUESTIONS	YES	NO
Persons with acute respiratory illness with sudden onset of at least one of the following:		
1. Are you experiencing a rise in body temperature recently? (use a non – contact thermometer to measure rise in temperature)		
2. Are you experiencing acute headaches recently?		
3. Are you coughing regularly recently?		
4. Are you experiencing excess sweating?		
5. Are you experiencing frequent shortness of breath recently?		
6. Are you suffering from acute diarrhea lately?		
7. Are you suffering from any muscle or joint pains recently?		
8. Do you have any underlying illness/disorder that might have an impact on your immune system?		
9. If yes, are you taking medication?		
AND / OR		
In the 14 days prior to onset of symptoms, met at least one of the following criteria:		
10. Have you been in contact with anyone who travelled abroad or has been exposed to the virus in the past 21 days?		
11. Have you travelled abroad in the last 21 days?		
12. Had a history of travel to areas with presumed ongoing community transmission of SARS-CoV-2?		
13. Worked at, or attended a health care facility where patients with SARS-CoV-2 infections were being treated?		
14. Close contact: A person having had face-to-face contact or was in a closed environment with a COVID-19 case; this includes, amongst others, all persons living in the same household as a COVID-19 case and, people working closely in the same environment as a case.		
15. Confirmed case: A person with laboratory confirmation of SARS-CoV-2 infection, irrespective of clinical signs and symptoms.		
16. Probable case: A person for whom testing for SARS-CoV-2 is inconclusive (the result of the test reported by the laboratory) or for whom testing was positive on a pan-coronavirus assay.		
If you have ticked more than five (5) boxes under "YES", then do the following:		
17. Refer the person to nearest medical institution dealing with COVID - 19 cases. Call the institution ahead of your visit and inform them of the symptoms.		
18. Contact the department's internal helpline on: 012 399 9300 for further assessment and advice.		

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Revised as per COVID-19 Baseline Risk Assessments

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Baseline Risk Assessment Roads

PROJECT: Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

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

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		Collision of vehicles	3	3	13	General Machinery Regulations7(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	Issue of PPE	Incorrect PPE	4	2	12	General Safety Regulation 2(1)	PPE Register
A10	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
A11	Adverse storms	Struck by lightning	2	5	19	Induction Training Safe Operation Procedure	Proper warning system
A12	Adverse heat	Dehydration, Sunburn, heat stroke	3	4	18	Induction Training Safe Operation Procedure	Proper drinking water, PPE
A13	Working in excessive winds	Exposure to dust	3	4	18	Hazardous Chemical Substances Regulation (36)(37)(38)	PPE

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	A14	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
	A15	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
	A16	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
	A17	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
	A18	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
Plant or vehicle & equipment	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

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Contractor

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		Vehicle/plant not used for correct purpose	3	3	13	Construction Regulations 23(1)(b)(c)	Supervision, controlled access to vehicle/plant
	B2	Licencing of operators	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
	B3	Parking of vehicles	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
Transportation	C1	Transportation of employees	4	4	21	Construction Regulation 23(1)(b)(j)	Supervisor
		Interaction with other vehicle-collision	4	4	21		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	4	4	21	Construction Regulation 23(g)(h)	Properly secure all goods
		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)
Towing coupler failure		3	3	13	Construction Regulation 22(e)	Inspection Register	
Hand Tools	D1	Injury Due to	4	3	17	Hand tool register, Induction Training,	Supervision
		Incorrect tools used	4	3	17	Hand tool register, Induction Training,	Supervision
		Defective tools	4	3	17	Safe Operation Procedure	Supervision

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		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

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			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
Site Clearance	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
Excavation & backfilling	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

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		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 Inspection Register
		Injury due to malfunction of equipment	3	3	13		
		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

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Temporary Works	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
Concrete	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

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			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		
Working at heights	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
Work in Confined Spaces	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
Construction	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	Gabions	Injury due to rock packing	4	3	17	Occupational Health and Safety Act 24(1)(c)(ii)	PPE, Induction Training

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		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
K3	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

