SOUTH AFRICAN NATIONAL PARKS

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

TENDER DOCUMENT

March 2024

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

NAME OF TENDERER: .....

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 Quantity Surveying Service Provider 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.

1: The Tender

Part T1: Tendering procedures

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

T1.1: Tender Notice and Invitation to Tender (SBD1)

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF SOUTH AFRICAN NATIONAL PARKS					
BID NUMBER:	**CI-GK-0127**	CLOSING DATE:	**7 MAY 2024**	CLOSING TIME:	**11:00**
DESCRIPTION	**THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK**				

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT

Location of tender box: **Bontebok Park Management Office Reception**

Physical address: **Bontebok National Park, Off N2 Road, Swellendam, 6740 (Tender Box is open between 07h30 – 16h00 and weekdays only.)**

Identification details: **Contract: CI-GK-0127 - THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK**

South African National Parks invites tenders for **THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK IN THE WESTERN CAPE PROVINCE**

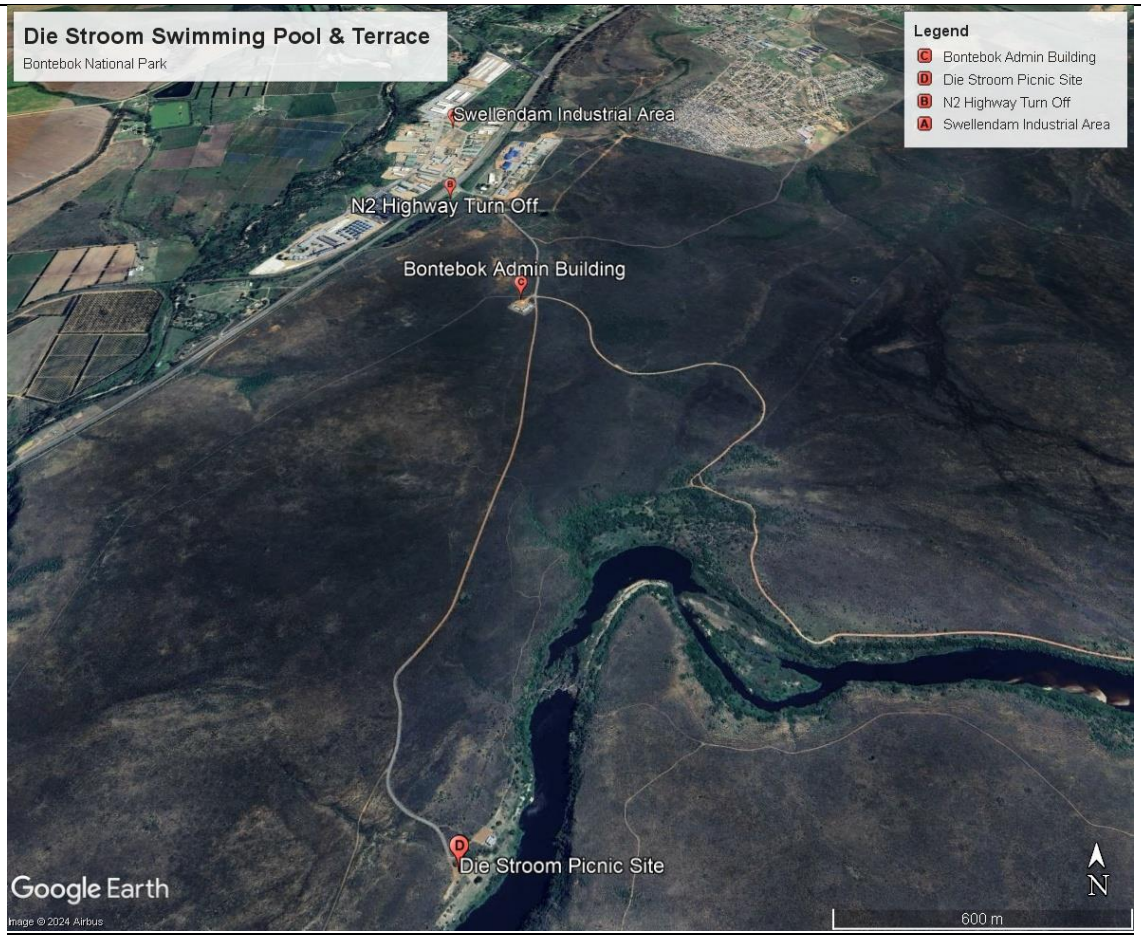
a) It is estimated that tenderers must have a CIDB contractor grading **4 GB** or higher.

b) Joint ventures are eligible to submit tenders provided that:
   i) every member of the joint venture is registered with the CIDB
   ii) the lead partner has a contractor grading designation in the **4 GB** class of the construction work
      - The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered of **4 GB** class of construction work or a value determined in accordance with the Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

c) Only tenderers who comply with the following are eligible to submit tenders:
   - Have the required and valid CIDB grading stated.
   - Achieved the minimum score for Functionality
   - Tenderer is not listed in the Register of Tender Defaulters and prohibited from doing business with the public sector.
   - The tenderer has not abused the Employer's supply chain management system
   - The tenderer has not failed to perform on any previous contract with the employer.

d) Joint ventures are to submit JV B-BBEE Level Status verification certificates

The physical address for collection of tender documents is:
Bontebok National Park
Off N2 Road, Swellendam
Western Cape Province
GPS Co-ordinates:
34.0593° S
20.4308° E



Tender documents will ONLY be available at the compulsory clarification meeting.
A non-refundable tender deposit of **R 300-00** payable in cash is required on collection of the tender documents. There will be no EFT facilities available – Cash Only

Queries relating to the issue of these documents may be addressed to:
All Queries
Mr Garret Kobe Tel No: (012) 426 5132 / 076 481 8604
Email: garret.kobe@sanparks.org

A compulsory clarification meeting with representatives of the Employer will take place at the **Park Management Office Boardroom** in the **Bontebok National Park** on **18 April 2024 starting at 11:00 hrs.** The Tenderer shall inspect and examine the Site and its surroundings and shall satisfy himself before submitting his tender as to the form and nature of the Site, the quantities and nature of the work and materials necessary for the completion of the Works and the means of access of the Site, the accommodation he may require and in general shall himself obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect his tender. The tenderer must be represented at the site inspection by a person who is suitably qualified and experienced to comprehend the implications of the work involved. Attendance of the site inspection is compulsory, and a tender will be disqualified if the site inspection is not attended by a representative of the tenderer.

The closing time for receipt of tenders is 7 May 2024 @ 11:00 hrs. Telephonic, e-mail and late tenders will not be accepted.

Tenders may only be submitted on the tender documentation that is issued. Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL ENQUIRIES MAY BE DIRECTED TO:	
CONTACT PERSON	**Garret Kobe (SCM)**	CONTACT PERSON	**Richard Williams**
TELEPHONE NUMBER	**012-426 5132 / 076 481 8604**	TELEPHONE NUMBER	**021 983 9304**
E-MAIL ADDRESS	Garret.kobe@sanparks.org	E-MAIL ADDRESS	Richard.williams@sanparks.org

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		**OR**	CENTRAL SUPPLIER DATABASE No:	MAAA

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS/SERVICES OFFERED?	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS/SERVICES OFFERED?	☐Yes ☐No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

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

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

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

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

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

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

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

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.** (see www.cidb.org.za) 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	Tender Data
C 1.1	The Employer is the South African National Parks.
C 1.2	The tender documents issued by the employer comprises: **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 **Part C2: Pricing data** C2.1 - Pricing assumptions C2.2 - Bill of Quantities **Part C3: Scope of work** C3 - Scope of work **Part C4: Site information** C4 - Site information **Part C5 : Drawings** C5 - Drawings, schedules and specifications
C 1.4	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

Clause number	Tender Data
	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. Enquiries should reference specific page and or paragraph numbers, where appropriate. **All questions/enquiries must be forwarded in writing not later than 30 April 2024 at 12:00.** Questions/enquiries received after **12:00 on 30 April 2024** will not be considered. Name: Garret Kobe Capacity: Manager SCM : Infrastructure and Special Projects Address: PO Box 787, PRETORIA, 0001 Tel: 012 426 5132 E-mail: Garret.kobe@sanparks.org The language for communications is English
C 2.1	Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor designation grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a **4 GB** or higher class construction work, are eligible to have their tenders evaluated. The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submission, are eligible to have their tenders evaluated: Joint Venture 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 **4 GB** class of construction work; or not lower than one level below the required grading designation in the class of construction works under consideration and possess the required recognition status. 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 **4 GB** class of construction work or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations.
C 2.7	The arrangements details for the compulsory clarification meeting are stated under Part T1.1: Tender Notice and Invitation to Tender. Tenderers must complete and sign the attendance register at the clarification meeting in the name of the tendering entity.
C 2.12	No alternative tender offers will be considered
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 0 (nil) copies.
C 2.13.7	The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are: **Location of tender box:** **Tender Box, Reception, Park Management Office, Bontebok National Park, Swellendam, Western Cape Province** **Physical address:** **Bontebok National Park, Off N2 Road, Swellendam** **Identification details**: **CONTRACT NO: CI-GK-0127 – THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK**
C 2.15.1	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
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.

Clause number	Tender Data
C 2.23	The tenderer is required to submit with his tender: 1) A valid Tax Status Compliance verification pin as issued by the South African Revenue Services; 2) Proof of active Contractor Registration issued by the Construction Industry Development Board - Compulsory 3) An original and valid B-BBEE Status Level verification Certificate issued by a SANAS accredited service provider or certified copy thereof or certified sworn affidavit (DTIC / CIPC issued certificate or sworn affidavit) 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 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. Copy of Joint Venture Agreement if applicable. 9) Form C1.1 – Form of Offer and Acceptance 10) Form T2.1 A - Certificate of Authority for Signature. 11) For Joint Ventures a JV Agreement shall be provided (if applicable) and a SANAS B-BBEE certificate or sworn affidavit in the name of the JV. 12) Form T2.1: B - Certificate of attendance at site inspection. 13) Form T2.1 F - Record of addenda to tender documents
C 3.4.1	The time and location for opening of the tender offers are: Date and Time: **7 May 2024 at 11:00** Place: **Bontebok National Park Management Office Board Room**
C 3.11	**Evaluation of tender offers** The procedure for the evaluation of responsive tenders is Price and Preference. The following price and preference point system is applicable to this tender: The 80/20 system for requirements with a Rand not exceeding R 50 000 000 (all applicable taxes included) Points for this bid shall be awarded as follows: (a) Price; and (b) Specific Goals The maximum points for this bid are allocated as follows: Price 80 Specific Goals: Preference Points 20 Total Points for Price and Specific Goals must not exceed 100 • The employer reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim regarding preferences, in any manner required by the employer. **Scoring financial offers: The 80/20 preference points system for acquisition of services, works or good** The following formula will be used to calculate the points for price in respect of tenders with a Rand value below R 50,000,000 (all applicable taxes included) and a maximum of 80 points is allocated to price: $$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right)$$

Contractor	Witness for Contractor	Employer	Witness for Employer

<table>
<tr><th>Clause number</th><th>Tender Data</th></tr>
<tr><td></td><td>
Where
Ps = Points scored for comparative price of bid under consideration
Pt = Comparative price of bid under consideration
Pmin = Comparative price of lowest acceptable bid

Scoring preferences

Points will be awarded to a tender for attaining the B-BBEE Procurement Recognition status level in accordance with the table below: Specific Goals: Preference Points. A maximum of 20 points is allocated to preference.
<table>
<tr><th>Specific Goal</th><th>Points Scored</th></tr>
<tr><td>1) Enterprises owned by black people</td><td></td></tr>
<tr><td>• Enterprises owned by black people with shareholding of 51% or more</td><td>8</td></tr>
<tr><td>2) Exempted Micro Enterprises</td><td></td></tr>
<tr><td>• Exempted Micro Enterprises (annual turn-over below R10m)</td><td>4</td></tr>
<tr><td>3) Locality</td><td></td></tr>
<tr><td>• To qualify, bidder must provide / include verifiable proof of business address in the Western Cape Province, older than 2 years</td><td>8</td></tr>
<tr><td>Total Points</td><td>20</td></tr>
</table>
<u>Important Notes</u>:
• A “zero” score will be applied if Tenderers does not qualify for any of the above mentioned “specific goals”.
• The Tender will not be disqualified if any of the two “specific goals” mentioned above are not met.
</td></tr>
<tr><td>C 3.13</td><td>
Tender offers will only be accepted with the following additional requirements:

a) 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;
or
ii) failed to perform on any previous contract and has been given a written notice to this effect;
e) has completed the Compulsory Enterprise Questionnaire, SBD1, 4, 6.1, and the 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.
f) Has submitted the documentation listed in C.2.23
</td></tr>
<tr><td>C 3.17</td><td>The number of paper copies of the signed contract to be provided by the Employer is one.</td></tr>
</table>

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK
CONTRACT NO: CI-GK-0127

Functionality Criteria

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.

Tenderers are required to score a minimum of 17 points out of a possible 24 points in order to be responsive: Tender Data, of the proposed functionality criteria and point system for evaluation.

The following pre-qualification / eligibility criteria apply:
(a) General Building Construction Experience (Maximum 12 points)
(b) Technical Expertise (Maximum 12 points)

a) General Building Construction, Renovation and or Alteration Experience (Maximum 12 Points)
Tenderers who fail to meet the minimum threshold shall be declared non-responsive and subsequently rejected.

Tenderers are required to demonstrate their ability to undertake the work and provide proof of experience in **General Building Projects (GB)**, specifically new building works. Tenderers are required to score a minimum of 7 points out of a possible 12 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.

Where insufficient information is provided, zero points will be awarded for such particular criterion. The quality criteria and maximum score in respect of each of the criteria as follows:

Quality criteria	**Sub-criteria**	**Maximum number of points**
Contracts of value between R 1 million and R 4.5 million, inclusive of VAT	1 point per contract	4
Contracts of value exceeding R 4.5 million	2 points per contract	8
Maximum possible score for quality		**12**

Tenderer to submit list of past and current projects for functionality information – information must clearly state project information, contractor to submit “Letter of Intent” for current projects, and “Completion Certificates” for completed projects. Project details shall include telephone contact details of either the client or the engineer for the project.

b) Technical Expertise (Maximum 12 Points)
Points will be awarded for Technical Expertise applicable to the key personnel and individual construction staff members within the three categories listed below and who must be available for the execution and completion of the work.

Quality criteria	**Sub-criteria**	**Maximum number of points**
Contracts Manager who has a minimum of 6 years general building construction experience.	4 points	4
Site Agent who has a minimum of 5 years general building construction experience	4 points	4
Site Foreman who has a minimum of 4 years general building construction experience	4 points	4
Maximum possible score for quality		**12**

Curriculum Vitae’s (CV’s) of the Contracts Manager, Site Agent and Site Foreman that will be employed on this contract must be submitted with the tender document. The various individuals must be in the permanent or fixed term employ of the tenderer to be awarded points.

Should the key personnel not be available at the time of appointment for any reasonable reason, the Contractor will submit to the Client and Engineer, his proposed change in key personnel which will have to be approved. The Client and Engineer may on their discretion reject personnel proposed by the Contractor at such time.

TENDERER TO SUBMIT LIST OF PAST AND CURRENT PROJECTS FOR FUNCTIONALITY INFORMATION – INFORMATION MUST CLEARLY STATE PROJECT INFORMATION, CONTRACTOR TO SUBMIT "**LETTER OF INTENT**" FOR CURRENT PROJECTS, AND "**COMPLETION CERTIFICATES**" FOR COMPLETED PROJECTS. PROJECT DETAILS SHALL INCLUDE TELEPHONE CONTACT DETAILS OF EITHER THE CLIENT OR THE ENGINEER FOR THE PROJECT.

Annexure C

Standard Conditions of Tender

(As per Construction Industry Development Board, Government Gazette No 42622, 8 August 2019)

C.1 General

C.1.1 Actions

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

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

Note: *1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*

2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

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

C.1.2 Tender Documents

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

C.1.3 Interpretation

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

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

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

a) conflict of interest means any situation in which:

   i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil 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.

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.

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.
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 authorised 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.

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.

2.19 Inspections, tests and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

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

C.2.23 Certificates

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

C.3 The employer's undertakings

C.3.1 Respond to requests from the tenderer

C.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.3.2 Issue Addenda

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

C.3.3 Return late tender offers

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

C.3.4 Opening of tender submissions

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

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

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

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,

b) preventing participating in the employer's procurement;

c) 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;

d) has the legal capacity to enter into the contract;

e) 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;

f) complies with the legal requirements, if any, stated in the tender data; and

g) 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.

Part T2: Returnable Schedules

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

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 minimum requirements 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

Capacity of Tenderer

Site inspection certificate

Health and Safety Specifications Acknowledgement

2 Other documents minimum requirements only for tender evaluation purposes

A valid Tax Compliance Status pin as issued by the South African Revenue Services

Proof of active Contractor Registration issued by the Construction Industry Development Board - Compulsory

An original and valid B-BBEE Status Level verification Certificate, SANAS approved or certified copy thereof or DTIC / CIPC certificate or sworn affidavit. JV B-BBEE Certificate or sworn affidavit to be submitted

Proof of registration of Closed Corporation/Company or other legal entities applicable to tender - Certified copy

Letter of good standing from the Compensation Commissioner - Compulsory

Letter of intent for a Construction Guarantee - Compulsory

National Treasury Central Supplier Database (CSD) Registration Report – Compulsory

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 2022

4 Other documents that will be incorporated into the contract

Clarification Meeting Information

Local Content Declaration

Health and Safety Specifications for **CONTRACT NO: CI-GK-0127. THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK**

Code of conduct for implementing a project for SANParks

DRAFT Environmental Management Programme for THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

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 (As per tender document, completed in black ink)

T2.2 Returnable Schedules

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

Resolution of Board of Directors / Members / Partners

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

_____

_____
(*legally correct full name and registration number, if applicable, of the Enterprise)*

Held at _____ (*place)*

On _____ *(date)*

RESOLVED that:

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

   _____
   (*project description as per Tender Document)*

   Tender Number: _____*(Tender Number as per Tender Document)*

2. *Mr/Mrs/Ms: _____

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

   and who will sign as follows: : _____

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

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			

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

ENTERPRISE STAMP

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:

3. 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)*

4. 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)*

5. *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.

6. 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.

7. 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:

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

ENTERPRISE STAMP

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)*

1. _____

   _____

2. _____

   _____

3. _____

   _____

4. _____

   _____

5. _____

   _____

6. _____

   _____

7. _____

   _____

8. _____

   _____

Held at _____ (*place)*

On _____ *(date)*

RESOLVED that:

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

   _____

   _____
   (*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 days 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)

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

No	Name	Capacity	Signature
11			
12			
13			
14			
15			

Note:

1. ** Delete which is not applicable*
2. ***NB**. This resolution must be signed by <u>all</u> the Duly Authorised Representatives of the Legal Entities to the Joint Venture submitting this Tender*
3. *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*
4. *Resolutions, duly completed and signed, from the separate Enterprises who participate in this Joint venture must be attached to the Special Resolution*

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

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

1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: CSD Number:

Section 5: 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 6: Particulars of companies and close corporations

Company registration number:

Close corporation number:

Tax reference number:

Section 7: SBD 1 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 8: SBD4 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 9: SBD6 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

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

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

Contractor	Witness for Contractor	Employer	Witness for Employer

ii)	Confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
iii)	Confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
iv)	Confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and
iv)	Confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Name	Position	Signed

Enterprise name	Date

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK
CONTRACT NO: CI-GK-0127

2. 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

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

3. 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**

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

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	**Name/s of employee**	**Number of employees**	**Permanent employed (Yes/No)**	**Categories of employees**	**Name of Employee/s**	**Number of employees**	**Permanent employed (Yes/No)**
Carpenter				General worker			
Bricklayer							
Plasterer							
Plumber							
Tiler							
Painter							
Thatcher							
Electrician							

Machinery	**Plant**	**Workshops**

Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

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

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

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

3. PARTICULARS OF COMMITMENTS WHICH THE TENDERER HAS PREVIOUSLY COMPLETED AND ARE PRESENTLY ENGAGED WITH:

3.1. Current projects: (Attach additional documents as proof)

	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

3.2. Previous projects: (Attach additional documents as proof)

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									

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

4. Site Inspection Certificate

This is to certify that I,	
Representing Company	
Position	
Visited the site on	

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

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

Name Tenderer's Representative	Position	Signed

Name of Tenderer	Date

Name of Employer's Representative	Signature	Date

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

5. 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 Baseline Risk Assessment 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**

Declaration by bidder

Local content: THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

The list of materials as specified for this contract is provided and tenderers are requested to complete it in full.

Description of item (s)	Product Description	Percentage threshold for local content required	Bidders' declaration (%) on local content to be used during construction	Comment if lower content is specified
Cement	Pure Portland cement with 95-100% clinker (Cem I)	100 %		
Electrical cable	Low Voltage Cable	90%		
Plastic conveyance pipes	Polyvinyl chloride (PVC) pipes	100%		
Plastic conveyance pipes	High Density Polyethylene (HDPE) pipes	100%		
Steel Products & Components for Construction	Fabricated Structural Steel (latticed steelwork; reinforcement steel; columns; beams; plate girders; rafters; bracing; cladding supports; stair stringers & treads; ladders; steel flooring; floor grating; handrailing and balustrading; scaffolding; ducting; gutters; launders; downpipes and trusses)	100%		
Steel Products & Components for Construction	Joining / Connecting Components (Gusset; cleats; stiffeners; splices; cranks; kinks; doglegs; spacars; tabs; brackets.)	100%		
Steel Products & Components for Construction	Frames (Doors and Windows)	100%		
Steel Products & Components for Construction	Roof and Cladding (Bare steek cladding; galvanised steel cladding; colour coated cladding)	100%		

Steel Products & Components for Construction	Fasteners (Bolts; nuts; rivets and nails)	100%		
Steel Products & Components for Construction	Wire Products (All fencing products: All barbed wire and mesh fencing; fabric/mesh reinforcing; gabions; wire; rope/tacks; springs and screws)	100%		
Steel Products & Components for Construction	Ducting and Structural Pipework (Non-conveyance tubing fabricated from steek sheeting and plate with structural supports)	100%		
Steel Products & Components for Construction	Gutters, downpipes & launders (Fabricated materials made from sheeting associated with roof drainage systems.)	100%		
Company name				
Name & surname of the signatory				
Signing Capacity				
Signature				
Date				

SBD 4

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

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

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

2. BIDDER'S DECLARATION

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest1 in the enterprise, employed by the state? **YES/NO**

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

Full Name	**Identity Number**	**Name of State institution**

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

……

……

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

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

Contractor	**Witness for Contractor**		**Employer**	**Witness for Employer**

2.3.1 If so, furnish particulars:

……

……

……

3 DECLARATION

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

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium2 will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition 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.

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

Contractor	Witness for Contractor	Employer	Witness for Employer

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

……..	…….
Signature	Date
……	……
Position	Name of bidder

SBD 6.1

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

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

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

---

1. GENERAL CONDITIONS

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

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

1.2 **To be completed by the organ of state**

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

b) The 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

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

(a) Price; and

(b) Specific Goals.

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	**100**

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

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

2. DEFINITIONS

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 PREFERENCE POINT SYSTEMS

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

80/20

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 80/20 preference point system.

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

Note to service provider: The service provider must indicate how they claim points for each preference point system. Points will be allocated according to the points claimed in the table below.

THE SPECIFIC GOALS ALLOCATED POINTS IN TERMS OF THIS TENDER	Number of points allocated (80/20 system) *(To be completed by the organ of state)*	Number of points claimed (80/20 system) *(To be completed by the tenderer)*
1) Enterprises owned by black people		
- Enterprises owned by black people with shareholding of 51% or more	8	
2) Exempted Micro Enterprises		
- Exempted Micro Enterprises (annual turnover below R10m)	4	
3) Locality		
- To Qualify, bidder must include verifiable proof of business address in the Western Cape Province, older than two years.	8	
MAXIMUM TOTAL POINTS:	**20**	

NB: Bidders with Black ownership less than 50% and who are not EMEs can still tender but will not claim points for specific goals. ***Note to service provider: If no points are claimed in the above table, zero points will be allocated during evaluation.***

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm…….

4.4. Company registration number: ……...

4.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in

paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

STANDARD BIDDING DOCUMENTS DECLARATION

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

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

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

I declare that I have had no participation in any collusive practices with any Bidder or any other person regarding this or any other procurement. I certify that the information furnished in these declarations (SBD4, SBD6.1) is correct and I accept that SANParks may reject the Offer or act against me should these declarations prove to be false. I confirm that I am duly authorised to sign this SBD declaration pack nominated in writing by the Chief Executive Officer or Senior Member/Person with management responsibility (Close Corporation, Partnership or Individual).

NAME (PRINT)	
CAPACITY	
SIGNATURE	
NAME OF FIRM	
DATE	

WITNESSES:

1 _____

2 _____

Date _____

C: The Contract

Part C1: Agreement and Contract Data

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

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:

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK CONTRACT NO: CI-GK-0127

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

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

. . . . . .Rand

(in words);

R . . . . . (in figures)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning a copy of this acceptance form 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(s)		Date	
Name(s)			
Capacity			
For the Tenderer			
Name of tenderer (Company)			
Address of tenderer			
Name of witness			
Signature of witness		Date	

ACCEPTANCE (NB: TO BE COMPLETED BY SANParks NOT THE TENDERER)

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

The terms of the contract, are contained in:

Part C1: Agreements and contract data, (which includes this agreement)
Part C2: Pricing data
Part C3: Scope of work.
Part C4: Site information and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

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

The tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed signed acceptance form, 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(s)		Date	
Name(s)			
Capacity			
For the Employer			
Name of Employer	South African National Parks		
Address of tenderer	643 Leyds Street Muckleneuk 0002 P O Box 787 Pretoria 0001		
Name of witness			
Signature of witness		Date	

Schedule of Deviations

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.

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

C1.2 Contract Data

The Conditions of Contract are in terms of the JBCC Principal Building Agreement for Organs of State Contract Data (Edition 6.2 – May 2018) published by the Joint Building Contracts Committee**.**

The Conditions of Contract are clauses 1 to 30 of the JBCC Principal Building Agreement for Organs of State (Edition 6.2) of May 2018) published by the Joint Building Contracts Committee.

Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors (011-3154140), Master Builders Association (011-205-9000; 057-3526269) South African Association of Consulting Engineers (011-4632022) or South African Institute of Architects (051-4474909; 011-4860684; 053-8312003;)

The JBCC Principal Building Agreement makes 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 JBCC Principal Building Agreement.

Each item of data given below is cross-referenced to the clause in the JBCC Principal Building Agreement to which it mainly applies.

The variations to the JBCC Principal Building Agreement are:

Clause	Variation
1.1	Replace the following definitions in **DEFINITIONS AND INTERPRETATIONS** with the following wording: **AGREEMENT** means the agreement arising from the signing of the Form of Offer and Acceptance by the parties, to be read in conjunction with the JBCC PBA. **BILLS OF QUANTITIES** means the document drawn up in accordance with the Pricing Instructions contained in the Pricing Data. **CONSTRUCTION PERIOD** means the period commencing on the date that the **agreement** made in terms of the Offer and Acceptance comes into effect and ending on the date of practical completion. **CONTRACT DOCUMENTS** means the **agreement** and all documents referenced therein. **CONTRACT DRAWINGS** means the drawings listed in the Scope of Work. **CONTRACT SUM** means the total of prices in the Form of Offer and Acceptance. **SCHEDULE** means the variables listed in the Contract Data. **INTEREST** means the interest rate applicable on overdraft facilities as charged by First National Bank to SANParks on the first calendar day of each month shall be used in calculating the interest due for such month.
5.2	Clause 5.2 is amended by the addition of the following to the end thereof:- "The parties shall sign the original agreement and shall each be issued with a copy thereof by the employer's agent. The original signed agreement shall be held by the employer's agent."
6.0 6.7	Clause 6.0 is amended by adding Clause 6.7 as follows :- 6.7 The authority of the **principal agent** to issue **contract instructions** or to perform duties as may be required for the relevant aspects of the **works** is delegated to the other agents as follows:- **6.7.1 Architects** The Architects is responsible for the architectural design, functional design and quality control. Without derogating from the generality thereof the Architects shall perform the following specific functions and duties:- 6.7.1.1 Give opinion on aspects of the **works** which are not in accordance with the **agreement**.

Clause	Variation
	6.7.1.2 Supply the specified number of drawings. 6.7.1.3 Be responsible for the design of the **works**. 6.7.1.4 Be responsible for primary coordination of design elements 6.7.1.5 Receive and accept design documentation undertaken by **nominated** or **selected subcontractors**. 6.7.1.6 Issue **contract instructions** to the **contractor** regarding: 6.7.1.6.1 Alteration to design, quality or quantity of the **works** provided that such contract instruction shall not substantially change the scope of the **works**. 6.7.1.6.2 Removal of any **materials and goods** from the **site** and the substitution of any other **materials and goods**. 6.7.1.6.3 Removal or re-execution of any work. 6.7.1.6.4 Opening up of work for inspection. 6.7.1.6.5 Testing of work and **materials and goods**. 6.7.1.6.6 Protection of the **works**. 6.7.1.6.7 Making good physical loss and repairing damage to the **works**. 6.7.1.6.8 The lists for **practical completion**, **works completion**, **final completion** and defects. 6.7.1.6.9 Compliance with acts of parliament, regulations and bylaws. 6.7.1.7 Witness the handing over to the **contractor** of pegs, beacons and datum level. 6.7.1.8 Define levels and provide the **contractor** with the necessary information to set out the **works**. 6.7.1.9 Inspect the work from time to time and give the **contractor** interpretation and guidance on the standard and state of completion required for **practical completion**. 6.7.1.10 Inspect the **works** for **practical completion**. 6.7.1.11 Issue **practical completion** list and re-inspect upon request of **contractor**. 6.7.1.12 Issue **works completion list**. 6.7.1.13 Inspect the **works** for **works completion** upon request of **contractor**. 6.7.1.14 Inspect the **works** at the end of the **defects liability period**. 6.7.1.15 Issue a defects list and re-inspect upon request of **contractor**. Acceptance in principle of design by **nominated** or **selected subcontractors**. **6.7.2 Quantity Surveying Service Provider (QSSP)** The **QSSP** is responsible for all measurements, valuations, financial assessments and all other Quantity Surveying and cost control functions. Without derogating from the generality thereof, the **QSSP** shall perform the following specific functions and duties: 6.7.2.1 Consult with the **contractor** in correction of rates for errors and discrepancies. 6.7.2.2 Prepare the **final account**. 6.7.2.3 Prepare the monthly recovery statement. 6.7.2.4 Complete the contract document and arrange for the signing thereof. 6.7.2.5 Hold a signed set of the agreement and all the documents referred therein. 6.7.2.6 Identify any changes to the Standard JBCC Documentation in the Contract Data and determine any loss and expense caused to the **contractor** caused by non-disclosure thereof. 6.7.2.7 Deal with amounts paid by the **contractor** to authorities having jurisdiction over the **works**. 6.7.2.8 Measure and value the making good of physical loss or damage. 6.7.2.9 Issue **contract instructions** to the **contractor** regarding: 6.7.2.9.1 Rectification of discrepancies, errors in description or omissions in the agreement and the documents referred to therein.