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Steps in operation	Ref No.	Hazard	Risk	Risk Rating			Controls Measures	Action Period (AP)	Action to mitigate
				P	F	S			
Entry Onsite Under COVID-19 Pandemic	L1 C-19	Allowing persons to work with flu like symptoms	Infections and contamination that may lead to transfer of diseases	3	4	13	Occupational Health and Safety Act and COVID-19 Training, Regulations Checklist and relevant registers	C	Early detection is key. Contractors and participants should go for voluntary screening, and where necessitated, for testing at approved Department of Health local Test Centres.
		Persons with underlying medical conditions	Infections and contamination that may lead to transfer of diseases	3	3	13	COVID -19 Regulations and Occupational Health and Safety Act	D	All participants must undergo pre, periodic and exit medical examinations and be declared fit to perform their duties. Participants with underlying medical conditions e.g. diabetes, asthma etc., must be on and take prescribed medication to ensure a healthy immune system.
Onsite Establishment for Activities	L2 C-19	Lack of Access control (using vehicles)	Infections and contamination that may lead to transfer of diseases	3	5	13	Occupational Health and Safety Act as per COVID-19 Regulations "National Road Traffic Act" (NRTA) and/or any amendments made to the NRTA through the "Disaster Management Act".	C	Early detection is key. A "designated focal point" must complete a health check, using the "self-assessment questionnaire" and measure body temperatures for fever symptoms on all contractors, drivers, operators and participants prior to them getting into a vehicle. Non-contact thermometers should be used to measure body temperature. Where occupants show symptoms of the virus (sudden onset of at least one of the following: cough, sore throat, fatigue, shortness of breath, temperature of 37.3 degrees Celsius or higher), they should not be allowed on the vehicle and be requested to stay at home.

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Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Action to mitigate
Access to site	L3 C-19	Lack of Access control (On site - where teams are walking or using alternative public transport to get to site.)	Infections and contamination that may lead to transfer of diseases	3	5	13	Occupational Health and Safety Act and COVID -19 Regulations and Guidelines "Disaster Management Act".	C	Where participants are allowed access, they must wash hands before entering the work site. The focal point should also continuously monitor other symptoms such as respiratory symptoms or difficulties in breathing, and ensure that participants are not exposed to potential risks (e.g. travel, contact with sick people, and participation in large gatherings). Access by third parties to project sites, as well as physical distance between participants should be strictly monitored by the focal points, in order to avoid the risks of contagion.
Lack of Access control on site	L4 C-19	Lack of Emergency Response plan.	Not being able to access Emergency Services / Death.	3	5	13	Occupational Health and Safety Act COVID -19 Regulations and Guidelines "Disaster Management Act". Continuous Risk Assessment tool	A	Contractors should register participants ' contacts and daily attendance for the purposes of contact tracing, Have a directory of COVID-19 hotlines / task force, communication channels on site in the event of COVID-19 situation and responsibilities, and location of the nearest available and competent medical facilities with sufficient staff, and arrangements for isolation of any person who develops COVID-19 symptoms at work. Clarify situations that should trigger suspension or closing of works, agreed by relevant stakeholders.

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Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Action to mitigate
Emergency Team	L5 C-19	Lack of Emergency Team (Designated focal point) for COVID - 19 Response.	Infections and contamination that may lead to transfer of diseases / Death	4	4	13	Occupational Health and Safety Act COVID -19 Regulations and Guidelines Competency training Checklist and Registers	C	Establishment a team with appointed focal points for COVID-19 responses. The team with focal points should consist of different stakeholders including contractor(s), site supervisor(s), and participant' H&S representative(s) with at least one female representative and/or a representative with a disability, if possible. In cases where a site OHS officer is in place, s/he should take the leading role for the team. Each focal point shall share and undertake the responsibilities outlined in the COVID - 19 SOP. Train each focal point to execute their respective roles, with the support of public health authorities when feasible. A focal point should hold at least one information update session on the status of COVID-19 at a specific time during the day.
On-site Training	L6 C-19	Training	Infections and contamination that may lead to transfer of diseases	3	3	12	Occupational Health and Safety Act. COVID -19 Regulations and Guidelines Skilled training	D	"Screen participants before allowing them access to training venue. Training attendees who have been in close contact with probably/confirmed COVID - 19 case, attended a funeral or visited an outlet, which was later confirmed to have an outbreak of positive tested people, must declare it and not be allowed to attend the training. When training takes place, the organizer should abide by the number of participants allowed in a place, arrange the seating to ensure that there is sufficient space between participants, and ventilate the training room in case the training takes place inside a building. In addition, alternative options such as online training for awareness-raising session when a large gathering is not feasible should be considered, as well as technical training in smaller groups through mobile training facilities.

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Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Action to mitigate
Workers care during operation	L7 C-19	Open skin exposure (Cuts and sores)	Infections and contamination that may lead to transfer of diseases	2	3	10	Occupational Health and Safety Act. First Aid Regulation	E	Keep all wounds and sores clean with antiseptic ointment. Cover any cuts or sores with a waterproof plaster before coming to work.
Workers hygiene	L8 C-19	Not practicing good hygiene in the work place	Infections and contamination that may lead to transfer of diseases / Death	5	5	13	Occupational Health and Safety Act. COVID -19 Regulations and Guidelines	A	Hand washing facilities are ideally to be located within 5m of toilets and at close range of eating space. Keep your hands clean. Wash your hands with soap thoroughly. Wash the back of your hands, between the fingers, under the nails and rinse with clean running water. Keep your nails short. Always wash your hands 1) before and after you eat, 2) before entering workplace, 3) before and after treating a cut or wound, 4) after using toilet, 5) after using tools, 6) after blowing nose, coughing, or sneezing, 7) after touching an animal, animal feed, or animal waste, 8) after touching waste and 9) after being out in the public. Cover your mouth with a tissue paper when coughing and sneezing. Once used, throw the tissue away in a closed bag or container. Wash your hands afterwards. Keep a distance of 2 meters between you and a person with a cough. Avoid touching your face with dirty hands at all times. Clean all utensils before eating. Where portable toilets are used, the seat must be sanitized after each use. A focal point should regularly remind and inform participants and contractors of the importance of thoroughly washing their hands with running water and soap for at least 20-30 seconds (40-60 seconds when hands are visibly dirty) at regular intervals. A focal point should also regularly advise participants and contractors to avoid touching eyes, nose, and mouth with unwashed hands.