Clause	Variation
	6.7.2.10 Furnishing proof of payment to **nominated** and **selected subcontractors**. 6.7.2.11 Budgetary Allowances and work executed by the **contractor** there under. 6.7.2.12 Contingency and other monetary provisions included in the Bills Of Quantities. 6.7.2.13 Prepare **nominated** and **selected subcontract** tender documents. 6.7.2.14 Receive proof from the **contractor** that the **contractor's** payment obligations have been met in respect of **nominated** and **selected subcontractors**. 6.7.2.15 Act on **employers** instructions to pay **nominated** and **selected subcontractors** directly. 6.7.2.16 Adjustment of the contract value in respect of a revision to the date of **practical completion**. 6.7.2.17 Calculate penalties for non-completion. 6.7.2.18 Valuation of payment claims for payment certificates. 6.7.2.19 Authorise or otherwise the removal of materials or goods from site by the **contractor** where these have been paid for. 6.7.2.20 Calculate compensatory and penalty Interest due to the parties. 6.7.2.21 With each payment certificate issue :- 6.7.2.21.1 Details of amounts certified for each **nominated** or Selected Subcontractor 6.7.2.21.2 Notification to each **nominated** and **selected subcontractors** showing the formulation of sub-contract amount included in payment certificates. 6.7.2.21.3 A statement to the **employer** and **contractor** showing the total amount certified and all adjustment amounts. 6.7.2.21.4 Determine the value of adjustments to the contract value. 6.7.2.21.5 Receive from the **contractor** details of expense and loss claims and assess such claims. 6.7.2.21.6 Issue recovery statement with payment certificate. 6.7.2.22 Prepare the **final account** and submit to **contractor**. **6.7.3 Employer's appointed consulting engineers** The **appointed consulting engineers** is responsible for all aspects of engineering design and quality control. Without derogating from the generality thereof, the engineers will perform the following specific functions and duties in respect of all aspects of the **works**:- 6.7.3.1 Give opinion of aspects of the **works** which are not in accordance with the **agreement**. 6.7.3.2 Supply the specified number of drawings. 6.7.3.3 Issue instructions 6.7.3.4 Be responsible for the design of the **works**. 6.7.3.5 Receive and accept design and design documentation undertaken by **nominated** or **selected** 6.7.3.6 **subcontractors**. 6.7.3.7 Issue **contract instruction** to the **contractor** regarding: 6.7.3.7.1 Alteration to design, quality or quantity of the **works** provided that such **contract instruction** shall not substantially change the scope of the **works**. 6.7.3.7.2 Removal of any **materials and goods** from the site and the substitution of any **materials and goods** therefore. 6.7.3.7.3 Removal or re-execution of any work. 6.7.3.7.4 Opening up of work for inspection 6.7.3.7.5 Testing of work and **materials and goods**. 6.7.3.7.6 Protection of **works**. 6.7.3.7.7 Making good physical loss and repairing damage to the **works**.

Clause	Variation
	6.7.3.8 Compliance with acts of parliament, regulations and bylaws. 6.7.3.9 Define levels and provide the **contractor** with the necessary information to set out the **works**. 6.7.3.10 Inspect the work from time to time and give the **contractor** interpretation and guidance on the standard and state of completion required for **practical completion**. 6.7.3.11 Inspect the **works** for **practical completion**. 6.7.3.12 Inspect the **works** for **works completion** upon request of **contractor**. 6.7.3.13 Inspect the **works** at the end of the defect liability period. 6.7.3.14 Acceptance in principle of design by **nominated** or **selected subcontractors**."
9.0	Clause 9.0 is amended by adding Clause 9.1.4. "9.1.4 The **contractor** indemnifies and holds harmless the **employer** against all liability, losses, claims, damages, penalties, actions, proceedings or judgments (collectively referred to as "Losses") arising from any infringement of letters, patent design, trademark, name, copyright or other protected rights in respect of any machine, plant, work, materials, thing, system or method of using, fixing, working or arrangement used or fixed or supplied by the **contractor**, but such indemnity shall not cover any use of the equipment or part thereof otherwise than in accordance with the provisions of the specification. All payments and royalties payable in one sum or by instalments or otherwise shall be included by the **contractor** in the price and shall be paid by him to those to whom they may be due or payable. The **contractor** shall reimburse the **employer** for all legal and other costs and expenses, including without limitation attorney's fees on attorney-client scale incurred by the **employer** in connection with investigation, defending or settling any Losses in connection with pending or threatened litigation in which the **employer** is a party."
16.0	Clause 16.0 is amended by adding Clause 16.4 and 16.5 16.4 The **employer** reserves the right to pay direct (i.e. not through the **contractor**) all or any permanent connections to local or other authority services. In the event of the **employer** paying direct for these charges the **contractor** will not be entitled to a ten percent (10%) mark-up in terms of Clause 32.4. All such provisional amounts included in the Total of prices in the Form of Offer and Acceptance will be omitted. 16.5 The **contractor** shall not be entitled to any percentage, profit or discount on the value of any work executed by "direct contractors" but shall nevertheless allow these direct contractors and the **employer's** employees to have access to the works, allocate reasonable space in the building for the storage of their materials, tools and equipment and coordinate via the **principal agent** the work of such direct contractors as necessary, all to the satisfaction of the **principal agent**. The **contractor** shall allow the direct contractors, etc., to use, free of charge, the latrine accommodation and water and power supply on the site and shall not in any way hinder or prevent the execution of their work.
19.0	Clause 19.0 is amended by adding the following clauses: 19.8 Acceleration 19.8.1 To accelerate the works in order to mitigate the need for a revision to the date of practical completion, where caused by a delay will be adjudicated by the Principle Agent under the provisions of [23.1 to 23.2] 19.8.2 Upon receipt of such instruction, the **contractor** shall take all necessary steps to ensure that the **works** are completed timeously including reprogramming and possibly the provision, by him of additional resources, plant, manpower, etc. and the working overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and requirements of all authorities) and by all other adequate and proper means and methods. The **contractor** shall prove that such steps are being taken if called upon to do so.
25.10	Replace clause 25.10 with the following: The **employer** shall pay the **contractor** the amount certified in an issued **payment certificate** on the 21st day of the following month of the date of the issue of the **payment certificate** including **default interest** and/or **compensatory interest** Contractor's. Payment shall only be made following receipt by the **employer** of both the original **payment certificate** and the **contractor**'s tax invoice.

Clause	Variation
26.9.4	Delete sub-clause 26.9.4
30	Replace clause 30 with the following: **30.0 DISPUTE RESOLUTION** **Settlement by the parties** 30.1 Should any disagreement arise between the employer (or the principal agent or an agent) and the contractor arising out of or concerning the action or inaction of the employer (or the principal agent or an agent) or the contractor, or any other matter concerning this agreement (including the validity thereof), either party may give notice of disagreement to the other. The parties shall attempt to resolve such disagreement between them and record resolution in writing signed by them. 30.2 Where the disagreement is not resolved within twenty (20) working days of receipt of the notice of disagreement, the disagreement shall be deemed to be a dispute. 30.3 The dispute shall be referred to mediation within twenty (20) working days of the expiry period [30.2] by means of a notice of mediation by the party (the referring party) which gave the notice of disagreement. **MEDIATION** 30.4 Where a dispute is referred to Mediation: 30.4.1 The mediation shall be administered by the Association of Arbitrators Southern Africa ("AoA"). The applicable AoA rules, at the time of declaring the dispute, shall apply to the mediation process. 30.4.2 The referring party shall issue notice of mediation and such notice shall clearly define the scope of the dispute to be resolved. 30.4.3 Regardless of the outcome of a mediation the parties shall bear their own costs concerning the mediation and equally share the costs of the mediator and related expenses. **ADJUDICATION** 30.5 Where a dispute is referred to adjudication: 30.5.1 The referring party shall issue notice of adjudication and such notice shall clearly define the scope of the dispute to be resolved by the arbitration and not by adjudication. 30.5.2 The arbitrator shall be nominated and appointed by the Association of Arbitrators Southern Africa. 30.5.3 The JBCC Rules of Adjudication, current at the time the dispute is declared, shall apply to the adjudication proceeding, failing which the rules shall be determined by the adjudicator. Neither party shall be entitled to legal representation, unless otherwise agreed in writing by the parties. 30.5.4 A determination given by the adjudicator shall be immediately binding upon and implemented by the parties notwithstanding that either party may give notice to refer the dispute to arbitration. 30.5.5 Where the adjudicator has given a determination, either party may give notice of dissatisfaction to the other party and to the adjudicator within twenty (20) working days of receipt of the determination, or an extended time period provided in the applicable rules for adjudication, whereafter such dispute shall be referred to arbitration. 30.5.6 Where the adjudicator has not given a determination within the time period allowed or extended time period provided in the applicable rules for adjudication either party may give notice to the other party and to the adjudicator that if such determination is not received within ten (10) working days of receipt of this notice his appointment is thereupon automatically terminated and such dispute shall be referred to further adjudication or arbitration, at the option of the referring party 30.5.7 The adjudicator shall not be eligible for subsequent appointment as the arbitrator.

Contractor	Witness for Contractor	Employer	Witness for Employer

Clause	Variation	
		ARBITRATION
	30.6	Where the dispute is referred to arbitration:
	30.6.1	Arbitration shall not be construed as a review or appeal of an adjudicator's determination. Any determination by the adjudicator shall remain in force and continue to be implemented unless and until overturned by the arbitration award.
	30.6.2	The resolution of the dispute shall commence now.
	30.6.3	The referring party in the adjudication shall be the claimant in the arbitration.
	30.6.4	The arbitrator shall be nominated and appointed by the Association of Arbitrators Southern Africa.
	30.6.5	The Restricted Representation Arbitration Rules (formerly the Summary Procedure Rules), as incorporated in the Rules for the Conduct of Arbitrators: 2021 Edition (November 2021), shall apply to arbitration proceedings.
	30.6.6	The arbitrator shall have the authority to finally determine the dispute including the authority to make, open up and revise and certificates, opinion, decision, determination, requisition or notice relating to the dispute as if no such certificate, opinion, decision, determination, requisition or notice had been issued or given.
	30.6.7	The arbitrator's award shall be final and binding on the parties.
		General
	30.7	The employer consents to the joining of any subcontractor with the contractor as a party to any proceedings.
	30.8	Where the parties fail to specify a body to nominate the adjudicator [1.6.1] or the arbitrator [1.7.4] the referring party shall have the right to choose a local recognised body to suggest one or more persons with appropriate skills to be appointed as an adjudicator or an arbitrator. Such nomination shall be binding on the parties.
	30.9	The parties shall continue to perform their obligations in terms of this agreement, notwithstanding any disagreement or dispute that exists between them.
	30.10	This clause shall, to the extent necessary to fulfil its purpose, exist independently of this agreement.

Part 1: Contract Data completed by the Employer

Clause	Item and data
	A. PROJECT INFORMATION
1.1	**Works Description:** The scope of works for the construction of the swimming pool comprises of the following: 1. New swimming pool (315m^2) 2. Terrace Areas excluding Pool (1115m^2) 3. Associated Pool Backwash tank slab (15m^2) 4. Septic Tank Pump Chamber (40m^2) 5. Pool Pump Room (40m^2) 6. Ablutions consisting of Shower facilities and Change Areas (105m^2) 7. External works: - Perimeter fence (210 Lm) - Civil works for parking Area (240m^2) and terrace area - Structural retaining earth walls 8. Physically Disabled Ramp to one braai area (80m^2) 9. Soft landscaping 10. New underground services (trenched) areas to include: - Electric cables - Sewer lines / soakaway - Pool backwash and soakaway - Water supply line Including all skills and trades , painting, plastering, electrical and concrete works and bulk & sewer services.
1.1	**Site Address:** The **site is at Die Stroom Picnic Site** in **Bontebok National Park.**
1.1	**Particulars of Employer** Name: South African National Parks (Infrastructure & Special Projects Unit) Physical Address: 643 Leyds Street, Muckleneuk, Pretoria, 0002 Postal address: PO Box 787, PRETORIA, 0001 Telephone: (012) 426 5126
1.1	**Particulars of Principal Agent** Name: OVP Associates Physical Address: 141 Hatfield Street, Gardens, Cape Town, 8001 Postal Address: 141 Hatfield Street, Gardens, Cape Town, 8001 Telephone: (021) 462 1262 E-Mail: greg@ovp.co.za
	B. CONTRACT INFORMATION
1.1	**Bills of Quantity System/Method of Measurement will be** Standard System for Measuring Building Work (7th Edition)
1.1	The interest rate applicable is the interest rate on overdraft facilities as charged by First National Bank to SANParks.
2.1	The **law applicable** to the agreement shall be that of the **Republic of South Africa.**
3.2	The currency applicable to this agreement is South African Rands.
5.2	The original agreement will be held by the Employer, South African National Parks.

Clause	Item and data
5.6	**One copy** of the construction document and one copy of the construction drawings are to be supplied to the **contractor** free of charge
6.2	Authority is delegated to the **Principal Agent and any other** agents as instructed by Principal Agent to issue contract instructions and perform certain duties for specific aspects of the work.
6.3	No other interests or involvement other than professional interest are recorded for the Principal Agent and/or other agents.
10	Insurances by Employer - None
10.1.1	Contract insurance is to be affected by the **contractor.**
10.1.1	Contract works insurance is to be affected by the **contractor** for a sum not less than the total of prices in the Form of Offer and Acceptance with a deductible in an amount that the **contractor** deems appropriate.
10.1.2	The following supplementary insurance is required: **SASRIA insurance** to be affected by the **contractor** For an amount equal to the gross tendered value inclusive of VAT plus 30% for fees and escalation. Full Final estimated value of the works including fees and escalation. With a deductible equal to the amount as determined by the contractor's insurance company.
10.1.3	**Public liability insurance** to be affected by the **contractor** The contractor will be required to have public liability insurance cover in place for an amount equal to the gross tendered value inclusive of VAT plus 30%. However, liability will not be limited to this amount. it remains the responsibility of the contractor to ensure sufficient insurance cover is available based on their assessment of their risk exposure.
10.1.4	Lateral support insurance is to be affected by the **contractor**.
10.1.5	Support insurance to be affected by the **contractor.**
11.1.2	The security to be provided by the contractor is a **Fixed Construction Guarantee** equal to five per cent (5%) of the **contract sum** or a **payment reduction** of five per cent (5%) of the value of each **payment certificate.**
11.10, 19.5	A waiver of the **contractor's** lien or right of continuing possession is required.
12.1.5 12.2.22	Possession of the **site** to the **contractor** shall be within five (5) **working days** of the **contractor** complying with providing the **employer** with **construction guarantees** in accordance with the provisions of 11.1.2 Within fifteen (15) **working days** of the date of the **agreement,** submit to the **principal agent** an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), including a works programme.
12.1.5. 19.0, 24.0	The period for the commencement of the **works** after the **contractor** takes possession of the site is: Seven (7) **working days**. For the **works** as a whole: The contract period will be **5 Months**. The park and contractor shall agree on an agreed basis on the scope of work per annum, the timeframes for completion of the annual allocated work and completion dates of each project. The **penalty** per **calendar day** is **R1 500 /day** for not completing work as per agreed project programme.
21.1.1	Extended **defects** liability period will apply to the following elements: n/a
25.2	**Contractor's** Monthly claims for payment shall be submitted to the **QSSP** on the 21st day of each month (**contractor** to ensure that applications for payment from subcontractors are received on the 20th day of each month), following which the **QSSP** shall submit his valuation to the **principal agent**

Clause	Item and data
	within 14 days. The payment shall be made by the **employer** to the **contractor** within 21 calendar days. Payment shall only be made following receipt by the **employer** of both the original payment certificate and the **contractor**'s tax invoice.
25.3.4, 26.0	No provision is made for cost fluctuations nor is the contract value to be adjusted.
30.0	Default dispute resolution process shall be by mediation, then adjudication and if required, arbitration. The latest JBCC Adjudication Rules will apply. In the event that the parties cannot agree on the appointment of a mediator and/or adjudicator, the nominating body will be the Association of Arbitrators South Africa.

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

Part 2: Contract Data completed by the Contractor (COMPULSORY COMPLETION)

Clause	Item and data
1.2	The name of the **Contractor** is. . . . . . The address of the **Contractor** is: Telephone: . . . . . . Facsimile: . . . . . . Cell phone: . . . . . . Address (physical): . . . . Address (postal): . . . . Email: . . . . .

C1.3 Construction Guarantee

[Use for JBCC Principal Building Agreement for Organs of State (Edition 6.2) May 2018]

GUARANTOR DETAILS AND DEFINITIONS

Guarantor means . . . . . .

Physical address . . . . . .

. . . . . .

Guarantor's signatory 1 . . . . . Capacity . . . . . .

Guarantor's signatory 1 . . . . . Capacity . . . . . .

Employer means The South African National Parks

Contractor means . . . .

Agent means

Works means Construction of a swimming pool in Bontebok National Park

Site means Die Stroom Picnic Site

Agreement means the JBCC Principal Building Agreement for Organs of State (Edition 6.2) May 2018

Contract Sum means the total of prices in the Form of Offer and Acceptance inclusive of VAT

Amount in figures R . . . . . .

Amount in words . . . . . (Rand)

Guaranteed Sum means the maximum aggregate amount of R . . . . . .

Amount in words . . . . . (Rand)

The Construction Guarantee required is of the type variable and the expiry date for the guarantee is Practical Completion.

AGREEMENT DETAILS

Sections: Total Sections _____ Last Section _____

Principal Agents issues: Interim payment certificates, Final payment certificates, Practical completion certificates/ and Final completion certificates

1. FIXED CONSTRUCTION GUARANTEE

1.1 Where a Guarantee for Construction (Fixed) in terms of the Agreement has been selected this 1.0 with 2.0 to 12.0 shall apply. The Guarantor's liability shall be limited to the diminishing amounts of the Guaranteed Sum as follows:

GUARANTOR'S LIABILITY	PERIOD OF LIABILITY
Maximum Guaranteed Sum (not exceeding 5% of the contract sum) in the amount of: _____ _____	From and including the date of issue of this Guarantee for Construction and up to and including the date of the only Certificate of Practical Completion or the last Certificate of Practical Completion where there are sections, where after this Guarantee for Construction shall expire

Amount in words:_____

Contractor	Witness for Contractor	Employer	Witness for Employer

2. The Guarantor hereby acknowledges that:

2.1 Any reference in this Guarantee to the Agreement is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a surety ship.

2.2 Its obligation under this Guarantee is restricted to the payment of money.

2.3 Reference to a recovery statement or an Interim or Final Payment Certificate, or a Certificate(s) of Practical or Final Completion shall mean such certificate issued by the Principal Agent

3. Subject to the Guarantor's maximum liability referred to in clause 1.0, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.1 to 3.3:

3.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Principal Agent in an interim or final payment certificate has not been made in terms of the Agreement and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.

3.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the first written demand in terms of sub-clause 3.1 and that the sum certified has still not been paid therefore the Employer calls up this Construction Guarantee and demands payment of the sum certified from the Guarantor.

3.3 A copy of the said payment certificate which entitles the Employer to receive payment in terms of the Agreement of the sum certified in clause 3.0.

4. Subject to the Guarantor's maximum liability referred to in clause 1.0, the Guarantor undertakes to pay the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Construction Guarantee stating that:

4.1 Agreement has been cancelled due to the Contractor's default and that the Construction Guarantee is called up in terms of clause 4.0. The demand shall enclose a copy of the notice of cancellation; or

4.2 A provisional sequestration or liquidation court order has been granted against the Contractor and that the Construction Guarantee is called up in terms of clause 4.0. The demand shall enclose a copy of the court order.

5. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of clauses 3.0 and 4.0 shall not exceed the Guarantor's maximum liability in terms of clause 1.0.

6. Where the Guarantor is a registered insurer and has made payment in terms of clause 4.0, the Employer shall upon the date of issue of the final payment certificate submit an expense account to the Guarantor showing how all monies received in terms of the Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Construction Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

7. Payment by the Guarantor in terms of clause 3.0 or 4.0 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

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

9. The Guarantor chooses the physical address as stated above for all purposes in connection herewith.

10. This Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1, or payment in full of the Guaranteed Sum or on the Guarantee expiry date, whichever is the earlier, where after no claims will be considered by the Guarantor. The original of this Construction Guarantee shall be returned to the Guarantor after it has expired.

11. This Guarantee, with the required demand notices in terms of clauses 3.0 or 4.0, shall be regarded as a liquid document for the purpose of obtaining a court order.

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

Signed at …… Date ……

Guarantor's Signatory 1 …… Guarantor's Signatory 2 ……

Witness 1 …….. Witness 2 ……..

Guarantor's seal or stamp

C1.4 Adjudicator's Contract

[Use for JBCC Principal Building Agreement for Organs of State (edition 6.2) May 2018]

This agreement is made on the . . . . . day of . . . . between:

. . . . . (name of company / organisation)

of . . . .

. . . . . (address) and

. . . . . .(name of company / organisation)

of . . . . . .

. . . . (address)

(the Parties) and

. . . . . (name)

of . . . .

. . . .,(address)

(the Adjudicator).

Disputes or differences may arise/have arisen* between the Parties under a Contract dated . . . . . and known as. . . . . .

and these disputes or differences shall be/have been* referred to adjudication in accordance with the JBCC Adjudication Rules, (hereinafter called "the Procedure") and the Adjudicator may be or has been requested to act.

*** Delete as necessary**

IT IS NOW AGREED as follows:

1 The rights and obligations of the Adjudicator and the Parties shall be as set out in the JBCC Adjudication Rules.
2 The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the JBCC Adjudication Rules.
3 The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses as set out in the Contract Data.
4 The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
5 The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by:	SIGNED by:	SIGNED by:
Name:	Name:	Name:
who warrants that he / she is duly authorised to sign for and on behalf of the first Party in the presence of	who warrants that he / she is duly authorised to sign for and on behalf of the first Party in the presence of	the Adjudicator in the presence of
Witness:	Witness:	Witness:
Name:	Name:	Name:
Address:	Address:	Address:
Date:	Date:	Date:

Contract Data

1	The Adjudicator shall be paid at the hourly rate of R. . . . . in respect of all time spent upon, or in connection with, the adjudication including time spent travelling.
2	The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to: (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs. (b) Telegrams, telex, faxes, and telephone calls. (c) Postage and similar delivery charges. (d) Travelling, hotel expenses and other similar disbursements. (e) Room charges. (f) Charges for legal or technical advice obtained in accordance with the Procedure.
3	The Adjudicator shall be paid an appointment fee of R . . . . . This fee shall become payable in equal amounts by each Party within 14 days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and/or item 2 of the Contract Data. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.
4	The Adjudicator is/is not* currently registered for VAT.
5	Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
6	All payments, other than the appointment fee (item 3) shall become due 7 days after receipt of invoice, thereafter interest shall be payable at 5% per annum above the Reserve Bank base rate for every day the amount remains outstanding.

*** Delete as necessary**

Part C2: Pricing data

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

C2.1 Pricing Instructions

[Use for JBCC Principal Building Agreement for Organs of State (Edition 6.2) May 2018]

1. The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work published and issued by the Association of South African Quantity Surveyors (Seventh Edition (Revised)), 2015. Where applicable the:

    a. Civil engineering work has been drawn up in accordance with the provisions of the latest edition of SANS 1200 Standardized Specifications for Civil Engineering Works.

    b. Mechanical work has been drawn up in accordance with the provisions of the Model Bills of Quantities for Mechanical Work, published by the South African Association of Quantity Surveyors, July 2005).

    c. Electrical work has been drawn up in accordance with the provisions of the Model Bills of Quantities or Electrical Work, published by the South African Association of Quantity Surveyors, (July, 2005).

2. The agreement is based on the JBCC Principal Building Agreement for Organs of State, prepared by the Joint Building Contracts Committee, Edition 6.2, May 2018. The additions, deletions and alterations to the JBCC Principal Building Agreement for Organs of State as well as the contract specific variables are as stated in the Contract Data. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.

3. Preliminary and general requirements are based on the various parts of SANS 1921, Construction and management requirements for works contracts. The additions, deletions and alterations to the various parts of SANS 1921 as well as the contract specific variables are as stated in the Specification Data in the Scope of Work. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.

4. **It will be assumed that prices included in the 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).**

5. The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.

6. The drawings listed in the Scope of Works used for the setting up of these Bills of Quantities are kept by the Principal Agent or Engineer and can be viewed at any time during office hours up until the completion of the works.

7. Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted with approval.
   See Addendum C2.1.1 – Material specifications.

8. The rates contained in the Bill of Quantities will apply irrespective of the final quantities of the different classes and kinds of work actually executed.

9. Rates for work of similar description occurring in different sections of the Bill of Quantity shall be identical.

10. 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.

11. Where any item is not relevant to this specific contract, such item is marked N/A (signifying “not applicable”)

12. The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Section 1 (Preliminaries) of the Bills of Quantities.

13. The Bills of Quantities is not intended for the ordering of materials. Any ordering of materials, based on the Bills of Quantities, is at the Contractor’s risk.

14. The amount of the Preliminaries to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount for the Preliminaries and any amount in respect of contract price adjustment provided for in the contract

15. Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out in 10 but taking into account the revised period for completing the works.

16. The amount or items of the Preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Bills of Quantities:

    a. an amount which is not to be varied, namely Fixed (F)

    b. an amount which is to be varied in proportion to the contract value, namely Value Related (V); and

    c. an amount which is to be varied in proportion to the contract period as compared to the initial construction period excluding revisions to the construction period for which no adjustment to the contractor is not entitled to in terms of the contract, namely Time Related (T).

17. Where no provision is made in the Bills of Quantities to indicate which of the three categories in 12 apply or where no selection is made, the adjustments shall be based on the following breakdown:

    a. 10 percent is Fixed;

    b. 15 percent is Value Related

    c. 75 percent is Time Related.

18. The adjustment of the Preliminaries shall apply notwithstanding the actual employment of resources in the execution of the works. The contract value used for the adjustment of the Preliminaries shall exclude any contingency sum, the amount for the Preliminaries and any amount in respect of contract price adjustment provided for in the contract. Adjustments in respect of any staged or sectional completion shall be prorated to the value of each section.

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

C2.2 Bill of Quantities

Contractor	Witness for Contractor	Employer	Witness for Employer

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

Part C3: Scope of Work

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

C3.1 Scope of Work

[Use for JBCC Principal Building Agreement for Organs of State (edition 6.2) May 2018]

1	**DESCRIPTION OF THE WORKS**
1.1	**Employer's objectives**
	THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK
1.2	**Overview of the works**
	The construction of swimming pool with its ancillary associated infrastructure and comprises of the following: - A new Swimming Pool - Associated Pool Backwash Tank and Slab - Septic Tank Pump Chamber - Pool Pump Room - Ablutions including Shower facilities and Change Areas - External Works -Structural retaining earth walls -Civil works for Parking and Terraces -Fencing - Soft Landscaping New Underground Services (Trenched) Areas to include: - Electric Cables - Sewer Lines / Soakaway - Pool Backwash and Soakaway - Water Supply Line
1.3	**Extent of the works**
	As above
1.4	**Location of the works**
	As per the sites in 1.2. The site is situated at Die Stroom Picnic Site in Bontebok National Park, Western Cape Province.
1.5	**Temporary works**
	Nil
2	**DRAWINGS**
2.1	As per drawing list
3	**PROCUREMENT**
3.1	**Subcontracting**
3.1.1	**Scope of mandatory subcontractor work**
	N/A
3.1.2	**Preferred subcontracting / suppliers** N/A
3.1.3	**Subcontracting procedures** N/A
4	**CONSTRUCTION**
4.1	**Applicable SANS 2001 standards for construction works**

	SANS 10142-1:2020 Edition 3 SANS 10407:2016 Edition 2.1 SABS 0400 SANS 1200 All other SANS standards that may become relevant with a specific project.
4.2	**Applicable national and international standards** SANS SABS
4.3	**Certification by recognised bodies** All certification must be submitted to Technical Services of SANParks for approval
4.4	**Agreement certificates** Alternative materials with Agreement Certificates must be submitted to Technical Services SANParks for approval prior to work commencing
4.5	**Plant materials and equipment supplied by the employer** Nil
4.6	**Services and facilities provided by the employer** • Water: Option C as hereinafter defined • Electricity: Option C as hereinafter defined • Telecommunication services: All communication must be provided by contractor. • Ablution facilities: No Ablution facilities available. Chemical toilets to be provided by contractor. • Medical / first aid facilities: to be provided by contractor • Fire protection services: to be provided by contractor for area of the works
4.7	**Other facilities and services** All temporary facilities to be provided by contractor
5	**MANAGEMENT OF THE WORKS**
5.1	**Applicable SANS 1921 standards** The following parts of SANS 1921 Construction works standards and associated specification data are applicable to the works: 1) SANS 1921 – 1: General engineering and construction works 2) SANS 1921 – 5: Earthworks activities which are to be performed by hand The abovementioned South African National Standards make several references to the Specification Data for data, provisions and variations that make these standards applicable to this contract. The Specification Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and these standards. Each item of Specification Data given below is cross-referenced to the clause in the standard to which it mainly applies. The associated Specification Data is as follows:

SANS 1921-1, General engineering and construction works	
Clause	**Specification data**
Essential data	
4.1.7	There are no requirements for drawings, information and calculations for which the contractor is responsible

Contractor	Witness for Contractor	Employer	Witness for Employer

	4.2.1	The responsibility strategy assigned to the contractor for the works is A.
	4.2.2	The structural engineer is SANParks Engineers.
	4.3.1	The planning, programme and method statements are to comply with the following: 1. Immediately on award of the Contract and prior to commencement on site, the Contractor, in conjunction with the Principal Agent, shall agree the working Programme covering the first month of the Construction Period. During the first month of the Construction Period the Contractor shall prepare and draw up in conjunction with the Principal Agent the Programme for the balance of the Works in accordance with the conditions stated below. 2. The Principal Agent shall have the right to modify such Programme to accommodate changes necessary in his opinion for coordinating the project as a whole. Any cost implications relating to such modification shall be dealt with in accordance with the provisions of the Agreement. 3. This Programme shall be drawn up in accordance with the dates given herein for possession, sectional completion and Practical Completion and shall be in sufficient and approved detail to ensure control over the work. 4. Notwithstanding the fact that the Programme has been prepared in conjunction with the Principal Agent, the Contractor shall be responsible at all times for maintaining the accuracy, validity and reasonableness of the Programme, and the implementation thereof. 5. The Programme shall be compiled based on the Critical Path Method of programming and the critical activities are to be clearly highlighted. It shall be compiled in such a way that logic is not constrained by resource limitations unless specifically agreed otherwise by the Principal Agent. The Programme will be processed on the Principal Agents system and the Contractor shall provide all the co-operation necessary to achieve this. 6. Documentation will not be available in complete detail at the commencement stage. However the Contractor, in conjunction with the Principal Agent, shall plan the Works on provisional information, to an agreed level of detail relating to the level of detailed information available and with sufficient scope to include future detail without disrupting the basic logic as initially agreed. The quantities contained in this document are provisional and shall be utilized as a guide only for the drawing up of the Programme. Where assumptions are made in regard to programming aspects, such assumptions shall be agreed by the Contractor and the Principal Agent, and suitably recorded in the Programme. 7. Should circumstances change to the extent where the Contractor is of the opinion that changes to the Programme are required, then the Contractor shall make written request to the Principal Agent for such changes, clearly identifying the reasons for requiring such change. The Contractor and Principal Agent shall thereafter agree such changes, if any. Should the Principal Agent be of the opinion that the Programme requires revisions, and notwithstanding the fact that a request for such revision has not been received from the Contractor, the Principal Agent shall be entitled to instruct the Contractor to revise the Programme accordingly, unless the Contractor can submit reasonable justification for not doing so. Any acceleration and/or special measures sanctioned by the Principal Agent together with associated effects shall be incorporated in a revision to the Programme. 8. The Contractor and the Principal Agent shall, at regular intervals not exceeding one month, agree the state of progress of the Works relative to the latest agreed revision of the Programme. Such agreement shall include the recording of actual commencement and completion dates for each activity and shall constitute the official record of the progress at such point in time. 9. In addition to and based on the Programme systems and format dictated above, the Contractor shall devise Detailed Working Programmes. These shall be drawn up on a regular basis (at least monthly), to the satisfaction of the Principal Agent. Such Working Programmes shall at all times relate to the constraints of the current Programme. 10. Notwithstanding anything to the contrary contained herein the Principal Agent at all times reserves the right to direct the order in which the various parts of the Contract are to be executed. The Contractor shall give priority to any individual section or portion of the Works that, in the opinion of the Principal Agent, requires to be expedited. 11. Should the Contractor and/or Principal Agent be of the opinion that such instruction warrants a revision to the Programme, then the provisions of 7 above shall apply. 12. Should it appear, in the Principal Agent's opinion, that work in any area is not being executed in accordance with the requirements of the Programme, the Contractor shall provide additional

	manpower and resources and shall work additional overtime and do everything else required to bring the work back to Programme to the satisfaction of the Principal Agent.
4.3.2	1. The Contractor is required to identify and provide the employer with material procurement and construction lead in periods for the following aspects: 1.1 Building Information 1.1.1 Foundation Layouts (Setting Out) 1.1.2 Reinforcing Schedules 1.1.3 Concrete Layouts (including pile caps, ground beams, columns, beams, stairs, etc) 1.1.4 Concrete Details 1.1.5 Paint Specifications 1.1.6 Metal Work etc. 2. The Contractor is further required to identify and provide the employer with lead in periods required for the appointment of anticipated sub-contractors for: 2.1 Sundry Fittings 2.2 Sundry Metalwork 2.3 Sundry Builder's Work
4.3.3	The notice period for inspection is 14 days.
4.7.3	Blasting operations will not be required.
4.9.3	Specific requirements of the employer are described in the scope of work.
4.12.2	The contractor will provide representative samples of materials, workmanship and finishes as the Principal Agent may require. Upon request of Principal Agent
4.14.1	Contractor will not be allowed to set up accommodation on site. Contractor to provide own accommodation and transport of workers outside of the park
4.14.3	The office accommodation, equipment, accommodation for site meetings and other facilities for use by the employer and his agents are: Nil
4.14.5	The Contractor is required to provide latrine and ablution facilities.
4.14.6	A Construction sign board and necessary H&S sign/notice boards are required. All signboards need to be approved / accepted by the Employer prior to erection.
4.17.1	The requirements for the termination, diversion or maintenance of existing services are: Nil
4.17.3	Services which are known will be pointed / are to be pointed out on site by the Employer.
4.17.4	The requirements for detection apparatus are: No as-built drawings exist
4.18	The following standards and specifications shall be in addition to the provisions of 4.18: 1. The Occupational Health and Safety Act 85 of 1993 and its Construction Regulations 2014. Said act and regulations are not attached. Health and Safety Specifications for SANParks – Construction of a swimming pool at Die Stroom in Bontebok National Park. (Said Specification is attached as Annexure A: Health and Safety Specifications for South African National Parks)
4.19	The following standards and specifications shall be in addition to the provisions of 4.19: 1. The *Environmental Management Programme (EMPr) for the Construction of a Swimming Pool at Die Stroom in Bontebok National Park, Western Cape Province.* Said specification is attached as Annexure B of the Scope of Works.
4.22	The works to be undertaken by nominated and selected subcontractors comprise: Nil

Variations	
1	Replace 4.1.9 with the following: All rights of publication of articles in the media, together with any advertising relating to, or in any way connected with this project shall vest in the Employer. The Contractor together with his Subcontractors shall not, without the written consent of the Employer, cause any statement or advertisement to be printed, screened or aired by the media.
2	Replace 4.9.3 with the following: Trees and shrubs shall not be removed, cut back or disturbed in any way without the consent of the principal agent. Specific requirements of the employer are described in the Scope Of Works.
3	Replace the heading of 4.12 with the following: **"4.12 Materials, samples, fabrication drawings and overloading."**
4	Include the following after 4.1.2.5 **"4.12.6 Overloading"** The Contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the Works or temporary works. Any damage caused to the Works by overloading shall be made good by the Contractor at his sole expense."
Additional Clauses	
1	Prime Cost Amounts All prime cost items are for material and goods delivered to site. The contract documents shall make provision for the contractor to separately price for overheads and profit and for taking delivery, unloading, checking against invoices and/or delivery notes, getting in, unpacking, storing, hoisting and fixing of such material and goods. The contractor shall check the quantity and condition of all materials and goods on taking delivery as any material and goods subsequently found missing or damaged shall be replaced at the contractor's expense.
2	Cash flow predictions The contractor shall provide all reasonable assistance to the principal agent in the preparation of cash flow projections of claims for payment certificates. Cash flow predictions will be updated by the Contractor on monthly basis and will be submitted to Employer together with its progress claims. The projections shall be based on the programme. The cooperation of the contractor in terms of this item shall not prejudice his right to receive payment in terms of the agreement.
3	Protection/isolation of existing /sectional occupied works The contractor shall provide all reasonable temporary measures to protect/isolate the existing and/or sections of the occupied works and remove such measures on completion.
4	Security of the works The contractor shall take all appropriate measures for general security of the works.
5	Minimum requirements for construction equipment Construction equipment must comply with all relevant legal requirements and must be adequate to execute the works.
6	Deposits and fees The contractor shall pay all deposits and fees and charges according to law, regulations or bylaws of any local or other authorities that relate to hoardings, the use of pavements, street encroachment or crossings, permission for the suspension of parking facilities and the like.
7	Water and electricity The Employer does not warrant that any water supply or electricity supply that may exist is adequate for the proper execution of the works. The responsibility strategies in terms of the tabulation below that will apply to the contract are: a) Water : **C** b) Electricity : **C**

		Service	**Option**		
			A **Contractor responsibility**	**B** **Employer responsibility**	**C**
		Water	The Contractor is to provide, and remove and make good upon completion, all the necessary temporary plumbing connections and purchase water from the local authority for the works at his own cost.	The Contractor shall make, and upon completion remove, all the necessary connections to the Employer's water supply at designated points and make use of water free of charge for construction purposes only.	The Contractor shall make, and upon completion remove, all the necessary connections and water meters to the Employer's water supply at designated points and be responsible for costs associated with all water consumed.
		Electricity	The Contractor is to provide, and remove and make good upon completion, all the necessary temporary electrical connections and installations and purchase electricity form the local authority / ESKOM for the works at his own cost.	The Contractor is to provide, and remove and make good upon completion, all the necessary temporary electrical connections and installations and purchase electricity form the local authority / ESKOM for the works at his own cost.	The Contractor shall make, and upon completion remove, all the necessary connections and meters to the Employer's electrical supply and be responsible for costs associated with all electricity consumed.

5.2.1

1. **Water:** Will be available for construction purposes in the park, but usage must be arranged through and approved by the local representatives of SANParks. Transport and storage of water for construction and personnel will be for the account of the contractor.
   (See also JBCC doc 28 – Scope of work [Additional clauses – 7])
2. **Electricity:** Electricity supply is available for construction purposes in the park, but usage must be arranged through and approved by the local representatives of SANParks
3. **Accommodation:** Accommodation is not available in the park. Contractor to establish own sites in the Park on demarcated sites to be identified and to be fenced to the required park standard.
4. **Telecommunication services:** to be provided by contractor where available. Cell phone signal available on site and no landline available.
5. **Ablution facilities**: No Ablution facilities available – contractor to provide in accordance with OHS Act
6. **Medical / first aid facilities**: To be provided by contractor including transport to medical facilities outside the park
7. **Fire protection services**: To be provided by contractor
8. **Solid waste:** Contractor responsible for solid waste in accordance with the Kgalagadi waste management programme.
9. **Transport:** Contractor to provide own transport of workers in accordance with Bontebok National Park's Code of Conduct regarding traffic rules, speed limits, traveling times, etc. Contractor vehicles to be clearly marked.

5.2.2 **Code of Conduct for working in the SANParks**

The document *Code of Conduct for Implementing a SANParks Project* is applicable to this contract, and is attached as Annexure C.

5.3 **Unauthorised Persons On Site**

The Contractor shall at all times strictly exclude all unauthorised persons from the Works.

No workmen or labourers are to be allowed under any circumstances to sleep or deposit any kit on the premises. Unless a designated enclosed and secure camp site for accommodating the Contractors employees has been allocated and approved by the Park Officials.

Furthermore, the Contractor shall take all measures necessary to ensure that no workmen are allowed into the building at any time after Practical Completion without the specific permission of the Principal Agent.

5.4	**Quality plans and control** Quality inspections will be held at regular intervals. The contractor must notify the Principal Agent of any closure of works which must be inspected to confirm quality.
5.5	**Accommodation of traffic on public roads occupied by the contractor** N/A
5.6	**Other contractors on site** N/A
5.7	**Testing, completion, commissioning and correction of defects** All testing and certification of the works will be done in accordance with the applicable governing regulations and the procedures for the following will be clarified at the site meeting: • Use of the works before completion has been certified; • Handover / beneficial occupation; • Pre-commissioning and commissioning of the works or part thereof, before and after completion; • Certifying completion; • Start-up; operation of the works; special arrangements associated with operating plant and machinery, etc.; • Training and technology transfer; • Take over; • Operational maintenance (if any), after completion; • Work which contractors may carry out after completion has been certified (in addition to correcting defects); and • Arranging access for correction of defects
5.7.1	**Product warrantees, guarantees and maintenance instructions/manuals** The Contractor shall obtain and hand over to the Principal Agent on Practical Completion all relevant product warrantees and guarantees, any operating and maintenance instruction manuals, data or instructions required by the Principal Agent or provided by manufacturers, suppliers or Subcontractors. The Contractor shall ensure that all warranties and guarantees received are fully ceded to the Employer on Works Completion, failing which the release of Construction Guarantee/Retention will be withheld until this is satisfactorily completed.
5.7.2	**Security at completion** At completion, the Contractor shall leave the Works secure with all accesses locked. The Contractor shall account for and hand over to the Principal Agent all keys, properly labelled with an itemised schedule to be signed by the Principal Agent as receipt.
5.8	**Recording of weather** A record of rain and all other inclement weather should be kept on site.
5.9	**Format of communications** All site instructions should be in writing on the prescribed format and will not be an approved site instruction until the Principal Agent has signed it. All notifications of inspections and all requests for information should be in writing.
5.9.1	**Site Instructions** Contract Instructions issued on Site are to be recorded by the Principal Agent in a Site Instruction Book which will be issued by the Principal Agent and which shall be maintained on Site. Only Site Instructions issued in such book will be effected by the contractor.
5.10	**Management meetings** The schedule for the site meetings will be agreed upon at the site hand-over meeting.

5.10.1	**Progress Meetings** The Principal agent and contractor shall hold meetings related to the progress of the works at regular intervals and at such time as may be necessary. Subcontractors shall not be present at progress meetings unless specifically requested by the contractor or principal agent. The principal agent shall record and distribute the minutes of the meetings.
5.10.2	**Technical meetings** At the instance of the principal agent or the contractor meetings shall be held to deal with technical and subcontractor's coordination matters.
5.11	**Forms for contract administration** All contract administration procedures will be agreed upon at the site hand-over meeting.
5.12	**Electronic payments** The contractor must be registered with the National Treasury's Central Supplier Database and provide the registration information in order to enable SANParks to pay him or her electronically.
5.13	**Daily records** Daily records must be kept of all workers employed on the site as per the attached Attendance Register – Annexure D. The attendance register must be submitted to the project manager together with the monthly certificates. The number of workers and person days should be calculated on these registers on a progressive monthly basis.
5.14	**Bonds and guarantees** All guarantees must be delivered to the SANParks Principal Agent.
5.15	**Payment certificates** The Principal Agent shall inspect all work and certify work done on a monthly basis. No payment shall be made for material on site. Material on site must be ceded to the employer and proof of payment to the supplier given to the employer before any payment of such material on site will be made.
5.16	**Permits** N/A
5.17	**Proof of compliance with the law** SANParks could request the contractor for proof that all aspects of South African Law are complied with.
5.18	**Insurance provided by the employer** N/A

ANNEXES	
A	Health and Safety Specifications for SANParks
B	DRAFT Environmental Management Programme (EMPr) for THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK, Western Cape Province**.**
C	Code of Conduct for Working in a National Park

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

C3.2: Drawings

Drawing Description	**Drawing number**
General Site Plan	001
Ablution Facility Plan	100
General Swimming Pool Section	101
Ablution Elevations	200
Door Schedule	500
Ironmongery Schedule	501
Window Schedule	502
Sanitaryware Schedule	503
Finishes Schedule	504
Trenching for Sewer and Water pipelines	GEN/300/01/1/00
Trenching for Sewer & Water pipelines & Electrical Cable	GEN/300/01/2/00
Rodding Eye detail	GEN-203/01/1/00
Manhole detail	GEN/202/01/1/00
Septic Tank Installation	GEN/200/04/1/01
Soak-Away detail	GEN/201/02/1/01
House Connection	GEN/103/02/1/00
Valves - Gate Valve with Beltoby	GEN-102/01/1/00

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

C3.3: Specifications

Item	Specification
FOUNDATIONS/ FOOTINGS/FLOORS & RAMPS	15MPa/19mm unreinforced concrete surface blinding under footings and bases. Reinforced Concrete strength 25MPa/19mm strip footings, bases, surface beds & ramps
FLOORS	25mm Screed on 85mm thick concrete slab laid on 375micron DPC.
WALLS	Walls external 230mm and 115mm (internal). Built with SABS approved clay bricks
LINTOLS	Pre-cast lintols to all openings with a minimum of three continuous forces of brickforce.
ROOF COVERING	0.6 mm Corrugated iron roof sheeting at 30º pitches on timber battens and prefabricated timber trusses for houses, laundry, ablution & kitchen, office store and ablution, shop Nutec big six roof sheeting for wall cladding at store.
PERGOLA'S	100-150mm CCA treated poles with 25-30mm CCA treated laths
CEILINGS	6mm Nutec ceilings with 76mm coved cornice on 38 x 38mm brandering.
WINDOWS & DOORS	Steel windows and door frames to be used. Internal doors to be hardwood framed, ledged, braced & battened. Solid hardwood external doors. Glazing of doors & windows to be according to SABS 0400.
PLUMBING AND DRAINAGE	Plumbing works according to SABS0400 & approved plumber.
SEWERAGE	All sewer pipes to be 100mm PvC at min 1:60 fall. All sewer pipes running underneath slabs to be encased in 300mm concrete. At all locations, septic tank, connection and pumps into existing sewer reticulation
ELECTRICAL	Electrical reticulation as per plan and fittings approved by principal agent. Distribution boards, light switches, plug points, solar geysers and sewer pumps.
TILING	200x200x6mm Samca white glazed wall tiles in kitchen, shower & splash backs. 50x50mm Mosaic sheets on shower floors. 300x300x8mm CTM Touchstone Ivory ceramic floor tiles on all floors.
PAINTING	External & internal walls painting, steel frames of doors & windows
PAVING	Block paving SA 80mm interlocking paving blocks on river sand with sand-cement mixture swept into joints

STEEL WORKS	Steel windows and pressed door frames as per specification. Galvanised Chromadek industrial type roler shutter doors. 0.58mm IBR 686 Chromadek cladded sliding doors on 100x50x20x3mm lipped steel frame with Hillaldam Rollaway 500 rollers and bottom steel track 60x60x8mm angle with wheels as per specification.
RAINWATER GUTTERS	100X200X3mm Galvanised steel gutters complete with down let pipes.

SERVICES SPECIFICATIONS FOR THE NEW SWIMMING POOL DEVELOPMENT AT DIE STROOM PICNIC IN BONTEBOK NATIONAL PARK

SPECIFICATIONS FOR SEWAGE-, WATER SUPPLY SERVICES

1. INTRODUCTION

A new Swimming pool development will be constructed at Die Stroom in the Bontebok National Park. The development will consist of a new Swimming Pool, ablutions, change rooms and a services room.

New services need to be installed for this development.

SEWERAGE: All sewerage and grey water effluent from the Ablutions, will be diverted to a new septic tank from there the grey water will be pumped to the existing Pump Sump .

The new sewage system will consist of the Supply and Installation of:

(i) new 110mm Ø uPVC pipeline from each building and between manholes up to the Septic Tanks
(ii) new Pump Sump chamber with Pumps and 63mm Pump Line
(iii) Construction of new Septic tank and additional Soak-aways.
(iv) Storage tank for swimming pool back-wash water

WATER: Municipal potable water is available on site.

The new water reticulation system will consist of the Supply and Installation of:

(i) new 50mm Ø HDPE class 12 main pipeline from the take-off point to the new development.
(ii) new House connections with water meter needs to be installed at the new development.
(iii) Installation of isolation valves at take-off point to isolate the various facilities.
(iv) New water meter and logger.

ROADS: The Standard Specifications for Road and Bridge Works for State Road Authorities (1998 Edition) as prepared by the Committee of Land Transport Officials (**COLTO**) are applicable to this Contract.

ELECTRICITY: Refer to Electrical Specification.

2. SERVICES

The scope for the services to be installed for the Swimming pool Development at Die Stroom is set out below. This specification needs to be read in conjunction with the relevant Project Drawings.

2.1 SEWERAGE

The installation of the gravity sewer system is to be done according to the following specifications and requirements:

2.1.1 General

- All excavations to be backfilled and made good.
- All pipes, material and equipment as well as all installations and construction work executed to comply with National Building Regulations and SANS.

2.1.2 Gullies

All gully installations should comply with the following requirements:

- Gullies on the outside of the facility to be constructed with bricks and smooth plaster with a cast iron frame and lid.
- Check position of gully in order accommodate wastewater outlets of building.
- Excavate by hand for new gully and store excavated material on site for re-use.
- Supply and install 110mm Ø uPVC "P" Trap with gully head and cast-iron grate.
- Connect uPVC "P" Trap to new 110mm Ø uPVC sewer line on 1:60 fall.
- Backfill with excavated material and compact.

- **Gulley detail –**

  - Quantity: 4

2.1.3 Sewage Pipelines (Gravity Feed and Pressurised)

All underground sewage pipelines need to be installed according to the following requirements and specifications:

- All underground gravity sewer pipelines to be of 110mm uPVC, installed at a preferred slope of 1:60.
- Pipes to be installed in a trench, with a minimum allowed cover of 600mm below the natural and final ground level – see drawing no. ***BNP-7/5/1/2/1***

  - 110mm Ø uPVC Class 34 Main Line 0.0m – 1.0m : ±15m
  - 110mm uPVC Class 34 House connections 0.0m – 1.0m : ±15m
  - 63mm Ø HDPE class 10 pump line 0.0m – 1.0m : ±170m

Bedding for sewer pipelines

- All pipes to be installed on a 100mm Class C or selected stone free bedding if intermediate, rock or clay material is present at bottom of trench - see drawing no. ***GEN/300/01/1/00*.**

  - Bedding for 110mm uPVC pipe **: 3m³**
  - Bedding for 63mm HDPE pipe **: 10m³**

2.1.3.1 Blanket for sewer pipelines

- All pipes to be covered with a 100mm Class C blanket or selected stone free selected material - see drawing no. ***GEN/300/01/1/00*.**

  - Blanket for 110mm uPVC pipe **: 6m³**
  - Blanket for 63mm HDPE pipe **: 20m³**

2.1.3.2 Backfilling

All backfilling done need to comply with the following requirements and specifications:

- All backfilling in road reserves to be compacted in 100 mm layers up to natural ground level with 93% Mod AASTHO.
- All backfill in other trenches to be compacted in 200mm layers up to natural ground level with 93% Mod AASTHO.
- Where prescribed by the Engineer all surplus material must be neatly piled over the real trench width to a height not more than 150 mm higher than the adjoining level.
- All other access material smaller than 50mm to be to be levelled around the edges of the trench.
- All other access material bigger than 50mm to be removed from site.

  - Backfill for 110mm uPVC pipe **: 10m³**
  - Backfill for 63mm HDPE pipe **: 30m³**

2.1.4 **Rodding Eyes** (Cleaning Eyes – CE)

All rodding eyes need to be installed according to the following requirements and specifications – see drawing no. ***GEN/203/01/1/00***:

- Rodding Eyes shall be constructed according to SANS and National Building Regulations.

- Rodding Eyes shall be provided at all horizontal changes in direction, at all pipe junctions and end points around and in the vicinity of a new building / structure.
- Rodding Eyes will only be permitted on a main sewer pipeline if indicated on the drawing or approved by SANParks.
- All “Rodding Eyes” to be of Cast Iron (CI) or similar (no PVC), placed on a well compacted sand base and casted into a 450mm x 450mm x 100mm deep concrete base (1:2:4).

- **Rodding Eye detail –**
  - Ablution facility: 3

2.1.5 Manholes

All manholes need to be constructed according to the following requirements and specifications – see drawings no. ***GEN/202/01/1/00***.

- Manholes to be provided as assembly points for sewer pipelines and junctions on main sewer pipelines.
- Manholes to be constructed from bricks with concrete base and top slabs (see drawing for detail on reinforcing).
- Low alkali sulphate resistant cement to SABS 471 shall be used for all concrete, mortar or screeding.
- All manholes to be provided with proper benching with a smooth steel trowel finish at angles not less than 1:6 (15º) and not exceeding 1:3 (30º).
- Plaster all inside and visible surfaces - inside and top of access chambers including manhole C&F’s.
- All manholes to be plastered on the inside (minimum 13mm thick) with a smooth wooden trowel finish.
- All manholes shall be water tight.
- All manholes deeper than 1.5m to be fitted with plastic type step irons.
- Maximum distance between manholes not to exceed 100m, unless otherwise specified.

***Note** : Manholes build in water drenched areas should also be plastered on the outside and water proofed.*

- **Manhole Detail -**
  - Position of Manholes : Drawing: ***BNP-7/5/1/2/1***
  - Quantity - 0.0m – 1.0m : 1

2.1.6 Septic Tank

A new “brick build” septic tank needs to be installed to accommodate the effluent and sewage from the different facilities. The position of the Septic Tank is indicated on drawing no. ***BNP-/7/5/1/2/1.***

The installation needs to accommodate the following requirements and specifications–

- Level of Septic Tank – top of effluent level to be 50mm below the invert level of the main sewage pipeline. This level will be guided by the slope of the gravity feed sewage pipeline.
- Level bottom of excavation and compact suitable in-situ or imported material.
- Provide a 150mm sand or selected material bedding below Septic Tank in clay or unsuitable in-situ material areas.
- Tank needs to be filled with water prior to any backfilling can take place.
- Selected backfill from in-situ or imported material for sides need to be stabilized with 5% cement.
- Backfill for all sides shall be hand compacted in 150mm layers.
- All concrete to be 20 MPa or higher.
- Concrete and Brickwork to SANS Standards.
- All excavations to be backfilled and made good.

Septic Tank for the New Development -
Supply, install and commission two new “**brick build**” **Septic Tanks** – see drawing no. ***GEN/200/01/1 rev 01***.

- **Septic Tank 01 detail –**
  - Length (L) : 6.0m
  - Width (W) : 1.8m
  - Depth (D) : 1.5m

NOTE : *Above dimensions are inside measurements only and related to the effluent volume of total tank. Inside of Septic Tank shall be plastered with a waterproof plaster containing Penetron concrete AdMix.*

2.1.7 Pump Sump

A new “brick build” septic tank needs to be installed to accommodate the effluent and sewage

Construct a new “pump sump” behind the “brick build” septic tank and connect the two items with a 110mm uPVC pipe. The level of the “pump sump” will be determined by the level of the septic tank and gravity sewage line - see drawing no. ***GEN/205/01/1/00*** and ***GEN/205/02/1/00***.

- **Pump Sump detail -**
  - Length (L) : 1.5m
  - Width (W) : 1.5m
  - Position of Sump: : 0.5m to 1.0m behind septic tank

- **Excavation detail -**
  - Depth : ± 2.4m max. (tank size will determine)
  - Excavation volume : ±10m³ (2.0 x 2.0 x 2.6m)

2.1.8 Sewer Pumps

Small sewer pumps are required to pump the “black water” or effluent from the new pump sump (at the Swimming pool development) into the existing Pump Sump at Die Stroom. The following sewer pumps are required –

2.1.8.1 Sewer Pump detail

The following pump and related equipment is required to pump the black water from the “pump sump” to the soak-away and need to comply with the following requirements and specifications –

- **Grundfos Unilift AP35B.50.08.3.V Pump**
  - Product no. : 96004577
  - Power input : 1.25 kW
  - Voltage : 3 x 400 Volt

- **Grundfos LCD 108 controller**
  - Product no. : 96841945
  - 2 Pump Controller : Yes
  - Automatic pump change over : Yes
  - Water hammer protection : Yes
  - Liquid level indicating : Yes
  - Alarm indicating : Yes

- **Level Switch complete for 4 switches**
  - Product no. : 62500015
  - Fits on 1 pump or 2 pump Controller : Yes
  - Alarm activating : Yes
  - Length of lead-out cable : 5m

- **Additional requirements**
  - Electrician needs to terminate lead out cable and "levelling system" to LCD Controller, test and certify the sewer pump installation.
  - LCD Controller needs to be secured in a Kiosk / DB supplied by others.
  - 4m x 10mm Stainless Steel chain to secure pump to the top of the access chamber.
  - Fittings, quick release couplings, flexible pipes complete with all sundries to connect to a 50/6 HDPE pipeline.

2.1.9 Soak-Away

Soak-aways are utilized to disperse of only "black water". The design of the soak-aways has to be done according to test results obtained from the percolation test (*Percolation Tests will be carried out by the main contractor once appointed – SANS 10400A*).
The installation of the soak-aways needs to accommodate the following requirements and specifications –

- Soak-aways to be constructed of "KayTech Infiltrator Quick 4 High Capacity Chamber Systems" (or similar).
- Soak-aways to be constructed according to installation procedures by manufacturer and SANParks drawing no. ***GEN/201/02/1/01***.
- All soak-aways to be provided with two rodding eyes for cleaning purposes.
- Units to be installed on one layer of cement blocks (190mm x 190mm x 390mm), turned on side for larger storage capacity.

- **Soak-Away detail –**
  - Position of soak away : see Drawing no. ***BNP-7/5/1/2/1***
  - Length of soak away : Percolation Test Results shall determine amount of Infiltrator Chambers required
  - Excavation depth : 1.2m
  - Excavation width : 1.0m

2.2 WATER

Municipal potable water is available at Die Stroom.
A new 50mm/12 HDPE water distribution pipeline with 25/10 HDPE take-offs to each of the new

Swimming Pool Development, needs to be installed. All new water supply pipelines, sewer pipelines and electrical cables needs to be, as far as possible, installed within the same trench and will follow the same route where possible.

The installation of the water supply system is to be done according to the following specifications and requirements:

2.2.1 New distribution pipelines

Supply, install and commission a new 50/12 HDPE water ring-main pipeline, including all Plasson couplings, from the new tanks on tank stand to the new housing units as per SABS 1200 specifications – refer to detail below and drawing no's ***BNP-7/5/1/2/1*** and ***GEN/300/01/2/00*** for installation specifications:

- Pipes to be installed in a trench, with a minimum cover of 600mm below natural and final ground level.
- All pipes to be installed on a 100mm Class C bedding or selected "stone free" bedding if intermediate, rock or clay material is present at the bottom of the trench.
- All pipes to be covered with a 300mm Class C blanket or selected "stone free" material and compacted to 95% Mod AASTHO in 300mm layers.
- Water pipeline to be pressure tested according to SANS 1200 specification.

NOTE: *If in-situ material at the bottom of the trench are equal to "Class C Bedding", no bedding material is required. Bottom of trench still need to comply with compaction requirements. If excavated material of trench are equal to "Class C Blanket", no imported material is required for the "blanket".*

➢ **Main Distribution ring-main Pipelines** *(from T-Junction)*

- 50/12 HDPE (main supply from T-Junction) : 130m

2.2.2 House connections

A pipe connection from the main pipeline to the house needs to be done in order to supply the chalet with potable water.

Supply install and commission High Pressure "Type 2" House Connections with Water Meters - refer to drawing no. ***GEN/103/02/1/00*** installation detail.

➢ **Connections**

- On 50/12 HDPE main distribution pipelines : 1
- Length of House Connections : 20m

2.2.3 Valves

The following valve related items are required for this project and need to accommodate the following requirements and specifications. No sundries such as bolts, nuts and rubber flange packings has been listed, but needs to be priced with the required items listed.

2.2.3.1 Gate Valves

Supply, install and commission RSV Gate Valves with Cap Top, Flanged, Table 10, 16 Bar rated in positions as indicated on layout drawings. Refer to drawing no. ***GEN/102/01/1/00*** – "Belltoby Valve Box on single Gate Valve" for installation specifications.