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Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Action to mitigate
Transportation of Workers	L9 C-19	Using work transportation to and from work.	Infections and contamination that may lead to transfer of diseases / Death	5	5	13	COVID -19 Regulations and Guidelines "National Road Traffic Act" (NRTA) and/or any amendments made to the NRTA through the "Disaster Management Act".	A	Vehicles inside must be sanitised prior to loading occupants. During transportation participants must wear the following PPE when seated inside a vehicle: 1) Safety goggles (recommended); 2) Face mask (N95 mask or 3 x material layer washable face mask - an issue of a minimum of 2 masks per participant); 3) Non - sterile medical gloves (recommended); 4) Long sleeve overalls. Ensure that the vehicle is adequately ventilated. Keep canopy windows open at all times. Preferable, adequate railings should be fitted to reduce "confine space" risk. Do not overload vehicles. Social distance in vehicles must be in accordance with the "National Road Traffic Act" (NRTA) and/or any amendments made to the NRTA through the "Disaster Management Act". Sneeze and cough inside a tissue or arm.
Tools and Equipment usage on site	L10 C-19	Tools and equipment (Sharing)	Infections and contamination that may lead to transfer of diseases / Death	3	4	13	COVID -19 Regulations and Guidelines	C	Avoid sharing PPE, tools and equipment during this current crisis. Where the sharing of tools and equipment are unavoidable, hands must be washed / sterilised before and after using shared tools and equipment. All surfaces of hand tools and equipment that are directly touched by multiple participants should be wiped down with water and detergents regularly, every day and stored in a safe location. These include safety helmets and boots, visibility vests, gloves, goggles, and ear muffs/plugs, among others. Medical reusable / 3 x material layer reusable masks must be washed with water and detergents every day after work is complete. Any waste of consumable products should be disposed of in designated disposal bins.

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Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Action to mitigate
Sharing and usage items	L11 C-19	Sharing items	Infections and contamination that may lead to transfer of diseases / Death	3	4	13	COVID -19 Regulations and Guidelines	C	Do not under any circumstances share food, drink, eating utensils; clothing, PPE, books and blankets.
Distance and spaces during activities on site	L12 C-19	Not keeping safe working distances	Infections and contamination that may lead to transfer of diseases	4	4	13	COVID -19 Regulations and Guidelines Occupational Health and Safety Act as Revised	C	Transmission of COVID-19 from one person to another is through respiratory droplets (e.g. sneezing, coughing, etc.) or physical contact. Keep a distance of 2 meters between you and a person with a cough. Avoid unnecessary social contact. Contractor must make extra efforts to allocate participants in a manner that allows them to keep a safe distance of 2 meters from each other, with due consideration of productivity. Therefore, it is suggested that group work is avoided and instead each participant is given individual work tasks to secure sufficient spacing. Also consider introducing working shifts, or time lags to reduce concentrations of participants in the same space, when applicable and where possible. Hand shaking and other ways of physical greetings must be avoided.
First Aid and Hygiene	L13 C-19	Unqualified First Aider on site	Aggravating injuries and not following correct procedures	3	5	10	Occupational Health and Safety Act. First Aid Regulation	D	There must be a qualified 2 x First Aider on site at all times.
	L14 C-19	Blood and other biological agents	Infections and contamination that may lead to transfer of diseases	3	3	13	COVID -19 Regulations, Occupational Health and Safety Act. First Aid Regulation	D	First aiders must be provided with PP1) Safety goggles; 2) Face mask (FFP1); 3) Non - sterile medical gloves; 4) Long sleeve overalls. Both the first aider and the person being treated must sanitize their hands. Possibly infected participants must be isolated and provided with a face mask (FFP1).
	L15 C-19	Sharp objects such as safety pins	Injury to beneficiary and first aider	3	3	13	Occupational Health and Safety Act.	D	Sharp objects must be used with caution to avoid cuts. Focal points should develop suitable safe procedures for the disposal of possibly infected solid wastes (e.g. tissues and other used cleaning consumables and materials) to eliminate these from becoming a potential hazard.