- **Gate Valves**

  On a 50mm HDPE supply pipeline

  - 50mm valve : 3

  Install with :

  - 50mm x 2 Plasson Flange Adaptor : 6
  - Position of Gate Vales : see Drawing no. ***BNP-7/5/1/2/1***

2.2.4 Storage Tanks

Additional storage facility needs to be constructed at the position indicated on drawing no. ***BNP-7/5/1/2/1,*** in order to create a retention facility for the swimming pool backwash water water to be available to the Housing units.

Supply, install and commission four new 10,000L storage tanks on reinforced concrete slab in positions as indicated on layout drawing no. ***BNP-7/5/1/2/1***. Refer to drawing no. ***GEN/102/01/2/00*** for installation specifications –

- **Storage Tanks**
  - 1x 10,000 L Storage Tanks on reinforced concrete slab *(Park to specify colour)*

- **Pipe Work & Valves on Storage Tanks**
  - Top inlet and overflow
  - Tank outlet to be linked with 63mm Class 9 uPVC pipe that will gravity feed to the new Pump Sump.

    - 63mm Ø Class 9 uPVC pipe (allowance) :±30m
    - 63mm Ø M/F Brass Ball Valve (shut off valve on tank outlet) : 2
    - 63mm Ø F/F Brass Ball Valve (Main shut off & Scour valve) : 1
    - 63mm x 63mm uPVC Tee : 1
    - 63mm uPVC Bends : 4

3. ROADS

The Standard Specifications for Road and Bridge Works for State Road Authorities (1998 Edition) as prepared by the Committee of Land Transport Officials (**COLTO**) are applicable to this Contract.

4. ELECTRICAL RETICULATION

4.1 ELECTRICAL SPECIFICATION

4.1.2 Transformer and load CB

The current Eskom power supply is 50KVA.3k3 step down to 400V, the current load will be adequate for the development, providing 3 phase -80 Main breaker at transformer and 63A 3 phase at pool precinct Main DB and 40 A at sub-DB for ablution single phase.

The reticulation from the transformer requires:

4.1.2.1 Secure and acceptable LV earthing

4.1.2.2 Main disconnector for the project of 100A three phase mould breaker with shunt coil and phase failure equipment with CT coil operation / if required separate enclosure steel standard to house the equipment IP 67 rated flush mounted to the trans former LV side, colour green [olive]

4.1.2.3 LV earthing measuring to compliance

4.1.3 Routing of the reticulation

Current infrastructure will be upgraded to accommodate the area selected. Cables will be installed next to the. Road in trenches supplying a DB at the pool /pump house [Main DB] as listed.

Contusing reticulation to the ablution facility and supply power to walkways and parking /pool areas [Bollards]. Bollards require hight of 600mm for the lights low intensity lighting fully installed on base with proper foundation.

4.1.4 Cable and trenching

- The required trenching at a cable depth of 900mm with relevant danger tape accompanying the cable at 600mm.and BCE wire relevant to the cable reticulation [no cable joints allowed in this reticulation [LV].
- Back fill and compaction -refer to civils methodology.

BLACK PVC/SWA/PVC/Cu 600/1000V Multicore cables to SANS 1507 (TYPE P1)

- All cables to enter on long bend radius elbows and protected up to 1m above ground for animal interference

- All cable end to be glandes on gland plates and all armour to be included as secondary earthing on the glands

"Gland, terminate and label the following BLACK PVC/SWA/PVC/Cu 600/1,000V Multicore cables using Pratley CW or equal approved gland (Nickel plated brass gland and PVC shrouds)".

- Separate BCEW to be installed alongside the cable and not as a core inside the SWA cable [isolated]
- Trenching to be at least min 900m but will run concurrent with the civil services depth

4.1.5 DB Boards Main and Sub DB board and cabling

The main reticulation from the transformer LV to terminate into the pool room for the pump and equipment. Out of the Main DB it will reticulate to the Ablution facility out wall mounted Sub DB that will provide lights for the ablution and outer lights [garden pool and walkways].

4.1.5.1 Distribution boards will consist

- Standard 3 tier wall mounted box rated at least IP45 [dust proof]
- Main disconnector of 80A [3]three phase breaker
- Sub Distribution board main breaker to be 63A [3]three phases
- Sub breaker for ablution and internal breakers not rated lower than 6KA for outer and sub-DB board
- Type SPD protection Combines Type-1 and Type-2 in main control boxes
- Earthing and bonding to be done in comply as per SANS 10142-1 regulations and standards
- All sub equipment reticulated from the distribution box will mainly be single phase and recommended control devices approved – All earth-leakage circuit breaker (ELCB) to be of overload type.

4.1.6 Type of cable to be installed

BLACK PVC/SWA/PVC/Cu 600/1000V Multicore cables to SANS 1507 (TYPE P1)

1. 25mm² - 4 core SWA - BCE wire – 16 mm²
2. 16mm² - 3 core SWA - BCE wire – 6 mm²
3. 6-4mm² - 3 core SWA/ Norflex Suffix - BCE wire – 2.5 mm² for outer lights and parking area
4. Danger tape to be installed at 500mm below surface above the cable [broad PVC type]

4.1.7 Outer lights

4.1.7.1 Bollard's pool and walkway lights mounted lights will be along the roadside at 10-20m intervals 4.1.7.2 Connected to day night switch and override switch

4.1.7.2 Bollards type

- Model: Montague 600 Bollard Light

- Lumens: 600 lumens of illumination
- Base Material: Durable outdoor-ready polycarbonate base
- Cover: Clear PC cover
- IP Rating: IP44 (suitable for outdoor use)
- Bulb Type: Requires 1 x E27 bulb (not included)
- Base Diameter: 155mm
- Base plate on cement plinth

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

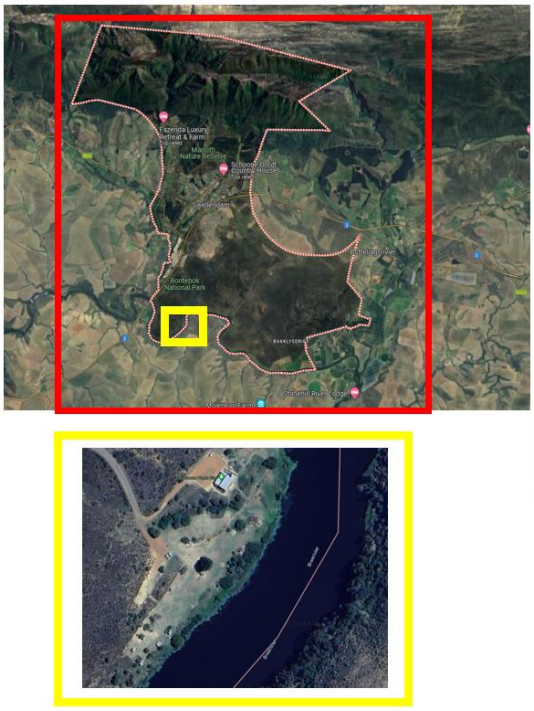
CONTRACT NO: CI-GK-0127

Part C4: Site Information

Bontebok National Park is located in Swellendam and is approximately 212km from Cape Town and 174km from Mossel Bay. Die Stroom Picnic Site is roughly 3km from the N2 turn off just outside Swellendam.

'Die Stroom' Picnic Site on the banks of the Breede River is already established and is regularly used by visitors to Bontebok National Park.

LOCATION PLAN



Contractor	Witness for Contractor	Employer	Witness for Employer

PROPOSED SITE PLAN

Contractor	Witness for Contractor	Employer	Witness for Employer

Annexure A

Health and Safety Specifications for South African National Parks

Contractor	Witness for Contractor	Employer	Witness for Employer

HEALTH & SAFETY SPECIFICATIONS FOR

THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM AT BONTEBOK NATIONAL PARK

CONTRACT NO: CI-GK-0127

(Contractor)

Date: March 2024

Contact person: Zamakhosi Mkhonza

Address: PO Box 787
Pretoria, 0001
Tel No: (012) 426 5199
Email Fax: 086 695 9139
Email:zamakhosi.mkhonza@sanparks.org

CONTENTS

Contractor	Witness for Contractor	Employer	Witness for Employer

- 5.28 Excavation
- 5.29 Demolition Work
- 5.30 Tunneling
- 5.31 Scaffolding
- 5.32 Suspended Platforms
- 5.33 Rope Access Work
- 5.34 Material Hoists
- 5.35 Bulk mixing plant
- 5.36 Explosive Actuated Fastening Device
- 5.37 Cranes
- 5.38 Construction Vehicles and Mobile Plant
- 5.39 Electrical Installations and Machinery on Construction Sites
- 5.40 Use and Temporary Storage of Flammable Liquids on Construction Sites
- 5.41 Water environments
- 5.42 Housekeeping and General Safeguarding on Construction Sites
- 5.43 Stacking of Materials
- 5.44 Fire precautions on Construction Sites
- 5.45 Construction Employees' Facilities
- 5.46 Hazardous Chemical Substances (HCS)
- 5.47 Hazardous Biological Substances (HBS)
- 5.48 Noise Induced Hearing Loss
- 5.49 Personal Protective Equipment (PPE)
- 5.50 Asbestos
- 5.51 Lead
- 5.52 Fire Extinguishers and Fire Fighting Equipment
- 5.53 Ladders and Ladder work
- 5.54 General Machinery
- 5.55 Pressure Equipment
- 5.56 Portable Electrical Tools
- 5.57 High Voltage Electrical Equipment
- 5.58 Welding, Flame-Cutting, Soldering and Similar Operations
- 5.59 Public Health and Safety
- 5.60 Work in confined space
- 5.61 Work in Elevated Heights
- 5.62 Lighting
- 5.63 Environmental Conditions and Flora and Fauna
- 5.64 Occupational Health
- 5.65 Blasting and Explosives

6. TRAINING, INSPECTIONS & RECORDS
    - Additional Requirements
    - Annexure A: Task Completion Form
    - Annexure B: Contractors Responsible Persons

7. PROJECT DETAILS
    - Project Directory
    - Project Details
    - Existing Environment
    - Project Health and Safety Requirements
    - Activities requiring approved Method Statements
    - Activities requiring Permits
    - General Arrangements
    - Protection of sit against Unauthorized access by public
    - Personal Protective Equipment
    - Hazardous Substance

8. BASELINE RISK ASSESMENT

1. PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

The purpose of this site specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Client Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards and expectations that the principal contractor and contractors must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements.

Further, there is no acceptance of liability by the Client which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

2. IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with Sub Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all sub-contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client prior to commencement with construction work.

3. APPLICATION AND INTERPRETATION

This document is to be read and understood in Conjunction with the following inter alia:

- Occupational Health and Safety Act (Act 85 of 1993)
- SABS codes and standards referred to by the Occupational Health and Safety Act
- Regulations as per the Occupational Health and Safety Act (Act 85 of 1993) with specific reference but not limited to:
    - General Safety Regulations (GN 928, 25 June 2003)
    - General Machinery Regulations (GN R1521, 5 August 1988)
    - Electrical Machinery Regulations (GN R250, 25 March 2011)
    - Electrical Installation Regulations (GN R242, 6 March 2009)
    - Driven Machinery Regulations (GN R1010, 18 July 2003)
    - Hazardous Chemical Substance Regulations (GN R930, 25 June 2003)
    - Hazardous Biological Agents Regulations(GN R 1390, 27 December 2001)
- Basic Conditions of Employment Act (Act 75 of 1997)
- SANParks Environmental Management Plan
- SANParks Code of Conduct of working in a National Park

4. DEFINITIONS

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO CLIENT AGENT, WHERE SO APPOINTED.
Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:

"agent" means a competent person who acts as a representative for a client;

Contractor	Witness for Contractor	Employer	Witness for Employer

"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"client" means any person for whom construction work is being performed;

"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with
the applicable regulations made under the Act;

"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;
"construction site" means a work place where construction work is being performed;

"construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"construction work" means any work in connection with-

- the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work ;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications ;

"designer" means a competent person who-

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter or landscape architect;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;

"fall protection plan" means a documented plan, which includes and provides for -

- all risks relating to working from a fall risk position, considering the nature of work undertaken;
- the procedures and methods to be applied in order to eliminate the risk of falling; and
- a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file " means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

"structure" means-

- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or
- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support ;

"temporary works" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act , 1993 (Act No. 85 of 1993);

"tunneling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

5. GENERAL REQUIREMENTS in terms of Construction Regulations 2014 and OHS Act and Regulations

5.1 Construction Work Permit

It must be noted that from August 2018 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 365 days and will involve more than 3600 person days or
- Tender value limit grade is 7, 8 or 9 of the Construction Industry Development Board (CIDB) grading.

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.

5.2 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

- include excavation work
- Include work at height where there is a risk of falling
- Include the demolition of a structure, or
- Include the use of explosives to perform construction work.

If the construction work involves construction of a single storey dwelling for a client, and such client will be residing in such dwelling upon completion, the contractor must also notify the Provincial Director of the Department of Labour at least 7 days before the works commence.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.

5.3 Duties of Principal Contractor / Contractor

A Principal Contractor must:

- provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
    - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
    - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
    - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
    - ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
    - appoint each contractor in writing for the part of the project on the construction site
    - take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
    - ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
    - stop any contractor from executing construction work which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the client or the client's agent;
- hand over a consolidated health and safety file to the client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work -

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which

must be made available on request to an inspector, the client, the client's agent or the principal contractor;

- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

5.4 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.

5.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to **Annexure B** at the end of this Health and Safety Specification).

5.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

5.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

5.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the operations.

5.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated, when there is a change in the site team.

5.10 Risk Assessments

Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method
- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site.**

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the client, client's agent, any

contractor, any employee, a representative trade union, a health and safety representative or safety committee member.

A Contractor must review the relevant risk assessment where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved

In general the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors and subcontractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

5.11 Safe Work Procedures

Safe Work Procedures are to form part of the H&S Plan and **must be compiled for all the identified activities.**
The safe work procedures must address the following elements:

- The work method to be followed to conduct work safely
- Mitigation of identified risks
- Reducing and controlling risks and hazards that have been identified
- Responsibilities of competent persons
- Required personal protective equipment
- Correct equipment/tools/machinery to be used
- Reference to relevant registers to be completed
- Reference to applicable risk assessment

5.12 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. He / she shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents and non-conformances.

5.13 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

5.14 Medical Certificate of Fitness

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

5.15 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

5.15.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

5.15.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, preferably weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance

register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health a safety file as evidence of training

5.16 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence.

5.17 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

5.18 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by **Annexure C** in this Health and Safety Specification, as well as by health and safety legislation.

5.19 Emergency Procedures

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service deliver protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and available to site personnel.

5.20 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

First Aid box/es must be adequately stocked at all time, accessible and be controlled by a qualified First Aider. If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

5.21 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

5.22 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

5.23 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 db; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage.

5.24 Management of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

5.25 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.

5.26 Structures

A contractor must ensure that-

- all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
- no structure or part of a structure is loaded in a manner which would render it unsafe; and
- all drawings pertaining to the design of the relevant structure are kept on site and are available on request to an inspector, other contractors, the client and the client's agent or employee.

An owner of a structure must ensure that-

- inspections of that structure are carried out periodically by competent persons in order to render the structure safe for continued use;
- that the inspections contemplated in paragraph (a) are carried out at least once every six months for the first two years and thereafter yearly;
- the structure is maintained in such a manner that it remains safe for continued use;
- the records of inspections and maintenance are kept and made available on request to an inspector.

5.27 Temporary works

A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

A contractor must ensure that-

- all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
- all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;
- detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the client, the client's agent or any employee;

- all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;
- no person may cast concrete, until authorization in writing has been given by the competent person contemplated above;
- if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;
- adequate precautionary measures are taken in order to-
- secure any deck panels against displacement; and
- prevent any person from slipping on temporary works due to the application of release agents;
- as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person
- the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- a temporary works drawing or any other relevant document includes construction sequences and methods statement;
- the temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any work other than its intended purpose.

5.28 Excavation

A contractor must-

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
- Evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

A contractor who performs excavation work-

- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where-
- the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
- such an excavation is in stable material: Provided that-
- permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
- where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
- must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
- must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
- must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six meters from the point where any worker within the excavation is working;

- must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
    - must ensure that every excavation, including all bracing and shoring, is inspected-
    - daily, prior to the commencement of each shift;
    - after every blasting operation;
    - after an unexpected fall of ground;
    - after damage to supports; and
    - after rain,

by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the client, the client's agent, any other contractor or any employee;

- must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –
    - adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and
    - provided with warning illuminates or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
- must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;
- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosives legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

5.29 Demolition Work

A contractor must-

- Appoint a competent person in writing to supervise and control all demolition work on site.
- ensure that before any demolition work is carried out, and in order to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed by that person.
- During a demolition, the competent person contemplated in sub regulation (1) must check the structural integrity of the structure at intervals determined in the method statement contemplated in sub regulation (2), in order to avoid any premature collapses.

A contractor who performs demolition work must-

- with regard to a structure being demolished, take steps to ensure that-
    - no floor, roof or other part of the structure is overloaded with debris or material in a manner which would render it unsafe;
    - all reasonably practicable precautions are taken to avoid the danger of the structure collapsing when any part of the framing of a framed or partly framed building is removed, or when reinforced concrete is cut; and
    - precautions are taken in the form of adequate shoring or other means that may be necessary to prevent the accidental collapse of any part of the structure or adjoining structure;

- ensure that no person works under overhanging material or a structure which has not been adequately supported, shored or braced;
- ensure that any support, shoring or bracing contemplated in paragraph (b), is designed and constructed so that it is strong enough to support the overhanging material;
- where the stability of an adjoining building, structure or road is likely to be affected by demolition work on a structure, take steps to ensure the stability of such structure or road and the safety of persons;
- 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 demolition work that may affect any such service, take the steps that are necessary to render circumstances safe for all persons involved;
- cause every stairwell used and every floor where work is being performed in a building being demolished, to be adequately illuminated by either natural or artificial means;
- cause convenient and safe means of access to be provided to every part of the demolition site in which persons are required to work; and
- erect a catch platform or net above an entrance or passageway or above a place where persons work or pass under, or fence 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 where there is a danger or possibility of persons being struck by falling objects.

- ensure that no material is dropped to any point, which falls outside the exterior walls of the structure, unless the area is effectively protected. (
- No person may dispose of waste and debris from a high place by a chute unless the chute-
    - is adequately constructed and rigidly fastened;
    - if inclined at an angle of more than 45 degrees to the horizontal, is enclosed on its four sides;
    - if of the open type, is inclined at an angle of less than 45 degrees to the horizontal;
    - where necessary, is fitted with a gate at the bottom end to control the flow of material; and
    - discharges into a container or an enclosed area surrounded by barriers.

- A contractor must ensure that every chute used to dispose of rubble is designed in such a manner that rubble does not free-fall and that the chute is strong enough to withstand the force of the debris travelling along the chute.
- A contractor must ensure that no equipment is used on floors or working surfaces, unless such floors or surfaces are of sufficient strength to support the imposed loads.
- Where a risk assessment indicates the presence of asbestos, a contractor must ensure that all asbestos related work is conducted in accordance with the Asbestos Regulations, 2001, promulgated by Government Notice No. R. 155 of 10 February 2002.
- Where a risk assessment indicates the presence of lead, a contractor must ensure that all lead related work is conducted in accordance with the Lead Regulations, 2001, promulgated by Government Notice No. R.236 of 28 February 2002. (11) Where the demolition work involves the use of explosives, a method statement must be developed in accordance with the applicable explosives legislation, by an appointed person who is competent in the use of explosives for demolition work and all persons involved in the demolition works must adhere to demolition procedures issued by the appointed person.
- A contractor must ensure that all waste and debris are as soon as reasonably practicable removed and disposed of from the site in accordance with the applicable legislation.

5.30 Tunnelling

No person may enter a tunnel, which has a height dimension of less than 800 millimetres.

5.31 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.

5.32 Suspended Platforms

A contractor must appoint a competent person in writing who must ensure that all suspended platforms work operations are carried out under his or her supervision and that all suspended platform erectors, operators and inspectors are competent to carry out their work.

No contractor may use or permit the use of a suspended platform, unless-

- the design, stability and construction thereof comply with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act;
- he or she is in possession of a certificate of system design issued by a professional engineer, certificated engineer or a professional technologist for the use of the suspended platform system; and
- he or she is, before the commencement of the work, in possession of an operational compliance plan developed by a competent person based on the certificate of system design contemplated in subparagraph (b) and applicable to the environment in which the system is being used, which operational compliance plan must include proof of the- (i) appointment of the competent person contemplated in sub regulation (1); (ii) competency of erectors, operators and inspectors; (iii) operational design calculations, which must comply with the requirements of the system design certificate; (iv) performance test results; (v) sketches indicating the completed system with the operational loading capacity of the platform; (vi) procedures for and records of inspections having been carried out; and (vii) procedures for and records of maintenance work having been carried out.

A contractor making use of a suspended platform system must submit a copy of the certificate of system design contemplated in sub regulation (2)(b), including a copy of the operational design calculations contemplated in sub regulation 2(c)(iii), sketches and test results, to the provincial director before commencement of the use of the system and must further indicate the intended type of work that the system will be used for.
A contractor must submit a copy of the certificate of system design in the manner contemplated in sub regulation (3) for every new project. (5) A contractor must ensure that the outriggers of each suspended platform – (a) are constructed of material of adequate

strength and have a safety factor of at least four in relation to the load it is to carry; and (b) have suspension points provided with stop devices or other effective devices at the outer ends to prevent the displacement of ropes.

A contractor must ensure that-

- the parts of the building or structure on which the outriggers of a suspended platform are supported, are checked by means of calculations to ensure that the required safety factor is adhered to without risk of damage to the building or structure;
- the suspension wire rope and the safety wire rope are separately connected to the outrigger;
- each person on a suspended platform is provided with and wears a body harness as a fall prevention device, which must at all times be attached to the suspended platform;
- the hand or power driven machinery to be used for the lifting or lowering of the working platform of a suspended platform is constructed and maintained in such a manner that an uncontrolled movement of the working platform cannot occur;
- the machinery referred to in paragraph (d) is so situated that it is easily accessible for inspection;
- the rope connections to the outriggers are vertically above the connections to the working platform; and
- when the working platform is suspended by two ropes only, the connections of the ropes to the working platform are of a height above the level of the working platform to ensure the stability of the working platform.

A contractor must ensure that a suspended platform-

- is suspended as near as possible to the structure to which work is being done to prevent as far as is reasonably practicable horizontal movement away from the face of the structure;
- is fitted with anchorage points to which workers must attach the lanyard of the safety harness worn and used by the worker, and such anchorage connections must have sufficient strength to withstand any potential load applied to it; and
- is fitted with a conspicuous notice easily understandable by all workers working with the suspended platform, showing- (i) the maximum mass load; (ii) the maximum number of persons; and (iii) the maximum total mass load, including load and persons, which the suspended platform can carry.

A contractor must cause-

- the whole installation and all working parts of a suspended platform to be thoroughly examined by a competent person in accordance with the manufacturer's specification;
- the whole installation to be subjected to a performance test as determined by the standard to which the suspended platform was manufactured;
- the performance test contemplated in paragraph (b) to be done by a competent person appointed in writing, with the knowledge and experience of erection and maintenance of suspended platforms or similar machinery, and who must determine the serviceability of the structures, ropes, machinery and safety devices before they are used, every time suspended platforms are erected; and
- the performance test contemplated in paragraph (b) of the whole installation of the suspended platform to be subjected to a load equal to that prescribed by the manufacturer or, in the absence of such load, to a load of 110 per cent of the rated mass load, at intervals not exceeding 12 months and in such a manner that every part of the installation is stressed accordingly.

A contractor must, in addition to sub regulation (8), cause every hoisting rope, hook or other load-attaching device which forms part of the suspended platform to be thoroughly examined in accordance with the manufacturer's specification by the competent person contemplated in sub regulation (8) before they are used every time they are assembled, and, in cases of continuous use, at intervals not exceeding three months.

A contractor must ensure that the suspended platform supervisor contemplated in sub regulation (1), or the suspended platform inspector contemplated in sub regulation (8)(c), carries out a daily inspection of all the equipment prior to use, including establishing whether-

- all connection bolts are secure;
- all safety devices are functioning;
- all safety devices are not tampered with or vandalized;
- the total maximum mass load of the platform is not exceeded;
- the occupants in the suspended platform are using body harnesses which have been properly attached; there are no visible signs of damage to the equipment; and
- all reported operating problems have been attended to.

A contractor must further ensure that –

- all inspection and performance test records are kept on the construction site at all times and made available to an inspector, the client, the client's agent or any employee upon request.
- all employees required to work or to be supported on a suspended platform are- (a) medically fit to work safely in a fall risk position or such similar environment by being in possession of a medical certificate of fitness; (b) competent in conducting work related to suspended platforms safely; (c) trained or received training, which includes at least- (i) how to access and egress the suspended platform safely; (ii) how to correctly operate the controls and safety devices of the equipment; (iii) information on the dangers related to the misuse of safety devices; and (iv) information on the procedures to be followed in the case of- (aa) an emergency; (bb) the malfunctioning of equipment; and (cc) the discovery of a suspected defect in the equipment; and (v) instructions on the proper use of body harnesses.

- where the outriggers of a suspended platform are to be moved, only persons trained and under the supervision of the competent person effect such move, within the limitation stipulated in the operational compliance plan contemplated in sub regulation (2)(c), and that the supervisor must carry out an inspection and record the result thereof prior to re-use of the suspended platform.
- the suspended platform is properly isolated after use at the end of each working day in such a manner that no part of the suspended platform presents a danger to any person thereafter.

5.33 Rope Access Work

A contractor must-

- appoint a competent person in writing as a rope access supervisor with the duty of supervising all rope access work on the site, including the duty of ensuring occupational health and safety compliance in relation to rope access work: Provided that the appointment of any such person does not relieve the construction manager of any personal accountability for failing in his management duties in terms of this regulation;
- ensure that all rope access work on the construction site is carried out under the supervision of a competent person; and
- ensure that all rope access operators are competent and licensed to carry out their work.

No contractor may use or allow the use of rope access work unless-

- the design, selection and use of the equipment and anchors comply with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act; and
- he or she is in possession of a site-specific fall protection plan developed by a competent person applicable to the specific work and environment prior to the commencement of the work, including records of maintenance and inspections of all the equipment used for the work operations.

A contractor must ensure that adequate measures are in place to allow rescue procedures to commence immediately in the event of a fall incident taking place.

5.34 Material Hoists

A contractor must ensure that-

- every material hoist and its tower have been constructed in accordance with the generally accepted technical standards and are strong enough and free from defects.
- the tower of every material hoist is- (a) erected on firm foundations and secured to the structure or braced by steel wire guy ropes, and extends to a distance above the highest landing to allow a clear and unobstructed space of at least 900 millimeters for over travel; (b) enclosed on all sides at the bottom, and at all floors where persons are at risk of being struck by moving parts of the hoist, except on the side or sides giving access to the material hoist, with walls or other effective means to a height of at least 2100 millimeters from the ground or floor level; and (c) provided with a door or gate at least 2100 millimeters in height at each landing, and that door or gate must be kept closed except when the platform is at rest at such a landing.
- every material hoist- (a) is inspected on daily basis by a competent person appointed in writing by the contractor and such competent person must have the experience pertaining to the erection and maintenance of material hoists or similar machinery; (b) inspection contemplated in paragraph (a) , includes the determination of the serviceability of the entire material hoist, including guides, ropes and their connections, drums, sheaves or pulleys and all safety devices; (c) inspection results are entered and signed in a record book by a competent person, which book must be kept on the premises for that purpose; (d) is properly maintained and the maintenance records in this regard are kept on site.

A contractor must cause-

- the platform of every material hoist to be designed in a manner that it safely contains the loads being conveyed and that the combined mass of the platform and the load does not exceed the designed lifting capacity of the hoist;
- the hoisting rope of every material hoist which has a remote winch to be effectively protected from damage by any external cause to the portion of the hoisting rope between the winch and the tower of the hoist; and
- every material hoist to be provided with an efficient brake capable of holding the platform with its maximum load in any position when power is not being supplied to the hoisting machinery.
- a notice, indicating the maximum mass load which may be carried at any one time and the prohibition of persons from riding on the platform of the material hoist, to be affixed around the base of the tower and at each landing.

No contractor may require or permit trucks, barrows or material to be conveyed on the platform of a material hoist and no person may so convey trucks, barrows or material unless those articles are secured or contained in a manner that displacement thereof cannot take place during movement. A contractor of a material hoist may not require or permit any person to operate a hoist, unless the person is competent in the operation of that hoist. No contractor may require or permit any person to ride on a material hoist.

5.35 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.

5.36 Explosive Actuated Fastening Device

No contractor may use or permit any person to use an explosive actuated fastening device, unless-

- the user is provided with and uses suitable protective equipment;
- the user is trained in the operation, maintenance and use of such a device;
- the explosive actuated fastening device is provided with a protective guard around the muzzle end, which effectively confines any flying fragments or particles; and
- the firing mechanism is so designed that the explosive actuated fastening device, will not function unless it is held against the surface with a force of at least twice its weight; and the angle of inclination of the barrel to the work surface is not more than 15 degrees from a right angle. (

A contractor must ensure that-

- only cartridges suited for the relevant explosive actuated fastening device, and the work to be performed, are used;
- an explosive actuated fastening device is cleaned and examined daily before use and as often as may be necessary for its safe operation by a competent person who has been appointed for that purpose;
- the safety devices of an explosive actuated fastening device are in good working order prior to use;
- when not in use, an explosive actuated fastening device and its cartridges are locked up in a safe place, which is inaccessible to unauthorized persons;
- an explosive actuated fastening device is not stored in a loaded condition; a warning notice is displayed in a conspicuous manner in the immediate vicinity wherever an explosive actuated fastening device is used; and
- the issuing and collection of cartridges and nails or studs of an explosive actuated fastening device are- (i) controlled and done in writing by a person having been appointed in writing for that purpose; and (ii) recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.

5.37 Cranes

A contractor must, in addition to compliance with the Driven Machinery Regulations, 1988 ensure that where tower cranes are used-

- they are designed and erected under the supervision of a competent person;
- a relevant risk assessment and method statement are developed and applied;
- the effects of wind forces on the crane are taken into consideration and that a wind speed device is fitted that provides the operator with an audible warning when the wind speed exceeds the design engineer’s specification;
- the bases for the tower cranes and tracks for rail-mounted tower cranes are firm, level and secured;
- the tower crane operators are competent to carry out the work safely; and the tower crane operators have a medical certificate of fitness to work in such an environment, issued by an occupational health practitioner.