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Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Action to mitigate
Hygiene Practise	L16 C-19	Improper disposal of possibly infected waste	Infections and contamination that may lead to transfer of diseases	2	2	10	Occupational Health and Safety Act.	E	Throw used tissue/s away in a sealed/closed bag or container. Medical waste must be disposed of at the nearest medical centre or clinic.
	L17 C-19	Not washing hands and face with soap and clean water prior to leaving the worksite	Infections and contamination that may lead to transfer of diseases	4	5	13	Occupational Health and Safety Act.	B	When work is completed, do the following: 1) Wash your hands with soap thoroughly. Wash the back of your hands, between the fingers and under the nails; 2) Wash your face and forearms before leaving the worksite. using clean running water for washing. A focal point should regularly remind and inform participants and contractors of the importance of thoroughly washing themselves prior to leaving the work site.
PPE Compliance	L18 C-19	Not wearing PPE.	Infections and contamination that may lead to transfer of diseases	4	5	13	COVID -19 Regulations, Occupational Health and Safety Act.	B	In addition to the existing prescribed PPE requirements, contractors and participants must be issued with a face shield, Face mask (3 x material layer washable face mask - an issue of a minimum of 2 masks per participant). These must be worn at all times during transport. Mask must be worn during normal work activities. For HCS operations, the required HCS respirators must be worn and should not be substituted with the (3 x material layer washable face mask. Face mask (FFP1) must be issued to persons required to go into isolation. Face mask (FFP1) must be worn by the first aider and participant when administering first aid.
	L19 C-19	Not changing uniforms / PPE when you arrive home.	Infections and contamination that may lead to transfer of diseases	5	5	13	COVID -19 Regulations,	A	Remove uniform / PPE when you arrive home and put it in a sealed plastic bag. Where possible wash the clothes at a high temperature. Wash your body before engaging with family members or prepare food.

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Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Other Controls
Infections Precautions and Hygiene Practise	L20 C-19	Residues on gloves	Infections and contamination that may lead to transfer of diseases	5	5	13	COVID -19 Regulations,	A	Remove gloves when eating, drinking or answering cell phones. Do not put used gloves inside trouser pockets. When holding the glove, use fingers to grip the glove on the top inner part of the glove covering the risk areas. Avoid touching your face area with dirty gloves and/or hands at all times.
	L21 C-19	Unauthorised people in the working area	Infections and contamination that may lead to transfer of diseases	3	3	10	Occupational Health and Safety Act.	D	Ensure only authorised persons enter the work site and storeroom areas. Place "no unauthorised entry" signs on doors leading to storerooms.
	L22 C-19	Lack of clean water, soap and sanitizers	Infections and contamination that may lead to transfer of diseases	3	3	13	COVID -19 Regulations, Occupational Health and Safety Act.	C	In areas where centralized safe water supplies are not available, basic water treatment technologies are effective in removing or destroying viruses, such as boiling or using high-performing filters. Project managers and contractors should consult public health authorities to provide appropriate water filtration/purification equipment. Provide washing facilities (clean water, soap and hand sanitizers) in accordance with the COVID - 19 SOP.
	L23 C-19	Not going into self isolation	Infections and contamination that may lead to transfer of diseases	3	3	13	COVID -19 Regulations and Guidelines, Occupational Health and Safety Act.	D	"Remain at home: o Avoid unnecessary social contact o Avoid travel o Remain reachable for monitoring"

Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

Contractor

Witness for Contractor

Employer

Witness for Employer

Steps in operation	Ref No.	Hazard	Risk	P	F	S	Controls Measures	Action Period (AP)	Action to mitigate
Actions and Isolation when affected	L24 C-19	Not going into quarantine or self isolation	Infections and contamination that may lead to transfer of diseases	3	3	13	COVID -19 Regulations and Guidelines, Occupational Health and Safety Act.	D	"If a participant develops a mild symptom similar to that of COVID-19, the participant should immediately be requested to self-quarantine and stay at home for at least 14 days, and such cases should be reported to health authorities immediately. If a participant develops a serious symptom such as difficulties in breathing or high fever, responsible managers/contractor should immediately contact the nearest designated medical facility for testing (if possible) and arrange logistics. Care should be taken to ensure that risk of contact with other people is minimized as the participant is in transit to home. A person having had face-to-face contact (≤ 2 metres) or was in a closed environment with a COVID - 19 case must go into isolation; this includes, amongst others, all persons living in the same household as a COVID - 19 and, people working closely in the same environment. Participant/s with suspected COVID - 19 infection with mild symptoms and no underlying or immunocompromising conditions may be cared for / isolated in the home environment. (Isolation is defined as the separation or restriction of activities of an ill person with a contagious disease from those who are well)."

Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

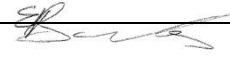

Contractor

Witness for Contractor

Employer

Witness for Employer

BASELINE RISK ASSESSMENT	
PARK NAME	Tankwa Karoo National Park
PROJECT NAME	Repairs to Oudebaaskraal Dam
CONTRACT NO:	CI-TN-0053-1
PROJECT DURATION	4Months
Rev No	
Date Published	14/08/2020
Next Review Date	08/2021
No of Pages	58

Prepared By	EL Barends	Designation	Civil Technician
Signature		Date	14/08/2020
16.2 Appointment	EL Barends	Designation	Civil Technician
Signature		Date	14/08/2020

Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

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Witness for
Contractor

Employer

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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

DRAFTING COMMITTEE

INITIALS	SURNAME	DESIGNATION	CONTACT DETAILS	HIRA TRAINING	SIGNATURE	DATE
E	Barends	Civil Technician	021-900-9062	Yes		
Z	Mkhonza	H&S Coordinator Compliance	012-426-5199	Yes		
CJ	Jonker	Manager Technical Services	012-426-5303	Yes		

Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

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Employer

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COVID -19 RA

DEFINITIONS		Probability (1 - 5)		Determining your prioritisation rating (A/P)			
Hazard	Is a condition, activity, object or substance that has the ability to cause harm.	1	Highly improbable	%	Prioritization indicator	Action	
Risk	Is the chance or likelihood of a hazard causing harm or damage.	2	Less than even chance	1% - 20%	E	Monitor the situation	
Probability	The likelihood of a specific outcome/consequence	3	Improbable	21% - 40%	D	Within six months	
Frequency	A measure of the rate of occurrences of an event expressed as the number of occurrences at a given time	4	Probable	41% - 60%	C	Within one month	
Severity	Degree or harm of the outcome/consequence	5	Inevitable	61% - 80%	B	Within one week	
This HIRA does not necessarily cover all hazards associated with the operation / equipment. It is designed as a guide to compliment the Operational Specific HIRA, which must be carried out for each task forming part of an operation.				81% - 100%	A	Immediate	
Frequency (1 - 5)		Severity (1 - 15)					
1	Hazard arise 2 yearly	1	Superficial injuries, minor cuts and bruises, nuisance and irritations (e.g. eye irritations & headaches), ill health leading to temporary discomfort.	6	Laceration, burns, concussion, serious sprains, minor fractures, deafness, dermatitis, asthma, work related upper limb disorder, ill health leading to permanent minor disablement.	11	Amputation, major fractures, poisoning, multiple injuries, fatal injuries, Occupational cancer, other severely life shortening diseases, acute fatal diseases.
2	Hazard arise yearly	2		7		12	
3	Hazard arise every month	3		8		13	
4	Hazard arise every week	4		9		14	
5	Hazard permanently present	5		10		15	

Health & Safety Specification: Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo NP :CI-TN-0053-1

Contractor

Witness for
Contractor

Employer

Witness for
Employer

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:

Contractor

Witness for
Contractor

Employer

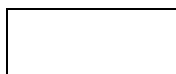
Witness for
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Annexure B

Environmental Management Plan



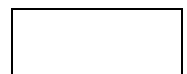
Contractor



Witness for
Contractor



Employer



Witness for
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Environmental Management Plan

General construction activities in parks

Park: Tankwa Karoo National Park

Project: Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

Prepared by:



South African National Parks
P.O. Box 787
PRETORIA
0001

Contractor

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Contractor

Employer

Witness for
Employer

Part**1****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

Witness for
Contractor

Employer

Witness for
Employer

Part**1****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 satisfactorily 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.

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.

Contractor

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Employer

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Employer

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

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Employer

Witness for Employer

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.

Contractor

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Contractor

Employer

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Employer

Part**2****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"> • Confirm the absence of Red Data Book Species; • Relocate, demarcate or recommend conservation / preservation measures for any identified ecologically "sensitive" and/or protected species and areas, and • Point out and/or demarcate all ecologically "sensitive" areas to the contractors (e.g. red data habitats & species, rivers, streams, drainage lines, wetlands, sensitive soils, steep slopes and areas susceptible to erosion). 	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"> • Confirm the absence of archaeological sites and/or artefacts; • 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 • Point out and/or demarcate all archaeologically "sensitive" areas to the contractors. 	SANParks, ECO & Contractor

Contractor

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Contractor

Employer

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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>Site Plan: 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"> • Site access (including entry and exit points). • All material and equipment storage areas (including storage areas for hazardous substances such as fuel and chemicals). • Construction offices and other structures. • Security requirements (including temporary and permanent fencing, and lighting) and accommodation areas for security staff. • Solid waste collection facilities and waste treatment facilities for litter, kitchen refuse, sewage and workshop-derived effluents. • Storm water control measures. • Provision of potable water and temporary ablution facilities. • 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. 	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>Site Camps: The following restrictions or constraints should be placed on the site camp, and construction staff in general:</p> <ul style="list-style-type: none"> • The use of rivers and streams for washing of clothes. • The use of welding equipment, oxy-acetylene torches and other bare flames where veld fires constitute a hazard. • Indiscriminate disposal of rubbish or construction wastes or rubble. • Littering of the site. • Spillage of potential pollutants, such as petroleum products. • Collection of firewood. • Poaching of any description. • Use of surrounding veld as toilets. • Burning of wastes and cleared vegetation. • No concrete structures allowed, if the site camp is within the Park boundaries. 	ECO & Contractor
<p>Vegetation clearing: 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>Water for human consumption: Water for human consumption should be available at the site offices and at other convenient locations on site.</p>	ECO & Contractor
<p>Sewage Treatment: 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</p>	ECO & Contractor