5.38 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
- has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
- has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm; and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms or similar appendages, fully lowered or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.

5.39 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.

5.40 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contactor 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

5.41 Water environments

A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for-

- preventing persons from falling into water; and
- 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.

5.42 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.

5.43 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.

5.44 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
    - only suitably protected electrical installations and equipment, including portable lights, are used;
    - there are no flames or similar means of ignition;
    - there are conspicuous notices prohibiting smoking;
    - oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
    - adequate ventilation is provided;

- combustible materials do not accumulate on the construction site;
- welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire- extinguishing equipment;

- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
    - persons to be evacuated speedily without panic;
    - persons to be accounted for; and
    - plant and processes to be shut down; and
    - a siren is installed and sounded in the event of a fire.

5.45 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.

5.46 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.

5.47 Hazardous Biological Substances (HBS)

Because of the possible exposure of workers to raw sewage the H&S Plan shall include details of the following:

- The conducting of Risk Assessment specifically aimed at exposure to HBA which shall include the following
    - Nature and dose of HBA
    - Where HBA may be present and in what physical form
    - The nature of work or process
    - Steps in the event of failure of control measures
    - The effect of the HBA
    - The period of exposure
    - Control measures to be implemented

- Monitoring of exposure of workers shall be conducted to establish whether any worker is infected with an HBA associated with working or being exposed to raw sewage, in terms of the following:
    - By an occupational medical practitioner
    - Before entering the site to establish the workers baseline
    - During the period of the contract the risk assessment indicate possible exposure
    - After completion of the contract
- Medical surveillance should such be required after the above-mentioned by an occupational health practitioner.
- Indication on how all records of assessment, monitoring, etc will be kept, taking into account that records have to be kept for a period of 40 years.
- How exposure to HBA is to be controlled
- The provision of personal protective equipment
- What information and training is to be provided to employees regarding the following:
    - The contents of these regulations
    - Potential risks to health
    - Control measures to be implemented
    - The correct use and maintenance of personal protective equipment
    - The results of the risk assessment.

5.48 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.

5.49 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.

5.50 Asbestos

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

5.51 Lead

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.

5.52 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.

5.53 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.

5.54 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

5.55 Pressure Equipment

The Contractor shall comply with the Pressure Equipment Regulations, which include inspecting equipment regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use equipment and enforce compliance.

5.56 Portable Electrical Tools

The Contractor shall comply with the Electrical Machinery Regulations and shall ensure that use and storage of all 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.

5.57 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.

5.58 Welding, Flame-Cutting, Soldering and Similar Operations

No employer or user of machinery shall require or permit welding or flame cutting operations to be undertaken, unless –

- the person operating the equipment has been fully instructed in the safe operation and use of such equipment and in the hazards which may arise from its use;
- effective protection is provided and used for the eyes and respiratory system and, where necessary, for the face, hands, feet, legs, body and clothing of persons performing such operations, as well as against heat, incandescent or flying particles or dangerous radiation;
- leads and electrode holders are effectively insulated; and
- the workplace is effectively partitioned off where practicable and where not practicable all other persons exposed to the hazards contemplated in paragraph (b) are warned and provided with suitable protective equipment.

No employer or user of machinery shall require or permit welding or name cutting operations to be undertaken in a confined space, unless –

- effective ventilation is provided and maintained; or
- masks or hoods maintaining a supply of safe air for breathing are provided and used by the persons performing such operations.

No employer or user of machinery shall require or permit electric welding to be undertaken in wet or damp places, inside metal vessels or in contact with large masses of metal, unless

- the insulation of the electrical leads is in a sound condition;
- the electrode holder is completely insulated to prevent accidental contact with current-carrying parts;
- the welder is completely insulated by means of boots, gloves or rubber mats; and
- at least one other person who has been properly instructed to assist the welder in case of an emergency is and remains in attendance during operations: Provided that the provisions of this sub-regulation shall not apply to a welding process where the maximum voltage to earth does not exceed 50 volts.

No employer or user of machinery shall require or permit welding, flame cutting, grinding, soldering or similar work to be undertaken in respect of any tube, tank, drum, vessel or similar object or container where such object or container –

- is completely closed, unless a rise in internal pressure cannot render it dangerous; or
- contains any substance which, under the action of heat, may --
  (i) ignite or explode; or
  (ii) react to form dangerous or poisonous substances, unless a person who is competent to pronounce on the safety thereof has, after examination, certified in writing that any such danger has been removed by opening, ventilating or purging with water or steam, or by any other effective means.

Where hot work involving welding, cutting, brazing or soldering operations is carried out at places, other than workplaces which have been specifically designated and equipped for such work, the employer shall take steps to ensure that proper and adequate fire precautions are taken.

5.59 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 onsite activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

Contractor	Witness for Contractor	Employer	Witness for Employer

5.60 Work in confined space

An employer or a user of machinery shall take steps to ensure that a confined space is entered by an employee or other person only after the air therein has been tested and evaluated by a person who is competent to pronounce on the safety thereof, and who has certified in writing that the confined space is safe and will remain safe while any person is in the confined space, taking into account the nature and duration of the work to be performed therein.

Where the provisions of sub regulation (1) cannot be complied with the employer or user of machinery, as the case may be, shall take steps to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapor, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when—

- subject to the provisions of sub regulation (3), the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and
- the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.

Where the provisions of sub regulation (2)(a) cannot be complied with, the employer or user of machinery shall take steps to ensure that the confined space in question is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that—

- the provisions of sub regulation (2) (b) are complied with;
- any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);
- at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and
- effective apparatus for breathing and resuscitation of a type approved by the chief inspector is available immediately outside the confined space.

An employer or user of machinery shall take steps to ensure that all persons vacate a confined space on completion of any work therein.

Where the hazardous gas, vapor, dust or fumes contemplated in sub regulation (2) are of an explosive or flammable nature, an employer or user of machinery shall further take steps to ensure that such a confined space is entered only if –

- the concentration of the gas, vapor, dust or fumes does not exceed 25 per cent of the lower explosive limit of the gas, vapor, dust or fumes concerned where the work to be performed is of such a nature that it does not create a source of ignition; or
- such concentration does not exceed 10 per cent of the lower explosive limit of the gas, vapor, dust or fumes where other work is performed.

The provisions of this regulation shall mutatis mutandis also apply, in so far as they can be so applied, to any work which is performed in any place or space on the outside of and bordering on or in the immediate vicinity of, any confined space, and in which place or space, owing to its proximity to the confined space, any hazardous article, oxygen-deficient atmosphere or dangerous concentration of gas, vapor, dust or fumes may occur or be present.

5.61 Work in Elevated Heights

No employer shall require or permit any person to work in an elevated position, and no person shall work in an elevated position, unless such work is performed safely from a ladder or scaffolding, or from a position where such person has been made as safe as if he were working from scaffolding

5.62 Lighting

Where poor or lack of illumination is identified as a hazard the lighting regulations must be complied with and the following must be included in the H&S Plan:

- How lighting will be ensured/ provided where daylight is not sufficient and /or after hours are worked.
- Planned maintenance programme for replacing luminaries.
- Proof of illumination levels of artificial illumination equipment.

5.63 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.

Contractor	Witness for Contractor	Employer	Witness for Employer

5.64 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.

5.65 Blasting and Explosives

The Contractor shall comply with the Explosives Regulations with regards to the Danger Area, Safeguarding workplace, Supervision, Safe Handling, and permissions.

1. 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

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)

7. PROJECT DETAILS

PROJECT DIRECTORY:		
Client	**SANParks** 643 Leyds Street, Muckleneuk Pretoria Contact: Ms A van Wyk	Tel: 012-425-5126 Email: Antionet.vanwyk@sanparks.org
Client Agent	**Infrastructure & Special Projects** Contact: Richard Williams	Tel: 021-983 9304 Email: Richard.williams@sanparks.org
Architect	**OVP Associates** 141 Hatfield Street, Gardens, Cape Town, 8001 Contact: Greg Lok	Tel: 021-461 1262 Email: greg@ovp.co.za

PROJECT DETAILS:
Description of Works Construction of a swimming pool at Die Stroom Picnic Site in Bontebok National Park
Anticipated Construction Duration 5 Months
Provisional Start Date August 2024
Completion Date December 2024

EXISTING ENVIRONMENT:	
Hazards particular to this project by virtue of location: **Wild Animals:** The site is located in the Bontebok National Park. A lookout for wild animals is going to be required to protect the workers **Members of public and children:** All necessary steps to be taken to protect them from any dangers associated with the construction works being undertaken. **Public Roads:** Use of roads network to be carefully planned to accommodate public, tenants and traffic **Other:……**	
Overhead, Above Ground and Underground Services crossing the site:	
Overhead:	Not Applicable
Underground:	Not Applicable
Ground Level:	Not Applicable
Services Drawings available	Yes
Way leaves required:	Not Applicable
Permits required:	Not Applicable
Isolation required:	Not Applicable

Existing structures and surrounding land use (with a significant impact on Health and Safety):
The site is an existing picnic site with parking and a building with kitchen, and male and female ablution facilities.

Existing ground conditions and ground survey report:
No Geotech study was conducted. The existing ground conditions is a combination of lime and

Existing Traffic Systems:

Conditions:	Gravel Road / Tar 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 work 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 baboons and probably snakes 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.

Other:…….

Normal construction hazards expected are as follow:

Asphalting
Bricklaying
Bruch Cutting
Compacting and filling / Compactors Operations
Concrete / Concrete pumping
Confined Spaces
Electric Tools & Electrical Installations
Excavations
Fire
Hand Tools
Hazardous Substances
Kerb Laying
Manual Handling of plant/material/equipment
Members of public
Metal work
Noise and Dust
Painting
Plant / Vehicle and Equipment Operations
Plastering
Plumbing
Road Construction

Road Markings
Scaffolding
Site Establisment
Snakes
Steel fixing
Temporary Works
Traffic Management
Transportation of workers
Working at heights

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
Road Traffic Management Protection of Public Not applicable

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
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 08:00 to 17:00 and Saturday 08:00-13:00
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 adverse weather conditions on site activities and implement control measures to mitigate risk
Induction Training:	All workers to receive induction training prior to commencement on site. Special reference to SANParks Health and Safety Policy and Induction Awareness Training and SANParks EMP and Code of Conduct

PROTECTION OF SITE AGAINST UNUATHORIZED ACCESS BY PUBLIC

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) waring 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.

General Fencing of Site: Note that construction site must be **fenced off** and have controlled access point.
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.

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

The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:

Petrol	Cement
Diesel	Silicone
Bitumen	Other
Paint	

Contractor	Witness for Contractor	Employer	Witness for Employer

BASELINE RISK ASSESMENT

Baseline Risk Assessment

PROJECT: The Construction of a Swimming Pool at Die Stroom Picnic Site in Bontebok 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

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
			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	Temporary Low voltage Electrical installation	Exposure to live wires-electrocution	2	5	19	Construction Regulation 24(a)(b)	Lockable DB box, Inspection register
			Faulty earth leakage	2	5	19	SANS 10142	Competent person to do installation & inspection
			Short circuit causing fire	2	4	14	Construction Regulation 24(b)	Weekly inspection, Induction Training & Fire fighting equipment

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
	A10	Issue of PPE	Incorrect PPE	4	2	12	General Safety Regulation 2(1)	PPE Register
	A11	Usage of PPE	Incorrect use of PPE	4	2	12	General Safety Regulation 3(2)	PPE Register, Induction Training, supervision
			Negligence to use PPE	4	2	12	General Safety Regulation 5	PPE Register, Induction Training, supervision
	A12	Adverse storms	Struck by lightning	2	5	19	Induction Training Safe Operation Procedure	Proper warning system
	A13	Adverse heat	Dehydration, Sunburn, heat stroke	3	4	18	Induction Training Safe Operation Procedure	Proper drinking water, PPE
	A14	Working in excessive winds	Exposure to dust	3	4	18	Hazardous Chemical Substances Regulation (36)(37)(38)	PPE
	A15	House keeping	Objects lying around can result in slip/fall	4	2	12	Construction Regulation 27(a)(b)	Regular cleaning of site
			Unhygienic conditions	3	3	13	Construction Regulation 27(d)	Induction Training
			Pollution of area	3	2	8	Construction Regulation 27(e)	Proper waste bins and waste removal
	A16	Fire prevention	Open Fires	3	3	13	Construction Regulation 29(a)	SANParks EMP & Code of conduct
			Inadequate fire fighting equipment	4	3	17	Construction Regulation 29(g)(h)	Inspection register, supervision
			Run away fires	4	4	21	Emergency evacuation plan	SANParks EMP & Code of conduct
			Accidental Fires	3	4	18	Construction Regulation 29(a)(d)(iii)	Designated smoking areas
	A17	Environmental pollution	Pollution of ground,air, workspace	3	2	8	Environmental Regulation 6(d)	SANParks EMP & Code of conduct
			Littering	4	2	12	SANParks Environmental Management Plan	Induction Training, Provide proper trash bins

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
	A18	Working near hazardous animals incl snakes, spiders & scorpions	Poisons bites/ attack by large animals	3	3	13	SANParks Environmental Management Plan	Induction Training, SANParks ranger where required, Proper treatment in first aid kit
	A19	Working in close proximity of water	Falling into water & drowning	3	4	18	Construction Regulation 26(1)(a)(b)	Safe work area, Induction Training, barricades
			Pollution of water body	3	4	18	SANParks Environmental Management Plan Construction Regulation 26(2)	Induction Training
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
			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	Unauthorized operation of equipment	3	3	13	Construction Regulation 23(1)(d)(i)(ii)	Valid operator, restricted access to machinery, supervision
			Expired licenses	3	1	6	Construction Regulation 23(1)(d)(i)(ii)	Keep OHS file up to date
	B3	Parking of vehicles	Runaway vehicle	3	4	17	Safe Operation Procedures (SOP)	Vehicle check list, use stop block behind tyres
			Parking in unsafe areas	3	1	4	Construction Regulation 23(2)(i)(j) Construction Regulation 23(1)(b)(j)	Demarcate proper parking areas
Transportation	C1	Transportation of employees	Interaction with other vehicle- collision	4	4	21		Supervisor
			Equipment not roadworthy	3	1	4	Construction Regulations 23(a)(b)	Vehicle checklist, vehicle must meet required standards

Contractor	Witness for Contractor	Employer	Witness for Employer

Steps in operation	Ref No.	Hazard	Risk	Risk Rating			Controls Measures	Other Controls
				L	C	R		
			Equipment not licensed	3	1	4	Construction Regulations 23(a)(b)	Supervision and monitor
			Operator of vehicle transporting employees not licensed and authorized	3	1	4	Construction Regulation 23(2)(i)(j)	Supervision and monitor if Driver has Valid PDP
			Vehicle not equipped to transport employees	3	1	4	Construction Regulation 23(d)(i)(j)	Vehicle checklist, vehicle must meet required standards
			Not Adhering traffic legislation	3	1	4	Construction Regulation 23(2)(j)	Supervision, implement fines
	C2	Transportation of material or equipment with people	Material/equipment fall from vehicle	4	4	21	Construction Regulation 23(g)(h)	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)	Awareness, trained operator
			Towing coupler failure	3	3	13	Construction Regulation 22(e)	Inspection Register
Hand Tools	D1	Injury Due to	Incorrect tools used	4	3	17	Hand tool register, Induction Training,	Supervision
			Defective tools	4	3	17	Safe Operation Procedure	Supervision
			Struck by flying debris	3	3	13	Safe Operation Procedure	PPE
	D2	Hand Drills	Clothing being grabbed by rotating drill	3	3	13	Safe Operation procedure, Toolbox Talks Electrical Machinery Regulations 10(3)(4)	PPE, Supervision
			Unsecured work piece rotating with drill	3	3	13		PPE, Supervision
			Shaving flying into eyes	3	3	13	Electrical Machinery Regulations 10(4)	PPE, Supervision
			Accidental injury	4	3	17	Electrical Machinery Regulations 10(4)	PPE, Supervision

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
			Electrocution	3	5	22	Electrical Machinery Regulations 10(1) (a)(b)	Tool inspection register
	D3	Angle Grinder	Cutting disc cracked and breaks	3	3	13	Safe Operation procedure, Toolbox Talks	PPE, Supervision
			Shaving flying into eyes	3	3	13	Electrical Machinery Regulations 10(3)	PPE, Supervision
			Exposure to noise	3	3	13	Noise Induced Hearing Loss Regulations (7)(1)(a)(b)(c)(d)	PPE
			Vibration	2	2	5	Safe Operation procedure, Toolbox Talks	
			Accidental injury	4	3	17	Safe Operation procedure, Toolbox Talks	PPE, Supervision
			Electrocution	3	5	22	Electrical Machinery Regulations 10(1) (a)(b)	Tool inspection register
	D4	Other electrical portable hand tools	Electrocution	3	5	22	Electrical Machinery Regulations 10(1) (a)(b)	Tool inspection register, inspect extension cord
			Exposure to noise	3	3	13	Noise Induced Hearing Loss Regulations (7)(1)(a)(b)(c)(d)	PPE
			Vibration	2	2	5	Safe Operation procedure, Toolbox Talks	
			Accidental injury	4	3	17	Safe Operation procedure, Toolbox Talks	PPE, Supervision
			Shaving flying into eyes	3	3	13	Safe Operation procedure	PPE, Supervision
	D5	Explosive actuated fastening device	Malfunction of equipment causing injury/damage	3	3	13	Explosive Regulations 15(a)(b)	Tool inspection register, inspect extension cord
			Accidental injury	3	3	13	Explosive Regulations 15(b)	PPE, Supervision
			Accidental discharge	3	3	13	Explosive Regulations 15(a)(b)	Safety mechanism working, Store in unloaded condition
Site Clearance	E1	Site/Bush Clearing	Moving machinery accident	4	3	17	Construction Regulation 23(2)(b)	Reflective vests, restricted access, induction training

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
			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		Properly mark & demarcate existing services
	E2	Tree felling	Injury from chainsaw	3	3	13	Construction Regulation 24(c) Safe Operation Procedures (SOP)	Trained operator, PPE
			Injury from falling tree	3	3	13		Safe work area, PPE
			Felling from height	3	3	13	Electrical Installation Regulations(5)(1)(2)	Safety Harness, Fall Protection Plan, PPE
			Exposure to electrical cables	3	3	13	Electrical Installation Regulations(5)(1)(2)	Safe work area, PPE
	E3	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
	E4	Demolition	Structure/rubble falling on person	3	3	13	Construction Regulation 14(1); 4(ii)	Induction Training, PPE, demarcate area
			Dust Inhalation	3	2	8	Hazardous Chemical Substances Regulation (36)(37)(38)	Induction Training & PPE
			Presence of lead	2	4	14	Lead Regulations (3)	PPE, Induction Training
			Presence of Asbestos	2	4	14	Asbestos Regulations (4)	PPE, Induction Training
			Hitting electrical cable - electrocution	3	5	22	Construction Regulation 24(a)	Induction training, Site map indicating existing services

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating			Controls Measures	Other Controls
				L	C	R		
			Hitting of gas line - explosion	3	5	22	Construction Regulation 14(1)(2) Construction Regulation 13(a)	Induction training, Site map indicating existing services
Excavation & backfilling	F1	Hand Digging of holes/trenches	Injury due to defective tools	4	3	18		Hand tool register, Induction Training
			Injury due to improper work method	4	3	18		Induction training, supervision
			Trip/fall into holes	3	3	13	Construction Regulation 14(4)(iii)	Demarcate area, induction training, PPE
	F2	Machine Digging of holes/trenches	Collapse of trench	3	3	13	Construction Regulation 14(4)(iii)	Excavation inspection register by component person daily
			Collapse of adjacent structure	3	3	13	Construction Regulation 11(1)(a)	Safeguard adjacent structures
			Malfunction of machinery	3	3	13	General Machinery Regulations 2(2)	Machinery Inspection Register
			Unauthorized driver	2	2	5	General Machinery Regulations 2(1)	Trained operator, supervision, restricted access to machinery
			Unnecessary Damage to environment	3	2	9	SANParks Environmental Management Plan Construction Regulation 23(g)	Induction Training, designated work area
	F3	Tipping of material	Material falling on to person	3	3	13		PPE, Safe Work area, Flag men
			Malfunction of equipment causing injury/damage	3	3	13	Noise Induced Hearing Loss Regulations 7(1)(a)(b)(c)(d) Noise Induced Hearing Loss Regulations 7(1)(a)(b)(c)(d)	
	F4	Use of Jackhammer	Exposure to excessive noise	3	3	13		PPE
			Injury due to malfunction of equipment	3	3	13		Inspection Register
			Exposure to prolonged vibration	3	3	13	Construction Regulation 24(a)(b)(c)	
	F5	Hitting of electrical cable and services	Electrocution	3	5	22	Construction Regulation 24(a)(b)(c)	Induction training, Site map indicating existing services
	F6	Opening trenches	Risk of collapse	3	3	13	Construction Regulation 13(h)(l)	Stabilize trench, work permit, induction training

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating			Controls Measures	Other Controls
				L	C	R		
			Fall, slip into trench	4	3	17	General Safety Regulations 2(5)(6)	Barricade trench, PPE
	F7	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
Installation of pipes/cables	G1	Installation of water pipes in trenches	Fall, slip into trench	4	3	17	Electrical Installation Regulations(5)(1)(2) Hazardous Biological Agent Regulations 5(2)	Barricade trench, PPE
			Exposure to hazardous biological agents	3	3	13		Induction training, PPE
			Pipe handling/lifting resulting in injury	3	3	13	Electrical Installation Regulations(2)(1)(2)	Induction training, PPE
	G2	Installation of electrical cable in trench	Fall, slip into trench	4	3	17	Electrical Installation Regulations(2)(1)(2)	Barricade trench, PPE
			Cable handling/lifting resulting in injury	3	3	13	Electrical Installation Regulations(2)(1)	Induction training, PPE,
			Dangerous/unsafe cable Joints	3	3	13	Electrical Installation Regulations(5)(1)(2)	Competent installer
Temporary Works	H1	Shoring/formwork/ Shuttering	Collapse of equipment	3	3	13	Construction Regulation 12(1)(2) Construction Regulations 12(3)(a)	Built by competent person, PPE
			Injury during assembly/dismantling	3	3	13		Induction Training, PPE, Supervision
			Failure of equipment	3	3	13	Construction Regulation 12(3)(c)(f) Construction Regulation 12(3)(c)(f)	Inspection register
			Collapse/bursting of structure	2	3	9		Design of structure to be loaded to be approved by competent designer
			Inaccessibility to work area	2	3	9	Construction Regulation 10(1)(b);(2)(a)(b) Construction Regulation 10(1)(b);(2)(a)(b)	Adequate safe access provided
			Fall, slip from shoring/formwork	3	3	13		Fall Protection Plan, PPE, safety nets

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
			Falling material from height	4	3	17	Construction Regulations 12(2)	PPE, safety nets
			Cuts and abrasions from splinters and nails	4	2	12	Construction Regulations 12(2) Construction Regulation 12(3)(d)	PPE
	H2	Stop & Go Procedures - Moving Vehicles	injuries to employees involved in an accidents whiles setting up and taking down Stop/Go procedure	4	4	21		Visibility jackets, radio communication
			Injuries to employees involved in an accidents - in the midst of Stop/Go activity	4	4	21	Construction Regulation 12(3)(d)	
			Injuries to road users involved in an accidents - approaching a Stop/Go activity	4	4	21	Construction Regulation 12(3)(d)	
Concrete	I1	Manual Mixing	Cement dust inhalation	3	2	8	Hazardous Chemical Substances Regulations 8(a)(b)(c) Hazardous Chemical Substances Regulations 9A(2); 2; and Material Data Sheet	Material Safety Data Sheet, PPE, Supervision
			Hazardous substance contact - dry cement mix	3	3	13		PPE, Induction Training
			Spillage/ pollution	3	3	13		PPE, Concrete mixing sheet
			Injury during mixing/ cement burns	3	3	13	General Safety Regulations 5(5)	Induction Training, supervision,PPE
	I2	Concrete Mixer Machine	Poor ventilation causing ill health	3	2	8	General Safety Regulations 5(5) Hazardous Chemical Substances Regulations 10(3)	PPE, additional ventilation
			Accidental injury through flying objects	3	3	13		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	Construction Regulation 20(1)(a)(b) Construction Regulation 20(1)(a)(b)	Induction training, inspection register, all moving parts covered with guard

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
	I3	Bulk Mixing Plant	Unauthorized operation	3	2	8		Competent Operator, Supervision
			Malfunction of equipment causing injury/damage	3	3	13	Safe Operation Procedures (SOP)	Inspection Register & maintenance register
	I4	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) Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	Inspection register
	I5	Exposure to Hazardous chemical substances	Exposure	3	3	13		PPE
			Burns to Skin	3	3	13		
			Inhalation	3	3	13		
Working at heights	J1	Climbing up and down equipment	Fall from equipment	4	3	17	General Safety Regulations (6) 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	Construction Regulation 16(1)	Inspection register
	J2	Working on Scaffolding	Collapse of Scaffolding	3	3	13	Construction Regulation 16(1)	Competent scaffold erector, inspection register
			Person slipping/falling from scaffolding	4	3	17	Construction Regulation 16(2) Construction Regulation 16(1)(2)	Fall protection plan, safety harnesses, barricades
			Falling objects from scaffolding causing injury/damage	4	3	17		PPE, safe work area, catch nets
			Scaffolding used for incorrect purpose	3	2	8		Induction Training, supervision

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Work in Confined Spaces			Sharp edges causing injury	3	2	8	General Safety Regulation 13A(4)(a)(b)	Eliminate or clearly mark edges
	J3	Working on Ladders	Fall from ladder	4	3	17	General Safety Regulation 13A(4)(a)(b)	PPE, safety harness, Fall protection plan
			Ladder not secure - slip	3	3	13	General Safety Regulation 13A(2)(a)(b)	Secure ladder
			Ladder damaged or substandard	3	3	13	General Safety Regulation 13A(2)(a)(b)	Ladder inspection Register
			Ladder used for incorrect purpose	3	2	8	General Safety Regulation 13A(3)(a)(b)	Induction Training, supervision
	K1	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) Occupational Health and Safety 8(1)(2)	Respiratory masks
Construction	L1	Bricklaying	Injury due to sharp bladed tools	3	3	13		PPE, Induction Training
			Fall from heights	3	3	13		PPE. Fall Protection Plan
			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 Operation Procedures (SOP) Safe Operation Procedures (SOP)	Safe work area, Induction Training, barricades
	L2	Plastering	Falling Material onto person	3	3	13		PPE, Induction Training
			Fall from heights	3	3	13	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3) Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	PPE. Fall Protection Plan
			Spillage/ pollution	3	3	13		Drop sheets to be used
			Hazardous substance contact - dry plaster mix	3	3	13		PPE, Induction Training

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Construction			Dust -ill health	3	3	13	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3) Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	PPE, Induction Training
	L3	Painting	Unauthorised use of grinders during preparation for painting	3	3	13		PPE, Supervision
			Exposure to chemicals/ inhalation of fumes	3	4	18		PPE, Supervision
			Spillage/ pollution from paint	3	3	13		PPE, Supervision Proper storage facilities, Fire fighting equipment
			Flammable liquids - Accidental fire	3	4	18	Construction Regulation 25(a)(b)(c)(d)(e)(f)(g) Construction Regulation 25(a)(b)(c)(d)(e)(f)(g)	
			Improper ventilation	3	3	13		Restricted access
			Unauthorized access to flammable liquids	3	3	13		Restricted access
			Fall from heights	3	3	13	Safe Operation Procedures (SOP) Safe Operation Procedures (SOP)	PPE. Fall Protection Plan
	L4	Tiling	Injury due to sharp bladed tools	3	3	13		PPE, Induction Training
			Shards flying into eyes from breaking tiles	4	3	17	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	PPE, Induction Training
			Exposure to chemicals/ inhalation of fumes	3	4	18	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3) Safe Operation Procedures (SOP)	PPE, Supervision
	L5	Carpentry & Joinery	Injury due to sharp bladed tools	3	3	13		PPE, Induction Training
			Shards flying into eyes	4	3	17	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3) Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	PPE, Induction Training
			Exposure to chemicals/ inhalation of fumes	3	4	18		PPE, Supervision
			Injury due to hauling of material	4	3	17	Hazardous Chemical Substances Regulation (36)(37)(38)	PPE, Induction Training
	L5	Chasing of services into brickwork	Dust Inhalation	3	2	8	Hazardous Chemical Substances Regulation (36)(37)(38)	Induction Training & PPE

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Construction			Electrocution - hitting of services				Construction Regulation 24(a) Safe Operation Procedures (SOP)	
			Injury due to sharp bladed tools	3	3	13		PPE, Induction Training
			Shards flying into eyes	4	3	17	Construction Regulations 18(1)(a)(b)(c)	PPE, Induction Training
	L6	Rope Access Work	Falling from height	3	3	13	Construction Regulations 18(1)(a)(b)(c) Construction Regulations 18(2)(a)(b)(3)	
			Failure of equipment	4	3	17		
			Improper equipment	3	3	13	Construction Regulations 10(1)(a)(b)(c) Construction Regulations 10(1)(a)(b)(c)	
	L7	Roof Construction	Falling Material onto person	3	3	13		PPE, Induction Training
			Fall from heights	3	3	13		PPE. Fall Protection Plan
			Collapse of structure	3	3	13	Safe Work Procedure Safe Work Procedure	Competent designer, supervision
	L8	Water pipeline connections	Person coming into contact with liquid under pressure	3	3	13		PPE
			Exposure to thread sealant	3	3	13		PPE
			Release of pressure during pressure test	2	2	5	Hazardous Biological Agents Regulation 4(1)(a)(b)(c);(2)(3) Hazardous Biological Agents Regulation 4(1)(a)(b)(c);(2)(3)	PPE
	L9	Sewer pipeline connections	Person coming into contact with hazardous biological agents	3	2	8		PPE
			Explosion due to hazardous fumes	3	2	8		PPE, Induction Training
		Electrical cable connections/ electrical installations	Person coming into contact with liquid under pressure	3	3	13	Construction Regulation 24(a)	PPE
	L10		Electrocution	3	5	22	Construction Regulation 24(a) Construction Regulation 24(a)(b)(d)(e)	Competent person to do installation & inspection