Contractor

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Contractor

Employer

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Employer

Mitigation / Management Action	Responsible Agent
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.	
Cooking Fuel: 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.	ECO & Contractor
Waste Management: 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.	ECO & Contractor

2.1.7 MATERIALS HANDLING, USE AND STORAGE

Mitigation / Management Action	Responsible Agent
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.	ECO & Contractor
Safety: 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.	ECO & Contractor
Hazardous Material Storage: 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 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.	ECO & Contractor
Fuels and Gas Storage: 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

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Employer

Witness for Employer

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

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
Plant Search and Rescue: <ul style="list-style-type: none"> 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. 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. 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. 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. 	ECO & Contractor
Vegetation Removal and Trimming in Watercourses: 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
Rehabilitation: 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

Contractor

Witness for
Contractor

Employer

Witness for
Employer

2.2.4 PROTECTION OF FAUNA

Mitigation / Management Action	Responsible Agent
<ul style="list-style-type: none"> 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. The Contractor and his employees shall not bring any domesticated animals onto the site. The Contractor shall ensure that the work site be kept clean, tidy and free of rubbish that would attract animals. No poaching of fauna and flora shall be tolerated by the Contractor or his personnel on Site or elsewhere. 	ECO & Contractor

2.2.5 HERITAGE AND/OR ARCHAEOLOGICAL SITES

Mitigation / Management Action	Responsible Agent
<p>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 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>	ECO & Contractor

2.2.6 SOIL MANAGEMENT

Mitigation / Management Action	Responsible Agent
<p>Topsoil: 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 & conditions. Topsoil must be stockpiled for later use.</p>	ECO & Contractor
Topsoil is to be handled twice only - once to strip and stockpile, and secondly to replace, level, shape and scarify.	ECO & Contractor
Topsoil stockpiles are not to exceed 1.5 m in height and should be protected to prevent erosion where needed.	ECO & Contractor
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.	ECO & Contractor
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.	ECO & Contractor
<p>Spoil Material: 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
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.	ECO & Contractor
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.	ECO & Contractor
Where required, cut-off trenches can be installed to divert substantial run-off and prevent	ECO &

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Contractor

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Witness for Contractor

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Employer

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Witness for Employer

erosion.	Contractor
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: <ul style="list-style-type: none"> • Vegetation, • Mitre drains (afleivore), • Benches (grondwalle), • Benches consisting of sandbags, • Packing branches and rocks in small gullies and disturbed areas. 	ECO & Contractor
Storm water drainage measures are required on site to control runoff and prevent erosion.	ECO & Contractor

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
Removed soil is to be used to backfill areas where required (i.e. such as existing and un-rehabilitated gravel pits).	ECO & Contractor

Contractor

Witness for
Contractor

Employer

Witness for
Employer

Mitigation / Management Action	Responsible Agent
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 site.	ECO & 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	ECO & Contractor

Contractor

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Employer

Mitigation / Management Action	Responsible Agent
measures.	
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 bunded 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
The contractor will maintain 'good housekeeping' practises as ensure that all work sites and construction camp are kept tidy and litter free.	ECO & Contractor

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	ECO & Contractor

Contractor

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Mitigation / Management Action	Responsible Agent
removed to an appropriate landfill site.	

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

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

Contractor	Witness for Contractor	Employer	Witness for Employer

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

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.

Contractor

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Contractor

Employer

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Annexure C

Code of Conduct for working in the South African National Parks

Contractor

**Witness for
Contractor**

Employer

**Witness for
Employer**



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;

Contractor

Witness for
Contractor

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Employer

- 2.2.9 Drive a vehicle without a licence or allow a minor to drive a vehicle under his control;
- 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.

Contractor

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Contractor

Employer

Witness for
Employer

Repairs and Rehabilitation to Oudebaaskraal dam, Tankwa Karoo National Park
 Contract number No: CI-TN-0053-1

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 it, must be sent to the Park Manager or designated person as soon as possible.

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.

Contractor

Witness for Contractor

Employer

Witness for Employer

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.