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Construction			Dangerous/unsafe cable Joints	3	3	13	Safe Work Procedure Hazardous Biological Agents Regulation 10(1)(a)(b); 2(a)(b)(c) Safe Work Procedure Hazardous Biological Agents Regulation 10(1)(a)(b); 2(a)(b)(c)	Supervision
			Accidental switch on while work in progress	3	5	22		Apply lockout procedure before doing connections
			Inadequate material used, causing short circuit/fire	3	3	13		SABS approved material
			Short circuit can blow up when switching	3	5	22		PPE
	L11	Work on Water pipeline reticulation	Person coming into contact with liquid under pressure	3	3	13		PPE
			Exposure to thread sealant	3	3	13		PPE
			Release of pressure during pressure test	2	2	5		PPE
	L12	Work on Sewer pipeline reticulation	Person coming into contact with hazardous biological agents	3	2	8	Safe Work Procedure Hazardous Biological Agents Regulation 10(1)(a)(b); 2(a)(b)(c) Safe Work Procedure Hazardous Biological Agents Regulation 10(1)(a)(b); 2(a)(b)(c)	PPE
			Explosion due to hazardous fumes	3	2	8		PPE, Induction Training
			Suspended pipe work, pipe falling on person	3	2	8		
			Person coming into contact with liquid under pressure	3	3	13	Construction Regulation 24(a)(b)(c)	PPE
	L13	Medium Voltage reticulation	Electrocution	3	5	22	Construction Regulation 24(a)(b)(c) Construction Regulation 24(d)(e)	Competent person to do installation & inspection
			Dangerous/unsafe cable Joints	3	3	13		Supervision
			Accidental switch on while work in progress	3	5	22		Apply lockout procedure before doing connections
			Short circuit can blow up when switching	3	5	22	Occupational Health and Safety Act 24(1)(a)(c) Occupational Health and Safety Act 24(1)(a)(c)	PPE
	L14	Exposure to mechanical components	Injury from moving parts	3	3	13		

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Construction			Electrocution	3	3	13	Hazardous Chemical Substances Regulations 4(a)(b)(d)(f)(g) Material Date Sheet Hazardous Chemical Substances Regulations 4(a)(b)(d)(f)(g) Material Date Sheet Electrical Installation Regulations 9(1) General Machinery Regulations 2(1)(2)(3)(i)	
			Explosions	3	3	13		
	L15	Water & Swimming Pool Treatment	Chemical Exposure					Sampling
			Slip and fall					
			Exposure to UV lights					
	L16	High Voltage reticulation > 1000V	Discharge of cable	3	5	22	Electrical Installation Regulations 9(1) General Machinery Regulations 2(1)(2)(3)(i)	Correct measuring equipment
			Electrocution	3	5	22	Construction Regulation 24(a)(b)(c) Electrical Installation Regulations 2(1)(2)(3)	Competent person to do installation & inspection
			Dangerous/unsafe cable Joints	3	3	13		Supervision
			Accidental switch on while work in progress	3	5	22		Apply lockout procedure before doing connections
			Short circuit can blow up when switching	3	5	22	Occupational Health and Safety Act 24(3)(a)(b)	PPE
	L17	Parking area	Risk of being struck by vehicle while working next to car or vehicle parking	4	4	21	Occupational Health and Safety Act 24(3)(a)(b)	Traffic Management Plan, Road Signs, reflective vests, Flag man
			Failure of regulating traffic causing collisions	3	4	18		Competent person, supervision
			Injury from road users and public	4	4	21	Construction Regulations 23(1)(e)(j)	Restrict access to site, Signage
			Noise pollution	3	2	8	Noise Induced Hearing Loss Regulations 7(1)(a)(b)(c)(d)	PPE
			Inhalation of dust	3	2	8	Hazardous Chemical Substances Regulations 8(a)(b)(c) Occupational Health and Safety 8(1)(2)	PPE

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Construction Ablution Facilities Showers and Changing Area	L18	Paving	Injury due to sharp bladed tools	3	3	13		PPE, Induction Training
			Injury due to hauling of paving blocks	4	3	17		PPE, Induction Training
			Shards flying into eyes from breaking bricks	4	3	17	Occupational Health and Safety Act 24(1)(a)	PPE, Induction Training
	L19	Kerb laying	Bodily injury due to handling	4	2	12	Occupational Health and Safety Act 24(1)(a)	PPE, Induction Training
			Falling of kerb onto person	3	2	8	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	Proper offloading plan, PPE
	L20	Bitumen Surfacing	Burns to Skin	3	2	9	Hazardous Chemical Substances Regulations 10(1)(a)(b)(f)(3)	PPE, Induction training
			Accidental Fire	3	3	13		Fire Fighting equipment, Induction Training, Emergency Plan
			Accidental spillage	4	3	17	Hazardous Chemical Substances Regulations 4(a)(b)(c)	SANParks EMP & Code of conduct
			Potential accident/collision of vehicle	4	3	17	Hazardous Chemical Substances Regulations 4(a)(b)(c)	Induction Training, Reflective vests, safe work area
			Hazardous fumes inhalation	3	3	13	Hazardous Chemical Substances Regulations 6(1)(a)(b)	PPE, Induction Training
			Hazardous Chemical Exposure	3	3	13	Hazardous Chemical Substances Regulations 10(1)(a)(b)	PPE, Material Data Sheet, induction Training
	L21	Ablution/ Shower and Change areas Works	Potential accident falling and trip	4	3	17	Hazardous Chemical Substances Regulations 14(b) Construction Regulations	Induction Training, Reflective vests, safe work area
			Hazardous Chemical Exposure	3	3	13	Hazardous Chemical Substances Regulations 10(1)(a)	PPE, Material Data Sheet, induction Training
			Radioactive exposure due to None-destructed density testing (Radio Active)	3	3	13	Hazardous Chemical Substances Regulations 5(4)	Induction Training, PPE
			Injury due to vehicle/plant	4	3	17	Occupational Health and Safety Act 24(1)(a)(b)(c)	Induction Training, Reflective vests, safe work area

Contractor | **Witness for Contractor** | **Employer** | **Witness for Employer**

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Construction Septic tank, sewer line and Soakaway	L22	Biological Agents	Injury due to inhalation exposer	4	3	17	Regulations for hazardous Biological Agent 7 and 8 Construction Regulation 10(2)(a)(b)(d)(e)	PPE, Induction Training
			Fall, slip	3	3	13		PPE, Fall Protection Plan, Safe Work area
			Cuts and abrasions from sharp material	4	2	12	Construction Regulation 10(4)(c)(ii)(d) Construction Regulation 10(4)(c)(ii)(d)	PPE, Induction Training
			Collapse of structure	2	4	14		Design of structure to be approved by competent designer
			Falling of material onto person	3	3	13	Fall protection plan	PPE, safe work area, catch nets
	L23	Swimming Pool backwash and soakaway line	Valve and pipework objects connection control causing injury/damage	3	3	13	Occupational Health and Safety Act	Safe work area, Induction Training, Trained operator, Lifting Plan
			Soil erosion failure causing object to fall or human	3	3	13	Construction Regulation 22(a)(b)(d)(e) Construction Regulation 22(a)	Inspection Register, Trained operator
			Accidental soil erosion due to non-stable soil or groundwork	2	3	9		determine safe work area, work under supervisor
Swimming Pool	M1	Water supply line, Bio fillers	Back injuries from manual handling	3	3	13		PPE, limit lifting weight
			Soil wash away structure collapsing	3	3	13	General Safety Regulations 9(1)(a)(b)(c)(d) General Safety Regulations 9(1)(a)(b)(c)(d)	PPE, Supervision
			Unsafe work conditions	3	5	22		Soil erosion, flashback arrestors, supervision
			Employees not competent to perform duty	3	3	13	General Safety Regulations 9(3)	Supervision
			Injuries from tie wire connection	3	3	13	General Safety Regulations General Safety Regulations	Proper safe work instruction First Air Box
			Accidental fire	3	3	13	General Administrative Regulations 8(1)(a)(b) General Administrative Regulations 8(1)(a)(b)	Firefighting equipment

Steps in operation	Ref No.	Hazard	Risk	Risk Rating L	C	R	Controls Measures	Other Controls
Fence	M2		Unsafe work conditions	3	3	13		PPE, Induction Training
			Fall from heights	3	3	13		PPE, Fall Protection Plan

LIKELIHOOD RATING	DESCRIPTION	FREQUENCY
5 - Almost certain	Expected to occur in most circumstances	Recurring event e.g. More than once per month.
4 - Likely	The event will probably occur	Event that may occur frequently once per year
3 - Possible	Might occur occasionally	Event that may occur. Once in 3 years
2 - Unlikely	Could happen some time	Event that is unlikely to occur. Once in 10 years
1 - Rare	May happen only in exceptional circumstances	Event that is very unlikely to occur

IMPACTS				
CONSEQUENCE RATING	**ENVIRONMENTAL**	**SAFETY**	**HEALTH**	**FINANCIAL IMPACT**
5 - Critical	Permanent environmental damage to an extensive area	Fatality. Permanent disabling injuries.	Life threatening or permanently disabling illness.	>R 500 000
4 - Major	Long term environmental damage extending to a large area requiring high level intervention	Severe irreversible damage to one or more persons. Lost Time Injury greater than 10 days.	Severe and irreversible health effects or disabling illness.	R100 000 –R499 000
3 - Moderate	Short term environmental damage requiring some intervention	Reversible injury or moderate irreversible impairment. Less than 10 days lost time	Severe but reversible health effects. Results in a lost time illness of less than 10 days.	R10 000 - R99 999
2 - Minor	Short term environmental damage affecting a small area easily remediated	Medically treated injury. Does not lead to restricted duties.	Reversible health effects of concern that results in medical treatment but does not lead to restricted duties.	R1 000 – R9 999
1 - Insignificant	Minimal environmental damage affecting a very small area immediately remediated	Single minor injury to one person. First aid or no treatment required. No lost time.	Reversible health effects of minor concern only requiring minor medical treatment.	R0 - R1 000

LIKELIHOOD							
CONSEQUENCE			1	2	3	4	5
			RARE	UNLIKELY	POSSIBLE	LIKELY	ALMOST CERTAIN
	1	INSIGNIFICANT	1	2	3	4	5
	2	MINOR	2	4	6	8	10
	3	MODERATE	3	6	9	12	15
	4	MAJOR	4	8	12	16	20
	5	CRITICAL	5	10	15	20	25

Risk rating	Risk magnitude	Response
16 - 25	High	Immediate action required to reduce risk. Introduce hard barriers and adequate controls to reduce risk. Control hazards/ Monitor regularly. Ensure the risk has been eliminated so far as is reasonably practicable
9 - 15	Moderate	Urgent attention to improve controls & reduce inherent risks. Monitor systems controls, implement controls, or minimised in accordance with the hierarchy of controls so far as is to reduce the risk.
0 - 8	Low	Tolerable risk level. Carry out activity following review and implementation of effective risk controls in accordance with the hierarchy of controls. Ongoing monitoring and management required by employees and line supervisors to use safe working procedure

Contractor | Witness for Contractor | Employer | Witness for Employer

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**	

Contractor	Witness for Contractor	Employer	Witness for Employer

INITIALS	SURNAME	DESIGNATION	CONTACT DETAILS	HIRA TRAINING	SIGNATURE	DATE
C	Jones	Regional Project Manager	021 983 9304	Yes		
R	Williams	Senior Project Manager	021 983 9304	Yes		
R	Wilson	Project Co-ordinator	021 741 2567	Yes		
Z	Mkhonza	OHS Coordinator Compliance	012 426 5199	Yes		

Maximum Reasonable Consequence (C)

C	People Health and Safety	Property or Production	Environmental or Community	Financial Impact
5	Could Kill or permanently disable	Could cause very major damage > R500K	A Major event creating irreversible damage/loss	>R10m
4	Could cause serious injury or disease (Major LTI)	Could cause major damage R100K to R500K	An event having substantial & permanent consequence to the environment	> R2.5m & < R10m
3	Could cause typical MTI / RWI / LTI	Could cause moderate damage R50K to R100K	An event having substantial temporary or a minor permanent consequence to the environment	> R500k & < R2.5m
2	Could cause First Aid injury	Could cause damage R5K to R50K	An event having temporary or a minor consequence to the environment	> R5k & < R500k
1	Couldn't cause injury or disease	Couldn't cause damage < R5K	No detrimental impact on the environment	<R5k

Likelihood of the event occurring (L)

L	Description of probability or potential of event occurring		
5	Very High	Common regular occurrence	Almost certain to happen
4	High	Possibility of regular occurrence	Likely to happen / Known to happen
3	Moderate	Isolated incidents - Could happen	Has been reported from else where so it could happen
2	Low	Not likely to occur	Unlikely: not likely to happen but not impossible
1	Very Low	Rare - Very unlikely	Practically impossible

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:

Annexure B

DRAFT Environmental Management Programme (EMPr)

FOR THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

NB!! The DRAFT EMPr must be approved by the Department of Forestry, Fisheries and the Environment (DFFE) as part of the Environmental Authorisation (EA) for THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK. The Contractor must take note of the responsibilities for the implementation of the construction project as listed in the DRAFT EMPr.

DEFINITIONS

Auditing:	A systematic and objective assessment of an organization's activities and services conducted and documented on a periodic basis based to a (e.g. ISO 19011:2003) standard.
Biodiversity:	The variety of life in an area, including the number of different species, the genetic wealth within each species, and the natural areas where they are found.
Contractor:	An employer, as defined in section 1 of the Occupational Health and Safety Act 85 of 1993, who performs construction work and includes principal contractors
Environment:	A place where living, non-living and man-made features interact, and where life and diversity is sustained over time.
Evaporation:	The change by which any substance (e.g. water) is converted from a liquid state into and carried off as vapour.
Developer:	One who builds on land or alters the use of an existing building for some new purpose
Independent:	Is independent and has no interest in any business related to the development site, nor will receive any payment or benefit other than fair remuneration for the task undertaken
Groundwater:	Subsurface water in the zone in which permeable rocks, and often the overlaying soil, are saturated under pressure equal to or greater than atmospheric.
Landowner:	Holder of the estate in land with considerable rights of ownership or, simply put, an owner of land
Monitoring:	A systematic and objective observation of an organisation's activities and services conducted and reported on regularly.
Natural vegetation:	All existing vegetation species, indigenous or otherwise, of trees, shrubs, groundcover, grasses and all other plants found growing on a site.
Pollution:	The result of the release into air, water or soil from any process or of any substance, which is capable of causing harm to man or other living organisms supported by the environment.
Protected Plants:	Plant species officially listed under the Threatened or Protected Species regulations as well as on the Protected Plants List (each province has such a list), and which may not be removed or transported without a permit to do so from the relevant provincial authority.
Red Data Species:	Plant and animal species officially listed in the Red Data Lists as being rare, endangered or threatened.
Rehabilitation:	Making the land useful again after a disturbance. It involves the recovery of ecosystem functions and processes in a degraded habitat. Rehabilitation does not

necessarily re-establish the pre-disturbance condition, but does involve establishing geological and hydro logically stable landscapes that support the natural ecosystem mosaic.

Site: Property or area where the proposed development will take place

ACRONYMS

DEA&DP: Department of Environmental Affairs and Development Planning

DFFE: Department of Forestry, Fisheries and the Environment

DWS: Department of Water and Sanitation

ECO: Environmental Control Officer

EA: Environmental Authorisation

EIA: Environmental Impact Assessment

EM: Environmental Manager

EMP: Environmental Management Programme

EO: Environmental Officer

ER: Engineer's Representative

AP: Interested and Affected Party

IEM: Integrated Environmental Management

MS: Method Statement

PM: Project Manager

SANS: South African National Standards

COMPLIANCE OF THIS EMPr WITH THE REQUIREMENTS OUTLINED IN SECTION 24N (2) & (3) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO 107 OF 1998 AS AMENDED):

(2) The environmental management programme must contain-

(a) information on any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts that have been identified in a report contemplated in subsection 24(1A), including environmental impacts or objectives in respect of-

(i) planning and design;
(Refer to Chapter 7 of the EMPr)

(ii) pre-construction and construction activities;
(Refer to Chapter 7 of the EMPr)

(iii) the operation or undertaking of the activity in question;
(Refer to Chapter 7 of the EMPr)

(iv) the rehabilitation of the environment; and
(Refer to Chapter 10 of the EMPr)

(v) closure, if applicable;
(Refer to Chapters 9 and 10 of the EMPr)

(b) details of-

(i) the person who prepared the environmental management programme; and
(Refer to Chapter 1 of the EMPr)

(ii) the expertise of that person to prepare an environmental management programme;
(Refer to Chapter 1 of the EMPr)

(c) a detailed description of the aspects of the activity that are covered by the environmental management programme;
(Refer to Chapter 1 of the EMPr)

(d) information identifying the persons who will be responsible for the implementation of the measures contemplated in paragraph (a);
(Refer to Chapters 2 and 4 of the EMPr)

(e) information in respect of the mechanisms proposed for monitoring compliance with the environmental management programme and for reporting on the compliance;
(Refer to Chapters 2, 4, 7 and 8 of the EMPr)

(f) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and
(Refer to Chapters 7 and 10 of the EMPr)

(g) a description of the manner in which it intends to-

(i) modify, remedy, control or stop any action, activity or process that causes pollution or environmental degradation;
(Refer to Chapter 7 of the EMPr)

(ii) remedy the cause of pollution or degradation and migration of pollutants; and
(Refer to Chapter 7 of the EMPr)

(iii) comply with any prescribed environmental management standards or practices.
(Refer to Chapter 3 of the EMPr)

(3) The environmental management programme must, where appropriate-

(a) set out time periods within which the measures contemplated in the environmental management programme must be implemented;
(Refer to Chapters 2, 4 and 7 of the EMPr)

(b) contain measures regulating responsibilities for any environmental damage, pollution, pumping and treatment of extraneous water or ecological degradation as a result of prospecting or mining operations or related mining activities which may occur inside and outside the boundaries of the prospecting area or mining area in question; and
(Not applicable in terms of proposed activities)

(c) develop an environmental awareness plan describing the manner in which-

(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and
(Refer to Chapters 7 and 11 of the EMPr)

(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment.
(Refer to Chapter 7 and 11 of the EMPr)

DEVELOPER's COMMITMENT

South African National Parks ("SANParks") has committed itself to a set of values that include the maintenance of good relations and transparent communications with all stakeholders, and the dynamic engagement of the larger community.

SANParks undertakes to implement suitable management systems for all the areas and aspects of this operation. This will ensure that development itself and management of the project will comply with legal, technical, environmental and transformation policies and standards.

SANParks, in drafting this EMP for implementation, intends to enable continuous improvement in legal compliance and the sustainable operation of the site.

This EMP intends to further guide the achievement of the strategic objectives of the organization at the project site and seeks to ensure that the basic requirements of ISO 14001: 2015 are satisfactorily met.

The EMP intends to change the way in which the owners, the construction process they have commissioned and the contractor plan for and manage resources to achieve sustainability.

The satisfactory implementation of the EMP on site will require both the full support and commitment of all personnel.

CHAPTER 1

1.1. Executive Summary

This EMP has been prepared principally in compliance with the requirements of Section 24N and Section 34 of the National Environmental Management Act 107 of 1998. This document, together with the conditions in the Environmental Authorisation, must be adhered to.

The EMP must be included as part of all contract documentation for all contractors in the construction phase of the development.

The Author and Enviro-EAP Legal Consulting (Pty) Ltd ("Enviro-EAP")

Enviro-EAP is an independent consulting company and has no interest in any business related to the development site, nor will it receive any payment or benefit other than fair remuneration for the task undertaken, as required in terms of the NEMA Regulations.

This report has been prepared by Johmandie Pienaar, of Enviro-EAP, an environmental consultancy, engaged in providing professional services in the field of environmental planning, -systems, -auditing and -biodiversity assessment and -management.

Johmandie Pienaar holds a Baccalaureus Technologiae Degree (Cum Laude) in Nature Conservation from the Cape Peninsula University of Technology (2008).

She has completed the following short courses at the Centre for Environmental Management;

- Implementing Environmental Management Systems (ISO 14001)(2009);
- Occupational Health and Safety Law for Managers (2010);
- Implementing an OHS Management System based on OHSAS 18001 (2010)
- Occupational Health and Safety Management System OHSAS 18001 Audit: A Lead Auditor Course Based on ISO 19011 and ISO 17021 (2011).

Johmandie has trained as an Environmental Assessment Practitioner since March 2009 and has been involved in the compilation, coordination and management of Basic Assessment Reports, Environmental Impact Assessments, Environmental Management Programmes, Waste Licence Applications, Water Use Licence Applications and Baseline Biodiversity Surveys for numerous clients.

Johmandie has also been involved in conducting environmental and occupational health and safety legal compliance audits for a number of clients.

The client has appointed Enviro-EAP to prepare an Environmental Management Programme that meets the technical standards as required.

1.2. Project Description

This section of the report is included in compliance with Section 24N (2) (e) of the National Environmental Management Act 107 of 1998.

Project - The proposed swimming pool, recreational facilities and associated infrastructure at Die Stroom Picnic Site in the Bontebok National Park, Swellendam will include the following:

- Pool Backwash tank slab = 15m^2 for 5000liter JoJo
- Septic tank and Pump chamber = 40m^2
- Pool pump room = 40m^2
- Ablutions/Shower/Change Area = 105m^2
- Swimming Pool = 315m^2
- Terrace less Pool = 1115m^2

- Fence = 210m long and 1.5m high
- Physically Disabled Ramp =80m^2
- Parking = 240m^2
- Underground electrical cable = 110m long (Area measured in sewer trench calculation)
- Sewer line /Soak-away = 260m long (Area = 390m^2)
- Pool back-wash and soak-away = 260m long (Area measured in sewer trench calculation)
- Water supply line = 25m long (Area 25m^2) (Balance of area measured in sewer trench calculation)
- Soak-away = 150m^2 (15m x 10m)
- 2 x Biofilters = 64m^2 (4m x 8m each)

Construction footprint = 0.44ha
Proposed development will lead to the permanent clearance of ±0.2ha of indigenous vegetation.

The final development footprint for the developments as described above = ± 0.28Ha

See proposed site development plan below:

Map 1: Layout map for developments proposed at Die Stroom Picnic Site in Bontebok National Park, Swellendam.

Contractor	Witness for Contractor	Employer	Witness for Employer

CHAPTER 2

This section of the report is included in compliance with Section 24N (2) (d) of the National Environmental Management Act 107 of 1998.

It deals with issues relating to the implementation of the EMP.

2.1 Organizational Structure

The organizational structure identifies and defines the responsibilities and authority of the various persons and organizations involved in the project. All instructions and official communications regarding environmental matters must follow the organizational structure.

The EMP must be an agenda item at the monthly site and operations meetings and the responsible client representative(s) may attend these meetings in order to provide input with respect to compliance with the EMP.

In some instances, an Environmental Consultant may be appointed to provide this input.

2.2 Responsibilities and Functions of the Environmental Control Officer

The ECO will be responsible for monitoring, reviewing and verifying compliance with the EMP and/or EA by all contractors and site management during site visits.

The ECO duties in this regard will include the following:

With the assistance, where necessary of the ER, to ensure all necessary environmental authorizations and permits have been obtained and are available and visible on site at the ER offices.

- monitor and verify that the EMP and/or EA is adhered to at all times and by taking action if the specifications are not followed;
- monitor and verify that environmental impacts are kept to a minimum;
- review and approve construction method statements, with input as appropriate from the ER;
- assist the contractor in finding environmentally responsible solutions to problems;
- report on the environmental issues at the site meetings and other meetings that may be called regarding environmental matters, if requested by ER;
- inspect the site and surrounding areas regularly with regard to compliance with the EMP and/or EA;
- monitor that environmental awareness training have been provided to all new personnel coming onto site;
- advise management on the removal of person(s) and/or equipment not complying with the specifications, after collaboration with the ER. Recommendations must be recorded by the ER in a Site Instruction Book.
- ensure that activities on site comply with known legislation of relevance to the environment;
- recommend the issuing of penalties via the developer for contraventions of the EMP and/or EA;
- keep a photographic record of progress on site from an environmental perspective; and
- undertake a continual internal review of the EMP and/or EA and submit a report to the developer and the responsible DEA&DP Environmental Official as according to EA conditions.

2.3 Agreed Work Plan and Site Visit Schedule of ECO

After initial construction start-up site visit it is recommended that an ECO site visit be conducted once a month during construction.

Information recording activity on site, and any guidelines or instructions emanating there from will be routinely made available electronically to the developer and applicable contractors and a copy of the report must be available at the site office.

Clearly matters of urgency or immediate action may be channelled appropriately on an urgent basis.

2.4 Site Manager

The site manager will have the following environmental control responsibilities:

- In conjunction with the ECO will present the environmental education programs to all persons employed on site.
- Consult with the ECO, landowner, developer and any contractor to resolve all environmental issues.
- Issue any instructions from the ECO to the management team via a formal site instruction book or appropriate management tool used for the purpose.
- Take responsibility for the penalty system. The ECO and developer recommendations must be considered when deciding whether or not to impose a penalty.
- The engineer will, via the ECO actions, be accountable for the overall implementation of the Environmental Management Programme.
- Keep a site diary and complaints register.

2.5 Contractors

As part of any tender, the tendering contractor must submit a first draft of a contractor's programme, to the developer that must include the environmental considerations to be followed prior to appointment.

The appointed Contractor's representative will have the following responsibilities:

- Ensure that all staff is familiar with the Environmental Management Programme, which explains the environmental policy for the project.
- Allow for sufficient time between surveying the exact locations where services will be intended and actual construction, for the ECO to facilitate and instruct for the removal of plants, seeds and cuttings if necessary.
- The contractor must keep his personnel fully aware of environmental issues and ensure they show adequate consideration to all environmental aspects.
- Establish environmental signs to be erected on the construction site at locations identified by the ECO and approved by the engineer.
- Be responsible for the cost of the restoration of any damage caused, in environmentally sensitive areas, as a result of contractor responsibility regarding negligence. This must be done in accordance with the engineer / ECO's specifications.
- Take responsibility and active steps to avoid any increase in the fire hazard.
- The contractor must take responsibility for implementing all the relevant provisions of the EMP, or if he encounters difficulties with the specifications, he must discuss alternative approaches with the ECO and engineer prior to proceeding.

Failure to comply with the EMP may result in the application of fines as set out, and any reported non-compliance may result in the suspension of work or termination of a contract.

2.6. Record keeping of activities, inclusive of recording of non-compliances and corrective actions

The site manager must keep a record of all activities relating to environmental matters on site, including:

- meetings attended;
- method statements;
- issues arising on site;

- cases of non-compliance with the EMP;
- corrective action taken and penalties issued.

This information will be recorded in an appropriate manner in a site diary, registers, issues/warning book, etc.

2.7 Compliance with other legislation

It is important that all on site staff are aware of other relevant legislation that may relate to the activities taking place on site, especially local authority required compliances.

CHAPTER 3

APPLICABLE LEGISLATION, POLICY AND ENVIRONMENTAL PRINCIPLES

Take Note: the list below is by no means a comprehensive list, but a list of relevant applicable Acts. It does not identify the specific applicable sections and regulations. The Developer is ultimately responsible to identify and ensure that compliance with all relevant legislation, policies etc. is taking place on site at all times.

3.1. Potential Applicable Legislation/Policies/Guidelines/By-laws Identified

1. ADVERTISING ON ROADS AND RIBBON DEVELOPMENT ACT, 21 OF 1940
2. BASIC CONDITIONS OF EMPLOYMENT ACT 75 OF 1997
3. COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT 130 OF 1993
4. CONSERVATION OF AGRICULTURAL RESOURCES ACT, 43 OF 1983
5. CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, 1996
6. ENVIRONMENT CONSERVATION ACT, 73 OF 1989, WESTERN CAPE NOISE CONTROL REGULATIONS
7. EMPLOYMENT EQUITY ACT, 55 OF 1998
8. ENVIRONMENT CONSERVATION ACT, 73 OF 1989
9. FENCING ACT, 31 OF 1963
10. HAZARDOUS SUBSTANCES ACT, 15 OF 1973
11. LABOUR RELATIONS ACT 66 OF 1995
12. NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT, 103 OF 1977
13. NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 107 OF 1998
14. NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT 39 OF 2004
15. NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 10 OF 2004
16. NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 59 OF 2008
17. NATIONAL FORESTS ACT, 84 OF 1998
18. NATIONAL HERITAGE RESOURCES ACT, 25 OF 1999
19. NATIONAL VELD AND FOREST FIRE ACT, 101 OF 1998
20. NATIONAL WATER ACT 36 OF 1998
21. OCCUPATIONAL HEALTH AND SAFETY ACT 85 OF 1993
22. TOBACCO PRODUCTS CONTROL ACT 83 OF 1993
23. WATER SERVICES ACT 108 OF 1997
24. SWELLENDAM LOCAL PARK MANAGEMENT BY LAWS

CHAPTER 4

COMPLIANCE

This section of the report is included in compliance with Section 24N (2) I of the National Environmental Management Act 107 of 1998.

4.1. Monitoring and Auditing

4.1.1 Introduction

In keeping with current environmental and associated legislation, all environmental management procedures and actions must be reviewed and refined on an ongoing basis.

This is in accordance with the dynamic nature of environmental management and allows for the timeous identification and mitigation of issues as they come to light.

The process of review and refinement, built into the requirements of the EMP, is known as monitoring and auditing.

4.1.2. Roles and responsibilities

Efficient implementation of the performance specifications, effective monitoring and auditing, as well as clear responsibility and accountability allocation requires that various role-players be defined for the construction implementation project.

Depending on the nature and scale of a project, implementing teams could be composed of any number of role-players, each with their own specified responsibilities.

Therefore, for the purpose of this document, the following role-players are defined, based purely on responsibility and accountability allocation. The actual designation of role-players may vary, but the responsibilities will largely remain as stated.

4.1.2.1. Developer/landowner or custodian of the land

The developer/landowner or custodian of the land is the person or organization with decision-making capacity for the land in question, and thus ultimately accountable for what takes place on that land.

4.1.2.2. Contractor

Contractors are appointed to undertake the works as specified in the contract. It is the responsibility of the contractor to do whatever is necessary from their side to ensure that he or an appointed advisor is well versed in environmental studies, so that they may accurately and efficiently carry out the requirements of the environmental specification.

The contractor is liable for any and all remedial work required in terms of the environmental specification, resulting from his environmental negligence, mismanagement and / or non-compliance.

4.1.2.3. Environmental Control Officer

An environmental control officer will manage and undertake monthly environmental inspections for the duration of the construction phase of the project as required.

The contractors or line management are answerable to the ECO for non-compliance with the performance specifications. Issues of non-compliance raised by the ECO/EO must be taken up by the project manager, and resolved as per the conditions of his contract.

Decisions regarding environmental procedures, specifications and requirements which have a cost implication (i.e. those that are deemed to be a variation and not allowed for in the performance specification) must be endorsed by the project manager.

4.2. The Monitoring Procedure

Environmental monitoring is the continuous evaluation of the status and condition of environmental elements. Its purpose is to detect change that takes place in the environment over time and involves the measuring and recording of physical, social and economic variables associated with development impacts.

Many techniques for environmental monitoring have been proposed, each detailing a specific protocol. Regardless of which technique is used, the ultimate aim is that each environmental management specification be checked by means of a system in which a score may be allocated for:

- Full compliance
- Satisfactory performance
- Unsatisfactory performance and
- No action taken

Completed monitoring reports will be submitted to the project engineer, developer/landowner and the contractor, who will attend to issues. These reports must be kept on file and be made available upon request by any environmental authority requesting such.

All persons employed, the contractor or his sub-contractors, must abide by the requirements of these performance specifications as they apply to the works. Any employees, the contractor or his sub-contractors found to be in breach of any of the environmental specifications, may be ordered to vacate the site forthwith and/or be subject to a disciplinary process.

The order may be given orally or in writing by the ECO. Confirmation of an oral order will be given as soon as practicable, but lack of confirmation in writing must not be a cause for the offender to remain on site, or not be subject to a disciplinary process. Supervisory staff, the contractor or his sub-contractor may not direct any person to undertake any activities that would place such person in contravention of the EMP, legislation and specifications.

The contractor and staff are deemed not to have complied with the performance specifications if:

- There is evidence of wilful or accidental contravention of any specification included in the specification;
- There is evidence of the contractor carrying out activities not permitted in terms of the EMP, contract and / or the specification;
- There is evidence of environmental negligence and / or mismanagement resulting in negative impacts on the environment;
- Has failed to meet with the requirements of the approved schedule.

The contractor and developer/landowner will be informed via ECO monthly reports, as well as by means of direct instruction (if necessary) as to what corrective actions are required in terms of environmental compliance.

Disregard for an instruction, and failure to respond adequately to complaints from the public will be construed as non-compliance. Non-compliance may lead to parties being penalised.
In more serious cases, the ECO may give notice, and halt operations until such a time that the corrective action is taken and the site complies with the performance specifications.

In more serious cases, the ECO may give notice, and halt operations until such a time that the corrective

action is taken and the site complies with the performance specifications.

In cases of persistent non-compliance, the contractor or staff may be evicted from site after disciplinary process is followed. Only the developer/landowner may issue such instruction, retaining any costs required to remedy situations perpetuated by environmental negligence, mismanagement and / or non-compliance.

4.3. The Auditing Procedure

Environmental auditing is the process of comparing the impacts predicted with those that have actually occurred during implementation.

An environmental performance audit examines and assesses practices and procedures that, in the event of failure, would cause an environmental impact or result in an environmental risk. During each of the lifecycle phases, various issues will be monitored. The performance audit will ensure that the monitoring was correctly undertaken and that compliance was best achieved.

To these ends the project will be audited versus this EMP for effectiveness. ISO/SANS 19011:2013 auditing standards will be applied.

Audits will be undertaken at completion of the construction phase. Audit reports will be submitted to management, who will attend to all noted issues.

These reports must be kept on record and be made available upon request by the developer/landowner/custodian of the land and any environmental authority or I&AP requesting such.

4.4. Compliance Auditing and Monitoring Schedule/s

Construction Phase	**Submission of Audit Report To**
Once-off Pre-construction ECO compliance monitoring	Park Management
Monthly ECO compliance monitoring	Park Management
Annual ECO compliance monitoring report	Park Management and DFFE
Completion of Construction Phase ECO compliance monitoring (at the end of each construction phase completion)	Park Management and DFFE
Operational Phase	
Once operational compliance monitoring will be responsibility of the park management to ensure that operations of the site is taking place in line with the requirements of the park management plan.	

4.5 Retentions and Penalties

It is recommended that a penalty retention system be combined with the penalty system to both motivate and compel the contractor to adhere to the EMP for the duration of the contract.

In this way incentives may be created to perform (i.e. in the form of the retention amounts that will only be paid to the contractor at the end of the contract), without creating the misunderstanding that adherence to the EMP is optional.

Persistent non-compliance will not only result in the contractor forfeiting any retention amount, but he will also be fined.

Of importance is that the contract specifies exactly how the penalty and retention system will operate, as well as how any funds resultant from retentions and penalties will be utilised.

All such funds must be used to improve environmental conditions on the site in general..

4.5.1. The retention system

For this system, a percentage value for each of the sections priced for in the environmental bill of quantities is retained until the full completion of the contract works.

If the monitoring process reveals persistent and/or wilful non-compliance with any aspect of the environmental performance specifications, then the full retention associated with that particular item will be withheld.

The project may then apply these retained funds to rectify the problem on site possibly making use of other or alternate resources at his disposal.

At the end of the contract or action, all remaining environmental retention amounts will be paid out to the contractor or staff pending approval by the ECO, after having confirmed full compliance with the relevant performance and rehabilitation specifications.

4.5.2. Penalty System

A system of penalties will be introduced to reinforce environmentally sensitive and prudent behaviour. The maximum penalties that will be fined per incident that may be enforced are listed below. The penalty amount will be determined (inter alia) by the severity of the offence.

Any defacing or cutting down trees, existing infrastructure, not specified to be removed	R5000 each
Disturbance to natural veld and wetlands outside of approved development area	R1000 / m^2
Catching or harming wild animals	R3000 plus charges at SAPS
Litter resulting from operation	R250 / offence / day
Entering a no-go area on foot	R500
Entering a no-go area in a vehicle	R5000
Making a fire outside an approved fireplace	R20 000
Disposal of any litter or construction material in a no-go or non-specified area	R1000 / m^2
Dumping of cement, concrete, fuel or oil in an area or other than that authorised and suitable	R10 000
Any damage to plant life in a no-go area	R1000
Failure to use portable / toilets	R100 / observed incident or evidence of human excrement in the veld
Waste of water resources during construction phase	R1000/day
Any actions contrary to the Environmental Policy which continue after an initial penalty	Termination of contract.

In addition to the above, all costs incurred by the client/developer to remedy any damage will be the responsibility of the offender.

Should the monitoring process reveal acts of persistent and / or wilful non-compliance with the environmental performance specifications, then the contractor or staff member will be fined according to the specified value of that item.

4.6. Method Statements

Upon request from the ECO the contractors must provide written statements for discussion with the ECO on environmentally sensitive aspects of the contract. Environmentally sensitive aspects include by example excavations, work close to sensitive areas, collection and storage of top soil and vegetation, erosion control, wash water control, waste control, etc.

Methods Statement (MS) Content

It is important to note that the ECO may request further methods specification, if it be deemed necessary in his view.

Examples of standard Methods Statement which may be requested by the ECO:

- MS to specify the fire drill procedure to be followed in the event of a fire.
- MS to state how pollution will be prevented from entering any environmental system. To include the methods of filtering out pollution such as oil, petrol and waste from any working areas or roads.
- MS to specify special measures that will be needed in the event of large pollution spills.
- MS to indicate the timing and sequence of events to follow in sensitive areas to give sufficient time for the ECO to survey these areas and remove plants.
- MS on how recommended no-go/no-development areas will be demarcated and remain demarcated throughout construction phase.
- MS on water saving management plan that will be implemented during construction.

The Method Statement must include a site plan, preparatory steps, materials, and supervision details.

Example of Environmental Method Statement Form:

METHOD STATEMENT

CONTRACT:……..……... **DATE:**……..

PROPOSED ACTIVITY (give title of method statement and reference number from the EMP):

WHAT WORK IS TO BE UNDERTAKEN (give a brief description of the works):

Contractor	**Witness for Contractor**		**Employer**	**Witness for Employer**

WHERE ARE THE WORKS TO BE UNDERTAKEN (where possible, provide an annotated plan and a full description of the extent of the works):

START AND END DATE OF THE WORKS FOR WHICH THE METHOD STATEMENT IS REQUIRED:

Start Date:	End Date:

HOW ARE THE WORKS TO BE UNDERTAKEN (provide as much detail as possible, including annotated maps and plans where possible):

Note: please attach extra pages if more space is required

DECLARATIONS

1) ENVIRONMENTAL SITE OFFICER/ ENGINEERS REPRESENTATIVE [select correct term]

The work described in this method statement, if carried out according to the methodology described, is satisfactorily mitigated to prevent avoidable environmental harm:

_____ _____
(signed) (print name)

Dated: _____

Contractor	**Witness for Contractor**		**Employer**	**Witness for Employer**

2) PERSON UNDERTAKING THE WORKS

I understand the contents of this method statement and the scope of the works required of me. I further understand that this method statement may be amended on application to other signatories and that the ECO / EO and ER will audit my compliance with the contents of this method statement

_____ _____
(signed) (print name)

Dated: _____

3) APPROVING AUTHORITY (Engineer)

The works described in this method statement are approved.

_____ _____ _____
(signed) (print name) (designation)

Dated: _____

Contractor	Witness for Contractor	Employer	Witness for Employer

CHAPTER 5

This section of the report is included in compliance with Section 24N (2) I of the National Environmental Management Act 107 of 1998.

5.1. Good Housekeeping

The developer/landowner will ensure the maintenance of “good housekeeping” practices during operations.

This will help avoid several disputes regarding responsibility and will allow for the smooth running of the operation as a whole.

Good housekeeping extends beyond the environmentally sensitive construction methods to include the care for and preservation of the surrounding environment.

5.2. Record Keeping

The developer/landowner will ensure that a filing system, identifying all documentation related to the EMP, is established.

A list of reports likely to be generated during the project is set out below.

All applicable documentation must be included in the environmental filing system catalogue or document retrieval index.

- Approved EMP, authorizations, licenses or permits;
- Final design documents and diagrams issued;
- All communications detailing changes of design/scope that may have environmental implications;
- Daily, weekly and monthly site monitoring reports (where applicable);
- Complaints register;
- Environmental training manual;
- Environmental training attendance registers;
- Incident and accident reports;
- Evidence of all disposed contaminated products, waste or residues, which have been generated during construction;
- Emergency preparedness and response plans;
- Copies of all relevant environmental legislation;
- Permits and legal documents as part of emergency preparedness teams e.g. fire teams, etc.;
- Crisis communication manual;
- Disciplinary procedures;
- Monthly site meeting minutes during construction;
- All method statements for all phases of the project.

All documentation should be kept on site, must be readily available at all times and made available to any person on request.

5.3 Document Control

The developer/landowner will be responsible for establishing a procedure for document control.

The document control procedure must comply with the following requirements:

- Documents must be identifiable by organisation, division, function, activity and contact person;

- Every document must identify the person and their positions, responsible for drafting and compiling the document, for reviewing and recommending approval, and final approval of the document for distribution;
- All documents must be dated, provided with a version number and reference number, filed systematically, and retained for a specified period.

The owner will ensure that documents are periodically reviewed and revised where necessary, and that current versions are available at all locations where operations essential to the functioning of the EMP are performed. All documents will be made available to the external auditor.

5.4 Reporting Requirements

All advice and recommendations made by the ECO must with the project engineer/engineers compliance be recorded on site in the site instruction book/suitable register for his attention.

All spills will need to be documented and reported to DWS and other relevant authorities.

CHAPTER 6

6.1. Public Communication Protocols

This section of the report is included in compliance with Section 24N (2) I of the National Environmental Management Act 107 of 1998.

The developer/landowner must be responsible for regulating public access to information and compliance reporting.

The developer/landowner must respond to third party or public queries and complaints.

The developer/landowner must also be responsible for maintaining the compliance register to record complaints received and action taken.

CHAPTER 7

This section of the report is included in compliance with Section 24 N 2 (d – g) and 3 (a – b) of the National Environmental Management Act 107 of 1998.

Copies of the specialists reports as listed in the table below must be kept at the construction site office and all management and staff members must be aware of and implement the relevant specialist's recommendations as and when required.

Specialist Recommendations to be adhered to before and during commencement of construction, operational and decommissioning Phases

Terrestrial Biodiversity Impact Assessment, August 2022, Nicolaas Hanekom, Enviro-EAP:

The following management and mitigation measures as proposed are to be implemented:

- Clearance of indigenous vegetation must be kept to a minimum clearly demarcating the proposed development area before construction commencement, maintaining the demarcation throughout the construction phase and only clearing the area required for the development

- All unused construction materials must be removed from site immediately after construction completion.
- No waste pollution may occur due to the construction activities and all waste must be contained and disposed of at the municipal landfill site on a daily basis.
- All landscaping of undeveloped and areas disturbed during construction must be done with indigenous vegetation.
- Grass for landscaping must be limited to *Cynodon dactylon* (kweekgras) or *Panicum maximum* (buffelsgras), no kikuyu grass (Pennisetum clandestinum) may be used or planted for landscaping of disturbed areas.
- Planted grass such as for the proposed picnic area must be prevented from encroaching further into the remaining and rehabilitating indigenous vegetation landscaped and undeveloped areas.
- Search and rescue of viable indigenous vegetation species must be conducted prior to site clearance within the demarcated development areas. Indigenous species rescued can be used for landscaping of impacted construction areas after construction completion. Specific viable species to be rescued prior to site clearance must be identified by a suitable botanical specialist once the proposed development site has been demarcated.
- Park management will be responsible for rescue/removal of these plants and to take care of these plants until it can be used on site for landscaping and rehabilitation purposes.
- Construction activities must be completed as quickly as possible to limit disturbance caused to animal and bird life as far as possible.
- No trapping, hunting or any injury to animal or birdlife may occur during construction activities.
- Search and rescue operations must be conducted before site clearance activities commences and should any local animal or birdlife be found within the construction area they must be carefully moved to the adjacent natural areas by park management not to be impacted upon.
- The discharge of stormwater must not lead to waste pollution or erosion of surrounding indigenous vegetation areas.
- Ongoing monitoring of erosion within and around the development site and should any signs of erosion be detected immediate rectification and further prevention measures must be put in place under the guidance of a qualified ecological specialist so as to prevent any additional cumulative impacts on the environment.
- The impacted site must be monitored for alien vegetation encroachment and should alien vegetation encroach on the impacted site it must be removed and monitored in accordance with parks alien vegetation management plan.
- All infrastructure and developments must be maintained in a good working condition not leading to any environmental degradation.
- Swimming pool water and sewage may not be discharged into the environment and must be managed in a closed system which must be maintained and monitored for leakages.
- Good waste management practices must be implemented not allowing any waste to accumulate or be disposed of in surrounding natural areas or landscaped indigenous vegetation areas.
- Undeveloped and landscaped indigenous vegetation areas on the property must be maintained in such a manner that the use of the facilities at Die Stroom picnic site does not lead to destruction of any additional indigenous vegetation. To achieve this the park must maintain the swimming pool fencing, remove any alien vegetation on the site which may encroach on natural areas, make sure that planted indigenous grass does not encroach on adjacent undeveloped and landscaped indigenous vegetation areas and place sign boards conspicuously along the edge of the undeveloped areas indicating that indigenous vegetation may not be picked/destroyed and is to be conserved at all times.
- No trapping, hunting or any injury to animal or birdlife may occur during operational activities. Should any local animal or birdlife be found within the fenced swimming pool

area during operational activities they must either be left undisturbed or carefully be moved to the adjacent natural areas by park management not to be impacted upon.

- No high intensity lights may be left on during the night that shines outwards unto the adjacent indigenous vegetation areas as this will lead to light pollution impacting on especially nocturnal animal and bird species.

Plant Impact Assessment, August 2022, Nicolaas Hanekom Enviro-EAP

The following management and mitigation measures as proposed are to be implemented

- Clearance of indigenous vegetation must be kept to a minimum clearly demarcating the proposed development area before construction commencement, maintaining the demarcation throughout the construction phase and only clearing the area required for the development
- All unused construction materials must be removed from site immediately after construction completion.
- No waste pollution may occur due to the construction activities and all waste must be contained and disposed of at the municipal landfill site on a daily basis.
- All landscaping of undeveloped and areas disturbed during construction must be done with indigenous vegetation.
- Grass for landscaping must be limited to *Cynodon dactylon* (kweekgras) or *Panicum maximum* (buffelsgras), no kikuyu grass (Pennisetum clandestinum) may be used or planted for landscaping of disturbed areas.
- Planted grass such as for the proposed picnic area must be prevented from encroaching further into the remaining and rehabilitating indigenous vegetation landscaped and undeveloped areas.
- Search and rescue of viable indigenous vegetation species must be conducted prior to site clearance within the demarcated development areas. Indigenous species rescued can be used for landscaping of impacted construction areas after construction completion. Specific viable species to be rescued prior to site clearance must be identified by a suitable botanical specialist once the proposed development site has been demarcated.
- Park management will be responsible for rescue/removal of these plants and to take care of these plants until it can be used on site for landscaping and rehabilitation purposes.
- The discharge of stormwater must not lead to waste pollution or erosion of surrounding indigenous vegetation areas.
- Ongoing monitoring of erosion within and around the development site and should any signs of erosion be detected immediate rectification and further prevention measures must be put in place under the guidance of a qualified ecological specialist so as to prevent any additional cumulative impacts on the environment.
- The impacted site must be monitored for alien vegetation encroachment and should alien vegetation encroach on the impacted site it must be removed and monitored in accordance with parks alien vegetation management plan.
- All infrastructure and developments must be maintained in a good working condition not leading to any environmental degradation.
- Swimming pool water and sewage may not be discharged into the environment and must be managed in a closed system which must be maintained and monitored for leakages.
- Good waste management practices must be implemented not allowing any waste to accumulate or be disposed of in surrounding natural areas or landscaped indigenous vegetation areas.
- Undeveloped and landscaped indigenous vegetation areas on the property must be maintained in such a manner that the use of the facilities at Die Stroom picnic site does not lead to destruction of any additional indigenous vegetation. To achieve this the park must maintain the swimming pool fencing, remove any alien vegetation on the which may encroach on natural areas, make sure that planted indigenous grass does not encroach on adjacent undeveloped and landscaped indigenous vegetation areas and place sign boards conspicuously along the edge of the undeveloped areas indicating that indigenous vegetation may not be picked/destroyed and is to be conserved at all times.

Animal Compliance Statement, August 2022, Nicolaas Hanekom Enviro-EAP

The following management and mitigation measures are proposed and must be implemented:

- Clearance of indigenous vegetation must be kept to a minimum clearly demarcating the proposed development area before construction commencement, maintaining the demarcation throughout the construction phase and only clearing the area required for the development.
- All unused construction materials must be removed from site immediately after construction completion.
- No waste pollution may occur due to the construction activities and all waste must be contained and disposed of at the municipal landfill site on a daily basis.
- All landscaping of undeveloped and areas disturbed during construction must be done with indigenous vegetation.
- Construction activities must be completed as quickly as possible to limit disturbance caused to animal and bird life as far as possible.
- No trapping, hunting or any injury to animal or birdlife may occur during construction activities.
- Search and rescue operations must be conducted before site clearance activities commences and should any local animal or birdlife be found within the construction area they must be carefully moved to the adjacent natural areas by park management not to be impacted upon.
- No trapping, hunting or any injury to animal or birdlife may occur during operational activities. Should any local animal or birdlife be found within the fenced swimming pool area during operational activities they must either be left undisturbed or carefully be moved to the adjacent natural areas by park management not to be impacted upon.
- The discharge of stormwater and management of effluent must not lead to waste pollution or erosion of surrounding indigenous vegetation areas.
- Ongoing monitoring of erosion within and around the development site and should any signs of erosion be detected immediate rectification and further prevention measures must be put in place under the guidance of a qualified ecological specialist so as to prevent any additional cumulative impacts on the environment.
- The impacted site must be monitored for alien vegetation encroachment and should alien vegetation encroach on the impacted site it must be removed and monitored in accordance with the parks alien vegetation management plan.
- All infrastructure and developments must be maintained in a good working condition not leading to any environmental degradation.
- Good waste management practices must be implemented not allowing any waste to accumulate or be disposed of in surrounding natural areas or landscaped indigenous vegetation areas.
- No high intensity lights may be left on during the night that shines outwards unto the adjacent indigenous vegetation areas as this will lead to light pollution impacting on especially nocturnal animal and bird species.
- Undeveloped and landscaped indigenous vegetation areas on the property must be maintained in such a manner that the use of the facilities at Die Stroom picnic site does not lead to destruction of any additional indigenous vegetation. To achieve this the park must maintain the swimming pool fencing, remove any alien vegetation on the which may encroach on natural areas, make sure that planted indigenous grass does not encroach on adjacent undeveloped and landscaped indigenous vegetation areas and place sign boards conspicuously along the edge of the undeveloped areas indicating that indigenous vegetation may not be picked/destroyed and is to be conserved at all times

Aquatic Compliance Statement, August 2022, Nicolaas Hanekom Enviro-EAP

The following impact management measures relating to preventing and where prevention is not possible mitigation potential impacts on freshwater resources of the site and surrounds must be implemented and included in the EMPr, and should they be implemented the proposed picnic site development activities should not have any significant negative impacts on any aquatic features present on the site or surrounds:

- Clearance of indigenous vegetation and physical disturbance on site must be kept to a minimum clearly demarcating the proposed development area before construction commencement, maintaining the demarcation throughout the construction phase and only clearing the area required for the development.
- All unused construction materials must be removed from site immediately after construction completion.
- No waste pollution may occur due to the construction activities and all waste must be contained and disposed of at the municipal landfill site on a daily basis.
- All landscaping of undeveloped and areas disturbed during construction must be done with indigenous vegetation.
- Grass for landscaping must be limited to Cynodon dactylon (kweekgras) or Panicum maximum (buffelsgras), no kikuyu grass (Pennisetum clandestinum) may be used or planted for landscaping of disturbed areas.
- Planted grass such as for the proposed picnic area must be prevented from encroaching further into the remaining and rehabilitating indigenous vegetation landscaped and undeveloped areas.
- The discharge of stormwater must not lead to waste pollution or erosion of surrounding undeveloped areas.
- Ongoing monitoring of erosion within and around the development site and should any signs of erosion be detected immediate rectification and further prevention measures must be put in place under the guidance of a qualified ecological specialist so as to prevent any additional cumulative impacts on the environment.
- The impacted site must be monitored for alien vegetation encroachment and should alien vegetation encroach on the impacted site it must be removed and monitored in accordance with parks alien vegetation management plan.
- All infrastructure and developments must be maintained in a good working condition not leading to any environmental degradation.
- Swimming pool water and sewage may not be discharged into the environment and must be managed in a closed system which must be maintained and monitored for leakages.
- No high intensity lights may be left on during the night that shines outwards as this will lead to light pollution impacting on especially nocturnal aquatic animal and bird species.
- Use only existing access roads and do not create any new access roads to proposed development sites especially through the drainage line.
- No pollution of surface water or ground water resources may occur due to activities on the property. Oil spillages from vehicles on site must be controlled to prevent pollution of water resources.

GOALS FOR PLANNING AND DESIGN PHASE

Overall Goal for Planning and Design Phase: Undertake the planning and design phase of the development in a way that:

- Ensures that the design of the development responds to the identified environmental constraints and opportunities.
- Ensures that pre-construction activities are undertaken in accordance with all relevant legislative requirements.
- Ensures that adequate regard has been taken of any landowner concerns and that these are appropriately addressed through design and planning (where appropriate).
- Ensures that the best environmental options are selected for the project.
- Enables the development construction activities to be undertaken without significant disruption to other land uses in the area.
- In order to meet this goal, the following objectives have been identified, together with necessary actions and monitoring requirements.

OBJECTIVE PD1: ENSURE THE DESIGN OF THE DEVELOPMENT RESPONDS TO THE IDENTIFIED ENVIRONMENTAL CONSTRAINTS AND OPPORTUNITIES

The most sensitive landscape features for planning purposes in the study area is the surrounding medium botanical sensitivity area, wetlands and sandy soil of the development sites which could make certain areas more susceptible to erosion. Access roads and construction camp areas should be placed so as to minimise the impacted area and construction sites should be clearly demarcated and no additional areas outside of the approved development footprint areas may be impacted upon.

Project Component/s	Access roads Construction area Development Layout		
Potential Impact	Design fails to respond optimally to the environmental consideration.		
Activities/Risk Sources	Poor consideration of the natural landscape features.		
Mitigation: Target/Objective	Ensure that the design of the developments responds to the identified environmental constraints and opportunities.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Design the proposed development taking into account all environmental impacts and aspects as identified during the assessment process.		Park Management Developer Town planner Engineer EAP	Design Phase
The developer together with the inputs of the engineer, EAP and town planner must determine which technological alternatives will suit the proposed development site the best and which are reasonable and feasible to implement, also taking into account funding available for the development. Some of these technological alternatives to be considered for the proposed development include: • Type of construction materials used. • Reduce hard surfacing as far as possible to encourage rain water to seep back into the ground rather than being carried away into the drainage systems. • Designed paved areas so that water run-off is slowed down and where possible used soak away and permeable paving that allows water to filter into the ground. • Aim for and promote zero waste in planning, operation, management, maintenance and demolition of the structures. I.e. build waste avoidance into the process at a design phase, by specifying products and materials that have less wasteful production processes and don't create wasteful emissions during construction, maintenance and demolition of a structure.		Park Management Developer Town planner Engineer EAP	Design Phase
Access roads to be carefully planned along existing access roads to minimise the impacted area and prevent unnecessary over compaction of soil.		Park Management Developer Town planner Engineer EAP Contractor	Design phase

As far as possible new roads must link with existing roads infrastructure.	Park Management Developer Town planner Engineer EAP Contractor	Design phase
The holder of an environmental authorisation has the responsibility to notify the competent authority of any alienation, transfer and, change of ownership rights in the property on which the activity is to take place.	Park Management Developer	Pre-construction
Fourteen (14) days written notice must be given to the Department that the activity will commence. The notification must include a date on which the activity will commence as well as the reference number.	Park Management Developer	Pre-construction
ECO to be appointed prior to the commencement of any authorised activities. Once appointed the name and contact details of the ECO must be submitted to the DFFE.	Park Management Developer	Pre-construction
All safety requirements for the construction and operation of proposed infrastructure must be factored in during the planning phase i.e. traffic management.	Park Management Developer	Pre-construction
Performance indicator	Design meets objectives and does not degrade the environment. Design responds to the mitigation measures and recommendations in the BA report. Minimal impact on the surrounding environment	
Monitoring	Ensure that the design implemented meets the objectives and mitigation measures in the BA report through review of the design by the EAP, Project Manager, Developer and the Contractor prior to the commencement of construction.	

OBJECTIVE PD2: ENSURE EFFECTIVE COMMUNICATION MECHANISMS WITH THE VARIOUS STAKEHOLDERS

On-going communication with affected and surrounding landowners and key departments is important to maintain during the construction and operational phases of the developments. Any issues and concerns raised should be addressed as far as possible in as short a timeframe as possible.

Project Component/s	Communication protocols		
Potential Impact	Communication failure that can lead to a number of detrimental impacts such as failure to comply with EMP requirements due to not receiving correct or any instructions.		
Activities/Risk Sources	Communication between all relevant parties		
Mitigation: Target/Objective	Effective communication with all relevant parties Addressing of any issues and concerns raised as far as possible in as short a timeframe as possible.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Compile and implement a grievance mechanism procedure for the public to be implemented during both the construction and operational phases of the facility. This procedure should include details of the contact person who will be receiving issues raised by interested and affected parties, and the process that will be followed to address issues.		Developer Contractor	Pre-construction Construction phase Operational phase

Discuss and agree upon communication protocols during pre-construction site meeting	Contractor Developer ECO	Pre-construction Construction phase
Performance indicator	A public complaint register is available at the site office and public complaints recorded in the register and dealt with swiftly. Pre-construction meeting minutes indicates communication protocols were discussed and agreed upon.	
Monitoring	An complaint or finding must be recorded, addressed and monitored by the ECO as according to the requirements of the EMP.	

OBJECTIVE PD3: PRE-CONDITIONS

The following pre-conditions shall be fully met before any construction activities may commence:

- ECO to be appointed prior to the commencement of any authorised activities. Once appointed the name and contact details of the ECO must be submitted to the DFFE.
- Plan and conduct pre-construction activities in an environmentally acceptable manner
- Fourteen (14) days written notice must be given to the Department that the activity will commence. The notification must include a date on which the activity will commence as well as the reference number.

A site meeting between the contractors, representatives of the developer and the ECO must take place at least 5 days prior to commencement of construction work to:

- Demarcate micro construction sites, services routes, access routes, working boundaries and no-go areas. Demarcate no-go areas before any land clearing occurs under the supervision of an ECO. Demarcation must be clearly visible and effective and no-go area must remain demarcated throughout construction phase;
- Discuss methods of stockpiling (vegetation, topsoil, sub-soil, shell-grit, etc.);
- Check required toilets and fire-fighting facilities to be in place;
- Discuss and agree restricted access to construction site and location of construction camp;
- Sign the Declaration of Understanding (Contractors);
- Discuss and agree communication channels/protocols including contact details;
- Discuss and agree areas of responsibility;
- Discuss and agree the demarcation and control of construction and building sites.
- Conduct flora and fauna search and rescue as required
- Discuss and implement adherence to site specific specialist recommendations
- Discuss and agree on site specific method statements to be submitted by the contractor to the ECO for approval before commencement

Minutes of this site meeting must be kept, and are to be distributed to all parties.

The following equipment must be on every micro or sub site before any construction work is due to start:

- Sufficient and suitable chemical toilet facilities.
- Sufficient refuse bins, which are weather and wind proof, with proper lids.
- 1 x type ABC (all purpose) 12.5 kg fire extinguisher

This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted:

- to the site manager and Park Management during the pre-construction ECO site visit.
- to the site manager and Park Management monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted)
- to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase
- to the DFFE, site manager and Park Management at the completion of the construction phase

OBJECTIVE PD4: LAYOUT PLAN CONTROLS

The contractor must ensure that a copy of the signed approved layout plan is available at the office on site at all times for inspection by the developer or his representative(s). Any variation to the approved layout plan must be submitted to the developer for signed approval and may only be implemented once the approved variation is available to the contractor and available on site at the office. The variation of changes to the layout must be approved by the competent authority as per the EA conditions.

This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted:

- to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted)
- to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase
- to the DFFE, site manager and Park Management at the completion of the construction phase

OBJECTIVE PD5: ADVERTISING

The contractors may place no advertising material on the property unless prior formal written permission has been obtained from the landowner.

This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted:

- to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted)
- to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase to the DFFE, site manager and Park Management at the completion of the construction phase.

CONSTRUCTION PHASE

Goal for Construction Phase

Overall Goal for Construction:
Undertake construction in a way that:

- ensures that construction activities are properly managed in respect of environmental aspects and impacts;
- enables construction activities to be undertaken without significant disruption to other land uses in the area, in particular concerning noise impacts, dust, farming practices, traffic and road use, and effects on local residents;
- minimises the impact on the surrounding area;
- minimises impacts on avifauna and other fauna using the site; and
- minimises the impact on the heritage and historical value of the site;
- minimises traffic impacts; and
- minimises possible health impacts.