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 RESTCAMP 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

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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.
- 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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Part C4: Site information

C4 Site information

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Repairs and Rehabilitation to the Spillway of Oudebaaskraal Dam, Tankwa Karoo National Park

CONTRACT No. CI-TN-0053-1

C4 Site Information

C4.1 DESCRIPTION OF THE SITE AND ACCESS

Tankwa Karoo National Park (farm Oudebaaskraal) is situated ±150 km north-east of the town Ceres in the Ceres Karoo. The contract entails the repair and rehabilitation of the Oudebaaskraal Dam spillway on the remainder of Oubebaaskraal 13, Ceres District, comprising of ±150m³ concrete weir plus ±1500m³ stone filled gabion and wire mattress reinforced structures.

The dam is instream and located in the catchment area of Tankwa River, within the larger Doring River drainage system in the Western Cape winter rainfall region. The dam is located in the Ecca Series as part of the Karoo Supergroup, which comprises mainly of shale (laminated clay-rich sedimentary rock) with subordinate thin chert and limestone lenses. The site itself is within the primary spillway at the left abutment of the Oudebaaskraal Dam located in the Tankwa River. At the site soils are typical gravelly shales together with the weathered black-grey dolerite dyke visible in the spillway.

The bulk materials required in the project is suitably sized stone for gabion and reno mattress structures plus aggregates for the concrete works. All the stone for the gabion structures must be generated from designated excavation sites forming part of the reshaping of the spillway. All work and borrow areas must be within the footprints of the existing spillway and dam basin. Stone for all the gabion and reno mattress structures will be selected and produced by the contractor from the excavated material. Materials for concrete will have to be imported from commercial sources.

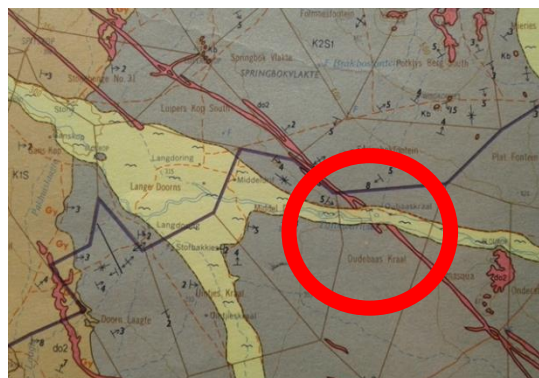
C4.2 TOPOGRAPHY AND TERRAIN

C4.2.1 Hydrology:

The dam and its catchment is located within the **E23F** quaternary run-off area. It is an instream dam situated in the Tankwa River, a tributary of the Doring River which forms part of the Olifants River drainage area. The Tankwa River is seasonal and the dam is only filled sporadically with runoff from its own catchment area during the winter rainfall seasons.

C4.2.2 Geology:

The geological investigation included a desk study with a view to compiling a geological profile of the proposed dam site as regards the formations and geological properties within the surrounding area (e.g. slip or contact planes, and seismicity). The paragraphs that follow offer brief descriptions of the geological formations found at the dam site, and are to be read in conjunction with the geological map extract below.



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1. Rock Formations:

The dam site is located in the Ecce Series as part of the Karoo Supergroup, which comprises mainly of shale (laminated clay-rich sedimentary rock) with subordinate thin chert and limestone lenses.

The geological map of the area indicates a clear dolerite dyke running across the river (pink colour). On the ground, this is confirmed to be black-grey dolerite (fine to medium-crystalline igneous rock) formation on which the crests of both spillways are formed. The dyke most probably runs under the river where the dam embankment was placed with the core barrier on the ridge of this dolerite dyke. At the dam the soils are typical gravelly shales together with the weathered black-grey dolerite dyke visible in both spillways.

2. Embankment Foundation

The embankment footprint is presumably founded on weathered gravelly black-grey dolerite and shale as well as less weathered dolerite, judging from the surrounding soil types and appearances.

The cut-off trench is presumably sealed and founded on the harder and less weathered dolerite dyke.

The spillways are partly in shale and on top of the dolerite dyke.

3. Material and Application

Oudebaaskraal dam is presumably constructed as a zoned earthfill structure. The bulk of the material for the construction of the embankment most probably came from within the basin of the dam, in view of the absence of borrow areas outside the dam.

It seems that there is no clayey material nearby the dam and it is therefore not clear which material was used for the core.

The dam embankment comprises mainly of a sandy to weathered black-grey dolerite mixture and shale material.

Since there is no actual construction information available regarding the construction methods and procedures, it is rather difficult to comment on the utilisation and application of materials.

4. Seismicity

In light of the intensity probabilities based on the Modified Mercalli Scale (MMS) as published in *Earthquake Hazard in South Africa* by the Geological Survey Division of the Department of Mining (1979), we recommend that the maximum credible earthquake (MCE) be taken as the equivalent of a 1-in-1 000-years' intensity, with a corresponding maximum horizontal acceleration of ±0,2g a figure that is, however, regarded as fairly high for these purposes.

Nevertheless, in light of the technical article Background to Draft SANS 10160 (2009): Part 4 Seismic Loading as published in volume 52 of *Journal of the South African Institution of Civil Engineering*, the following:

Although the article does not provide complete elucidation, we conclude and recommend that a seismic load or charge equivalent to 0,1 g be assumed for this region in the Western Cape when it comes to design purposes such as this.

C4.2.3 Geotechnical:

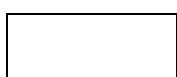
1. Material Investigation:

Information with regard to the material investigations is available in a geotechnical report by Forbes Dick & Associates, as per the previous inspection report.

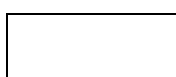
Although the actual report was not seen by the writer, it was appropriately referred to and quoted in the first inspection and no negative observations were reported regarding the dam materials.

2. Material Properties:

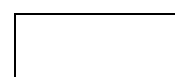
The characteristics of the two rock types in the dam area (and of which the embankment and spillways were constructed) namely shale and dolerite, can be summarised as in *Table 5.1* below. This information is taken from *Engineering characteristics of important southern African rocks with the emphasis on the shear strength of concrete dam foundations* (by the Department of Civil Engineering Technikon Pretoria to the Water



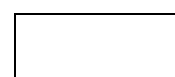
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Research Commission, WRC, December 2000) and *A Guide to Practical Geotechnical Engineering in Southern Africa* (by Frankipile South Africa, July 1995).

2.1 Shale

Unweathered shale of this area is a very hard rock (UCS >100 MPa) and contains closely spaced bedding planes that are mainly horizontally disposed but occasionally dip at a few degrees. The shale typically contains one or two moderately spaced near-vertical joint sets. The shale rock mass has a low permeability and therefore provides little access for weathering agents, e.g. water and oxygen. However, when exposed to the atmosphere, the outer crust of the rock (100 to 150 mm) rapidly slakes and breaks into gravel-size slivers of rock. Where these slivers are removed by water or gravity, the underlying rock continues to weather.

Where the shale had been indurated (baked) by the very hot dolerite intrusions, the shale would be stronger and more durable. This was shown in testing elsewhere, where similar shale in the Ecca Series of the Karoo Super-group have shear friction angles of 36 to 38 degrees.

From results of the durability testing on similar shale it appears that the indurated shale (visually not prone to slaking) is strong, and that most of the decrease in strength takes place within a short period (days rather than weeks). Therefore, all slightly weathered and unweathered shale can be considered suitable as hard rock-fill, provided that it is protected by an outer shell of durable rock (dolerite).

The specific gravity and the water absorption properties exceed that which is recommended for gabion rock by ASTM C127, i.e. 2.65 vs 2.6 and 0.76% vs 2%.

2.2 Dolerite

Slightly weathered to unweathered dolerite is an extremely hard rock (UCS > 200 MPa) but often contains three or more sets of closely to medium spaced cooling joints that break the rock mass into more or less cubical blocks. It is a durable rock and is the only suitable source for concrete aggregate.

Surface weathering agents (water and oxygen) enter the rock along these joints and weathering results in the formation of sub-rounded core-stones within a matrix of clayey silt. When the soft matrix is removed by surface erosion, the rounded boulders remain on surface or roll down on account of gravity and eventually cover large areas on plateau areas and along slopes. Due to a surface coating of iron oxides, these boulders are resistant to weathering and remain in place for a long time (locally named "ysterklip"). The rounded boulders and the unweathered dolerite are suitable for filling gabions.

The specific gravity and the water absorption properties exceed that which is recommended for gabion rock by ASTM C127, i.e. 2.94 vs 2.6 and 0.56% vs 2%.

2.3 Excavation

In general, the shale is considered to classify as 'soft' excavation according to SABS 1200D standards to considerable depth. Furthermore, the generally closely jointed nature of the parent material will aid in its removal where intersected during platform creation. However, cognisance must be paid to the fact that local variations in hardness may occur due to the degree of weathering and mineral content or as a result of 'baked contacts' where in close proximity to the dolerite intrusion.

Highly weathered dolerite and overlying residual and colluvial material is considered as 'soft' excavation according to SABS 1200D standards. Where slightly to medium weathered bedrock is encountered at deeper levels, excavation will become more difficult and may require ripping or blasting to remove. In the same regard large core-stones may be encountered within the weathered to residual dolerite profile and also require more effort to remove

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Tender Drawings – Repairs to the Spillway of Oudebaaskraal Dam

Number	Name
1936-S3-A	Locality Map
1936-S3-B	Geology Map
1936-S3-01	Spillway (OGL): Contour Layout Plan, Section positions
1936-S3-02	Spillway Design: Earthworks Contour Layout Plan
1936-S3-03	Longitudinal Sections
1936-S3-04	Longitudinal Sections
1936-S3-05	Longitudinal & Cross Sections
1936-S3-06	Cross Sections
1936-S3-07	Construction Details ~ Gabions & Reno's
1936-S3-08	Construction Details ~ Concrete
1936-S3-09	Rock Anchor Layout

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