Objectives
In order to meet these goals, the following objectives have been identified, together with the necessary actions and monitoring requirements.

OBJECTIVE C1: WORKING HOURS

Construction Sites	
Mondays to Fridays	07h00 – 17h00
Saturdays & Public Holidays	07h00 – 13h00

Project Component/s	Construction site Access roads		
Potential Impact	Surrounding landowners and residents are exposed to noise generated from the development site.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	Effective communication with affected and surrounding landowners; Addressing of any issues and concerns raised as far as possible in as short a timeframe as possible.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Contractors may only be present on the site during the standard working time hours.		Contractor	Construction phase
Performance indicator	Construction only taking place during approved working hours.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase.		

OBJECTIVE C2: SECURITY, SAFETY AND EMERGENCIES

Project Component/s	Construction site Access roads Adjacent residential areas		
Potential Impact	Safety of the public, surrounding landowners and residents Safety of personnel working on site Safety of visitors on site		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect all involved from incidents and injury		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Access to the construction sites must be controlled. Notices should be displayed at all public entrances to the property, warning visitors that they are entering a construction site and that all visitors must report to the site office.		Contractor	Construction phase
Telephone numbers of emergency services, including the local fire-fighting services, must be posted conspicuously in the contractor's office and near the telephone. No firearms are permitted on the construction site, other than those authorised by the developer for the property security service provider if needed.		Contractor	Construction phase

All personnel must wear Personal Protective Equipment during the construction as required.	Contractor	Construction phase
If an environmental emergency such as fire, oil/fuel spills, sewage pipe burst, floods etc. occurs on site during the construction phase immediate actions must be taken to manage and contain the situation by the contractor/s and Park Management. Within 24hours of emergency detection the ECO must be informed of the incident, where after ECO will conduct a site visit and recommend further remediation and/or rehabilitation methods to be implemented. Depending on type and extent of emergency that occurred specialists may be contacted to provide specific recommendations. An incident report must be completed and sent to municipal and governmental authorities.	Contractor Park Management ECO	Construction phase
Performance indicator	All required notices posted at public entrances and at the site office. All personnel wearing PPE as required All emergency situations contained and reported as soon as possible and preventative measures put in place.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase.	

OBJECTIVE C3: SPEED LIMIT

Project Component/s	Construction site Access roads	
Potential Impact	Speeding motorists and construction vehicles could injure personnel, members of the public or cause damage to property/infrastructure.	
Activities/Risk Sources	Activities associated with site construction	
Mitigation: Target/Objective	To protect all involved from incidents and injury.	
Mitigation: Action/Control	**Responsibility**	**Timeframe**
For security and safety reasons the speed limit on the property for all contractors' vehicles must be in accordance with the speed limits of the park. The contractor is responsible for ensuring that all his employees, sub-contractors and delivery vehicles adhere to this rule.	Contractor	Construction phase
Performance indicator	All vehicles entering construction sites adhering to park speed limit	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted:	

	• to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase.

OBJECTIVE C4: CONTRACTOR'S CAMP

Project Component/s	Construction camp		
Potential Impact	Degradation of the natural environment inside/outside of the development area.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate impacts on the environment.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
The location and extent of the contractor's camp area will be discussed and approved by the developer/landowner and ECO.		Developer Contractor ECO	Construction phase
The contractor's camp is to accommodate the site offices, temporary waste storage area, and bunded concrete/cement mixing area, contractor stores, servicing, parking and refuelling area for vehicles and machinery, as well as adequate ablution and accommodation facilities for employees.		Contractor	Construction phase
The construction camp is not to be established within 32m of a watercourse/wetland or within a no-go area		Contractor	Construction phase
Only existing access roads may be used during construction.		Contractor	Construction phase
Performance indicator	ECO in conjunction with the landowner and contractor will approve construction camp area outside of no-go areas and more than 32m away from the edge of a watercourse. Construction camp to be neatly fenced and to accommodate all facilities as listed above and elsewhere in EMP.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase.		

OBJECTIVE C5: DELIVERIES TO CONTRACTORS

Project Component/s	Construction site Construction camp Access roads
Potential Impact	Increased traffic, congestion and noise for surrounding landowners / residents and other road users. Impact on the natural environment.
Activities/Risk	Activities associated with site construction

Sources			
Mitigation: Target/Objective	To protect and mitigate impacts on the environment, surrounding land uses, landowners, and personnel working on site.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Contractors will at all times be responsible for compliance by their delivery service providers as engaged. Delivery times will be limited to working times as defined in this document.		Contractor	Construction phase
Contractors have the responsibility of advising the property security staff of deliveries expected and to be executed.		Contractor	Construction phase
Contractors shall further ensure that drivers of service providers are informed of all procedures and restrictions e.g. which access road to use, speed limits, no-go areas, demarcated construction areas, and maximum allowed vehicle mass etc., as applicable before their first visit to site.		Contractor	Construction phase
Washing of service provider delivery vehicles and equipment will not be allowed on the property and must be carried out elsewhere.		Contractor	Construction phase
Performance indicator	All delivery vehicles and staff adhere to the rules of the site.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase.		

OBJECTIVE C6: DEMARCATION, SITE CLEARANCE AND FENCING

Project Component/s	Construction site Access roads Construction camp No-go areas		
Potential Impact	Safety of the public, surrounding landowners and residents Safety of personnel working on site Safety of visitors on site Protection of sensitive environmental features		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate impacts on the environment, surrounding land uses, landowners, and personnel working on site.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Demarcate no-go areas before any land clearing occurs under the supervision of an ECO		Contractor ECO	Construction phase
The ECO together with the site manager must indicate each construction site and/or access route to be demarcated and demarcation methods to be used before construction commences and construction personnel will not be allowed beyond the construction perimeter of the site.		Contractor ECO	Construction phase

Physical demarcation of construction sites should at the very least be via colour coded posts at least 1,5m high. Relatively small construction areas can be fenced with wooden or metal post at 3m centres with 1 plain wire strand tensioned horizontally at 900mm from ground level. Commercially available danger tape may also be wrapped around the wire strand. For large areas, like fairways, these posts are to be at 15m centres with 5 equidistant easily visible lime spot markings in between.		
Demarcation must be clearly visible and effective and no-go area must remain demarcated throughout construction phase	Contractor	Construction phase
Site clearance along the border of the no-go areas must be done under the supervision of an ECO.	Contractor ECO	Construction phase
Personnel should be restricted to the construction camp site and immediate construction areas only.	Contractor	Construction phase
Construction areas and access routes must be clearly demarcated to restrict access/egress across such demarcated lines and minimise environmental impact.	Contractor ECO	Construction phase
All activities including stockpiling must occur within this demarcated area.	Contractor	Construction phase
The Contractor responsible for impacting on areas outside of the demarcated construction areas must fund reinstatement or rehabilitation of damaged areas and features.	Contractor	Construction phase
The onus here will fall on the contractors to ensure all respect these no-go lines.	Contractor	Construction phase
Failure to ensure discipline will lead to the immediate erection of more physically challenging structures.	Contractor	Construction phase
No run-off oil, cement, or any other building material is to be permitted, or allowed to enter the no-go areas	Contractor	Construction phase
In the event that sensitive features outside of demarcated development areas are threatened by construction activities, the temporary fencing off of these areas or the construction area, when working in a mainly natural environment, is recommended and will be determined by the ECO.	Contractor ECO	Construction phase
Remove and conserve topsoil layer and overburden material for rehabilitation after construction activities have ceased.	Contractor	Construction phase Rehabilitation
Removal of soil must be kept to a minimum as far as possible and should only take place in areas where development will take place as part of the approved development footprint.	Contractor	Construction phase
Performance indicator	Demarcated construction areas and/or no-go areas remain demarcated and undisturbed throughout construction phase.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase	

	• to the DFFE, site manager and Park Management at the completion of the construction phase.

OBJECTIVE C7: INDIGENOUS FAUNA AND FLORA

Project Component/s	Construction site Access roads Construction camp No-go areas		
Potential Impact	Impact on indigenous fauna and flora.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate impacts on the indigenous fauna and flora.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Indigenous plants or wild animals including reptiles, amphibians, birds, etc. may not be damaged or harmed or interfered with. Vegetation removed as part of the legitimate development requirements is excluded.		Contractor	Construction phase
Trapping, poisoning and/or killing of animals is specifically and strictly forbidden.		Contractor	Construction phase
All indigenous vegetation and soil materials must be stockpiled and stored (at site identified by ECO), and used for rehabilitation of the disturbed areas upon construction completion.		Contractor ECO	Construction phase
Demarcate proposed no-development areas before construction commences and maintain demarcation throughout construction phase to ensure that it is not impacted upon.		Contractor	Construction phase
Personnel should be restricted to the construction camp site and immediate construction areas only.		Contractor	Construction phase
Site clearance along the border of the no-go areas must be done under the supervision of park management.		Contractor ECO	Construction phase
Rehabilitate impacted indigenous vegetation areas outside of the development areas immediately if disturbed.		Contractor	Construction phase Rehabilitation phase
Park management to conduct search and rescue of vegetation species of conservation concern and tortoises etc.		Contractor	Construction phase
Performance indicator	No indigenous fauna and flora and their habitats outside of approved development footprint areas are impacted upon. All vegetation and materials removed from site during excavations stockpiled and re-used for rehabilitation of disturbed sites.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase.		

OBJECTIVE C8: ALIEN INVASIVE PLANTS

Project Component/s	Construction site Access roads Construction camp
Potential Impact	Alien/invasive plant species spread into natural/indigenous vegetation areas.
Activities/Risk Sources	Activities associated with site construction and associated disturbance of natural areas
Mitigation: Target/Objective	To protect and mitigate impacts on the environment.

Mitigation: Action/Control	**Responsibility**	**Timeframe**
The contractor must clear all weeds and alien invasive plant from the proposed development sites, access routes and construction camp.	Contractor	Construction phase
No on-site burying, dumping or stockpiling of any weeds or invasive species must occur. They should be removed from the site and dumped at a suitable dumping site from which seed cannot escape.	Contractor	Construction phase
The contractor must make sure of and implement all legal requirements regarding herbicide application procedures if herbicide is to be used to control weeds/invasive plants. The instructions on the herbicide labels must be strictly followed throughout application. .	Contractor	Construction phase
The contractor shall take all necessary precautions to prevent overspray of herbicides outside of the demarcated construction areas and onto natural veld.	Contractor	Construction phase
All personnel working with any herbicide, pesticide or fertilizer must be registered and comply with the requirements set in these registrations.	Contractor	Construction phase
All equipment associated to herbicides and pesticides must be maintained in accordance to the set standards.	Contractor	Construction phase
The disposal of all redundant and empty containers of herbicides and pesticides must be controlled and disposed of at a waste management facility licensed to do so under the National Environmental Management: Waste Act.	Contractor	Construction phase
Undertake construction activities only in identified and specifically demarcated areas.	Contractor	Construction phase
An important aspect of on-going maintenance is the monitoring of the rehabilitated sites and access road verges for alien plant species.	Contractor	Construction phase
Ensure building materials brought onto site are free of alien seeds.	Contractor	Construction phase
Materials such as sand and stone should, wherever possible, be sourced from local areas which are free of alien plants.	Contractor	Construction phase
Rehabilitation of disturbed area should be done with seeds collected in the area during rehabilitation and with topsoil as derived of the development site	Contractor	Construction phase Rehabilitation phase

Performance indicator	All possible introduction and spreading of alien invasive plant species are controlled.
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase

OBJECTIVE C9: STORM WATER MANAGEMENT

Project Component/s	Construction site Access roads Construction camp No-go areas		
Potential Impact	Erosion due to poor storm water management. Pooling of water / flooding in portions of the development site due to poor storm water management.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate impacts on the environment.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
To minimise or prevent erosion and overflowing/flooding the work must be done as far as possible during the dry season.		Contractor	Construction phase
Areas disturbed during construction must be re-shaped as according to surrounding contours and stabilised as soon as possible.		Contractor	Construction phase
All roads need to be maintained and monitored and visible signs of possible erosion immediately rehabilitated.		Contractor	Construction phase
All areas impacted during construction must be maintained and monitored and visible signs of possible erosion immediately rehabilitated and prevention measures put in place.		Contractor Park Management	Construction phase
It will be the responsibility of the developer to ensure contractors apply erosion control measures throughout the period of risk and that the works are protected from damage that may be caused by rainwater runoff.		Contractor Park Management	Construction phase
Stormwater discharge flow must be managed and restricted in such a manner that it does not cause erosion.		Contractor Park Management	Construction phase
Adequate provisions of stormwater management including inter alia channels, litter traps etc. must be used to divert stormwater away from the activities that could lead to its contamination.		Contractor Park Management	Construction phase
Performance indicator	All signs of erosion are controlled and affected areas rehabilitated.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted:		

	• to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase

OBJECTIVE C10: ARCHAEOLOGY AND PALAEONTOLOGY MANAGEMENT

Project Component/s	Construction site Access roads Construction camp		
Potential Impact	The loss of cultural or heritage resources.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate the potential loss of cultural and heritage resources.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Should any heritage or fossil remains be exposed during any excavation or related activities, activities on the relevant site must stop immediately and these finding must be reported to the provincial heritage resource authority of the Western Cape, Heritage Western Cape (in terms of the National Heritage Resources Act, 1999 (Act No.25 of 1999) via the ECO.		Contractor ECO	Construction phase
Heritage remains uncovered or disturbed during earthworks must not be further disturbed until inspection and verification by a professional has been conducted.		Contractor Heritage Professional	Construction phase
Performance indicator	Protection of heritage resources		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase		

OBJECTIVE C11: DIESEL FUEL AND LUBRICANT HANDLING PROGRAMME

Project Component/s	Construction site Access roads Construction camp No-go areas		
Potential Impact	Contamination of soil, storm and ground water resources as a result of an oil/diesel/lubricant spill/leak.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate impacts of contaminants on the environment and hydrological features.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Servicing of construction vehicles and machinery to		Contractor	Construction

take place off site at a vehicle workshop.		phase
All vehicles must be in a good condition and inspected on a daily basis with no leakages leading to possible contamination of soil or water supplies.	Contractor	Construction phase
All waste oils, fuels and lubricants are considered hazardous waste to be stored separately in bunded areas and disposed of at a licensed hazardous waste handling facility and for which safe disposal certificates must be kept.	Contractor	Construction phase
It is the responsibility of each landowner, lease holder or developer to ensure that they are aware of and adhere to the requirements of the NEM:WA as it pertains to their operations.	Contractor/landowner/ lease owner/developer	Construction phase
The following conditions related to the temporary fuel tanks must be implemented: • The fuel tanks must be designed and installed in accordance with relevant Oil Industry standards and SANS codes where applicable for the aboveground storage tanks. The tanks must be located within a bund (110 % of the tanks capacity) in order to contain potential spills. • During fuel tanker delivery, the tanker driver must be present at all times during product offloading. Should an incident occur the supply vehicle emergency cut-off switch must be activated to immediately stop fuel delivery. Flexible hoses with dry-break couplings and emergency isolation must be used. All spillage incidences and actions taken consequent thereto must be reported to the ECO and recorded in the site register. • All fuel and flammable liquids should be stored under secure and fenced conditions and in a bunded site with the volume of the bunding capable of holding 110% of the liquid. • The applicant must ensure that effective stock inventory monitoring and regular auditing take place for the early identification of possible leaks. • The requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), must be adhered to. Within three months of the tanks ceasing to be used the tanks must be removed at the expense of the applicant, and the site, including all associated infrastructure must be rehabilitated to the satisfaction of the relevant authority.	Contractor	Construction phase
Refuelling: • Refuelling of equipment must be conducted from the bunded fuel tank and pump at the contractor's camp. • Fuel tanks must be bunded and supplied with a concrete apron. Any spills on the	Contractor	Construction phase

concrete apron or floor below the tank are to be treated with OT8 or Spillsolve or equivalent as per the product instructions. • A 500 litre drawn trailer to convey diesel to the equipment for re-fuelling may also be used. Such trailer will be drawn by a specified vehicle and driver, with alternate nominated as approved by the Site Manager. Such tow vehicle may travel at 20kms per hour maximum at any time, be clearly identifiable as such, and may only tow the diesel cart should the pre requisite drip trays and emergency equipment be on the vehicle at the time. • Staff will require instruction in the identification of diesel and oil leaks and the use of Spillsolve (or equivalent) products.		
On-Site emergency repairs: • Only small mobile plant and emergency repairs are to take place on site. These will require the provision of drip trays and funnels to ensure that no oil or fuel leakages occur onto the ground. Should such spill take place, then the oil saturated soil is to be placed in suitable containers and disposed of at a hazardous waste disposal site. • Any contamination of soil is to be treated with Spillsolve or similar product. Contaminated water as a result of an oil or fuel spillage on the area should similarly be treated in appropriate way, and the polluted water should be specifically removed and not allowed to merge with run-off water collected in the trap collecting all run offs from the slab.	Contractor	Construction phase
Collection of contaminated spares and waste oils: • Contaminated spares, oil filters, gaskets, water, etc. must be collected in separate holders at the designated storage facility for disposal at a licensed H:h (hazardous waste handling) site. • Staff will require instruction in: -Deleterious effects of oil / fuel on the environment -Identification of oil leaks -Handling of oil / fuel leaks into soil -Location and method in storage of contaminated spares -Fire prevention and emergency drills in case of an accident	Contractor	Construction phase
Any oil or diesel spills etc. must be reported to the site manager and rehabilitation measures must be taken immediately and contaminated soil disposed of at a licensed hazardous waste handling facility.	Contractor	Construction phase
Performance indicator	Ensure that fuel storage, re-fuelling, emergency repairs, collection of contaminated spares and waste oils takes place as according to	

	requirements and that no spillages occur and if it does occur that it is handled and cleaned up accordingly.
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase

OBJECTIVE C12: SERVICES

Project Component/s	Construction site Bulk services and network services Sewerage network Power supply Water resources/supply Access roads		
Potential Impact	Damage/loss of services infrastructure or supply.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate impacts on existing services infrastructure and surrounding land users; landowners and residents.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Care and due cognisance must be taken of existing services, service routes and services restrictions. The contractor shall be held liable for damages, expenses or costs incurred for any interruption in supply, variation, frequency, or failure of any utility provider to supply service if the contractor is found to be responsible for unplanned service interruptions.		Contractor	Construction phase
All relevant sections and regulations of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.		Contractor	Construction phase
Performance indicator	Protection of existing infrastructure and minimising use of existing services.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase		

OBJECTIVE C13: ROADS AND TRAFFIC

Project Component/s	Access and internal roads
Potential Impact	Increased traffic/congestion. Construction vehicles pose a potential risk to other road uses and the natural environment if they do not use designated routes.

Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	Designation of specific routes for construction vehicles to reduce impact on the environment and other road users.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Only existing access routes to the property will be used during construction work, so as to control the movement of construction vehicles. Traffic safety measures shall be considered in determining entry or exit points to public roads.		Contractor	Construction phase
The contractor shall ensure that access to construction sites and associated infrastructure and equipment is designated off-limits to the public at all times during construction.		Contractor	Construction phase
Traffic safety measures shall be considered in determining entry or exit points to public roads.		Contractor	Construction phase
Adhere to speed limit and road rules.		Contractor	Construction phase
Work during normal working hours and only use demarcated access and internal roads		Contractor	Construction phase
Only allow drivers with valid driver's licenses to drive and/or operate construction vehicles		Contractor	Construction phase
Performance indicator	Necessary no entry signs and speed limit signs etc. posted at all entrances and only one designated access route to the development site is used.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase		

OBJECTIVE C14: DUST, ODOUR, NOISE AND VISUAL IMPACT CONTROL

Project Component/s	Constructions site Access roads Construction camp		
Potential Impact	Excessive dust and noise production and visual impacts on surrounding land users		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	Minimisation of dust and noise production and visual impacts on surrounding land users		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
The contractor is to take appropriate measures to minimise the generation of dust as a result of construction works, to the satisfaction of the affected surrounding land users.		Contractor	Construction phase
Dust, odour and noise must be controlled appropriately and must not cause any nuisance conditions during hours of operation of the facilities and/or infrastructure.		Contractor	Construction phase
Vegetation must be stripped from demarcated		Contractor	Construction phase

construction sites only shortly before commencing with the construction process.		
During high velocity wind conditions, the contractor or his representative to evaluate the situation and make recommendations as to whether dust suppression measures are adequate, or whether to suspend work until wind speeds drop to an acceptable level.	Contractor	Construction phase
The use of potable water for dust suppression is discouraged and alternative sources of water should be considered and discussed with Park Management if required.	Contractor	Construction phase
Construction noise levels must not pose a nuisance to the surrounding communities and all construction working hours must be limited to normal working hours unless arranged with Park Management.	Contractor	Construction phase
All machinery and construction vehicles must be serviced regularly and be in a good working condition to prevent excessive noise generation.	Contractor	Construction phase
Only work in approved development areas to ensure that visual footprint is kept to a minimum and ensures that construction camp and area are neat and kept clear of windblown construction waste.	Contractor	Construction phase
Construction material will be stored at the contractor's camp, as well as on the construction site within the demarcated working areas at each construction point. Special permission may be obtained from the ECO to store material on suitable substitute or ancillary locations should the need arise, and as communicated by the project engineer	Contractor	Construction phase
Construction camp must be neatly fenced and construction site must be neat and tidy.	Contractor	Construction phase
Stockpile construction materials in one specific area.	Contractor	Construction phase
Proposed construction activities must be limited to development footprint site.	Contractor	Construction phase
Plant additional vegetation where needed after construction during site rehabilitation if required.	Contractor	Construction phase Rehabilitation phase
Performance indicator	No excessive dust or noises are produced at the construction sites and no visual impact outside of approved development areas is observed.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase	

OBJECTIVE C15: TOPSOIL AND MATERIAL REMOVAL AND STOCKPILING

Project Component/s	Construction site		
Potential Impact	Loss of topsoil and refill materials		
Activities/Risk Sources	Activities associated with site construction - excavation		
Mitigation: Target/Objective	Conserve topsoil and excavated materials to be used for rehabilitation after construction completion		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Depending on type of topsoil available and rehabilitation required after construction completion the ECO will determine if it is required to, prior to construction or earthworks commencing, remove and conserve a minimum of 100 mm topsoil from demarcated construction sites and keep it separately stockpiled (within the demarcated working area or on designated areas).		Contractor ECO	Construction phase
Topsoil stockpiles must be convex and should not exceed 1.8 metre in height, and if required be covered by anchovy net as necessary to prevent wind erosion.		Contractor	Construction phase
Topsoil must not be compacted in any way, especially by vehicles riding over it.		Contractor	Construction phase
Surplus sub-soil that becomes available during construction work and building operations must be used as fill material on site.		Contractor	Construction phase
Plant material stockpiled must be chopped in ± 300 mm pieces and scattered over the disturbed areas to be rehabilitated at construction completion.		Contractor	Construction phase
Performance indicator	Topsoil separately stored and safeguarded from erosion at designated areas and re-used on sites to be rehabilitated at construction completion.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase		

OBJECTIVE C16: APPROPRIATE USE OF CONSTRUCTION MACHINERY

Project Component/s	Construction site Access roads Construction camp		
Potential Impact	Environmental disturbance due to incorrect use of machinery		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	Use the correct machinery for the proposed tasks and ensure that machinery is properly operated		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
The contractor must at all times carefully consider what machinery is appropriate to the task to minimise the		Contractor	Construction phase

extent of environmental damage.		
No machinery is to operate outside of any demarcated working area.	Contractor	Construction phase
Operators of machinery must be suitably qualified.	Contractor	Construction phase
All machinery and heavy vehicles to be parked at night at the defined contractor's camp.	Contractor	Construction phase
Performance indicator	Correct and successful use of construction machinery on site by qualified personnel.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase	

OBJECTIVE C17: ANTI-EROSION MEASURES

Project Component/s	Construction site Access roads Construction camp	
Potential Impact	Wind/water erosion as a result of construction activities.	
Activities/Risk Sources	Activities associated with site construction	
Mitigation: Target/Objective	Reduce the impact of erosion by implementing anti-erosion measures.	
Mitigation: Action/Control	**Responsibility**	**Timeframe**
The contractor shall take all appropriate and active measures to prevent and if prevention is not possible to mitigate erosion, especially wind and water erosion, resulting from activities on site to the satisfaction of the ECO.	Contractor	Construction phase
During construction, the contractor shall protect areas susceptible to wind and water erosion, by installing all the necessary temporary and permanent works if required and indicated by the ECO. Measures can include brush packing, anchovy net stabilisation, etc.	Contractor ECO	Construction phase
Demarcate no-go areas before any land clearing occurs under the supervision of an ECO. Demarcation must be clearly visible and effective and no-go area must remain demarcated throughout construction phase.	Contractor	Construction phase
Access to roads and other areas must be controlled to avoid disturbance of areas outside the development footprint. Personnel should be restricted to the construction camp site and immediate construction areas only.	Contractor	Construction phase
Undertake dust suppression as needed, without using potable water resources.	Contractor	Construction phase
Appropriate and effective storm water management measures must be put in place to ensure that erosion and environmental degradations outside of the proposed development footprint area does not occur,	Contractor	Construction phase

but the storm water measures implemented must not impede storm water flow to such an extent that it is completely stopped. Current hydrological processes outside of the proposed development footprint area must continue to function as is.		
Rehabilitate or stabilise eroded areas immediately to prevent increase in erosion	Contractor	Construction phase Rehabilitation phase
Performance indicator	All possible erosion impacts are controlled and rehabilitated.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase	

OBJECTIVE C18: LIGHTS

Project Component/s	Construction site Access roads Construction camp	
Potential Impact	Light pollution at night	
Activities/Risk Sources	Activities associated with site construction	
Mitigation: Target/Objective	No significant light pollution must be caused during the construction activities	
Mitigation: Action/Control	**Responsibility**	**Timeframe**
The Contractor must ensure that any lighting installed on the site for his activities or security purposes does not interfere with road traffic or cause a direct disturbance to indigenous animal and bird life.	Contractor	Construction phase
Performance indicator	Non-intrusive lighting to be installed at construction areas.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase	

OBJECTIVE C19: EATING, WASHING, REST AND ABLUTION FACILITIES

Project Component/s	Construction site Construction camp
Potential Impact	Environmental pollution
Activities/Risk Sources	Activities associated with site construction
Mitigation: Target/Objective	Prevent potential environmental pollution and disturbance outside designated areas.

Mitigation: Action/Control	Responsibility	Timeframe
The contractor must designate restricted places for personnel to eat, wash and rest, within the specified working areas.	Contractor	Construction phase
The contractor must provide adequate weather proof refuse bins at the designated areas that are emptied on a weekly basis and not overflowing at any time.	Contractor	Construction phase
The feeding of, or leaving food for, animals is strictly prohibited	Contractor	Construction phase
The contractor is responsible for the provision of sufficient and suitably placed chemical toilets.	Contractor	Construction phase
Toilets must be of a neat construction and must be provided with doors and locks and must be secure to prevent wind damage.	Contractor	Construction phase
The contractor must ensure that toilets are serviced and emptied by the service provider when full/required.	Contractor	Construction phase
Waste must be disposed of at a registered/licenced waste disposal site.	Contractor	Construction phase
Performance indicator	Weather proof waste bins provided at designated eating, washing, rest and construction areas. Secure ablution facilities. Waste bins and ablution facilities not overfull and emptied on a regular basis.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase	

OBJECTIVE C20: INTEGRATED WASTE AND HAZARDOUS MATERIALS MANAGEMENT PLAN

Project Component/s	Access roads Construction camp Storage areas Construction site Adjacent land and environmental systems
Potential Impact	Incorrect storage, handling, transporting and disposing of hazardous substances resulting in the contamination of soil, storm and ground water resources. Incorrect storage, handling, transporting and disposing of general solid waste resulting in litter, storm water pollution, and creating a nuisance to adjacent landowners/residents. Incorrect storage, handling, transporting and disposing of effluent/liquid waste resulting in the contamination of the storm water system, adjacent property, or hydrological systems. Incorrect storage, handling, transporting and disposing of garden waste, alien vegetation or natural vegetation during the clearing phase of the development site. Poor waste management practices, resulting in waste not being

	reduced, re-used or recycled.
Activities/Risk Sources	Activities associated with site construction
Mitigation: Target/Objective	Protect and mitigate impacts on the environment and hydrological features Ensure that the storage and handling of chemicals and hydrocarbons on-site does not cause pollution to the environment or harm to persons Ensure that the storage and maintenance of machinery on-site does not cause pollution of the environment or harm to persons Comply with waste management guidelines Minimise production of waste Ensure appropriate waste storage and disposal

Mitigation: Action/Control	**Responsibility**	**Timeframe**
Specific areas must be designated on-site for the temporary management of various waste streams, i.e. general refuse, construction waste (wood and metal scrap) and contaminated waste as required. Location of such areas must seek to minimise the potential for impact on the surrounding environment, including prevention of contaminated runoff, seepage and vermin control.	Contractor	Construction phase
A waste separation area must be provided for use by the contractors. The waste separation area can be used in conjunction with an existing waste separation program of the park.	Contractor	Construction phase
Waste awareness and training must be implemented to all staff, contractors, and visitors to the site to ensure proper waste management occurs.	Contractor	Construction phase
Spillage of oils and fuels must be minimized with the use of drip trays in the garage/workshop areas.	Contractor	Construction phase
An integrated waste management approach that is based on waste minimisation must be used and must incorporate reduction, recycling, re-use and disposal where appropriate. Where practically possible, construction and general wastes on-site must be reused or recycled. Bins and skips must be available on-site for collection, separation, and storage of waste streams (such as wood, metals, general refuse etc.).	Contractor	Construction phase
The applicant must ensure that all waste generated during the construction phase should be separated into different waste streams for recycling purposes prior to removal by a reputable contractor from the site and disposed of at an appropriately licensed landfill facility.	Contractor	Construction phase
Please note that section 28 (1) of the National Environmental Management Act, 1998 (Act No 107 of 1998) as amended (NEMA) states: “Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorized by law or cannot reasonable be avoided or stopped, to minimize and	Contractor	Construction phase

rectify such pollution or degradation of the environment". Failure to adhere to section 28(1) of NEMA is an offence and thus particular care of the environment must be taken.		
Disposal of waste must be in accordance with relevant legislative requirements, including the use of licensed contractors and disposal at appropriately licensed waste disposal sites	Contractor	Construction phase
The National Information Systems Regulation must be adhered to in terms of registering and reporting of hazardous waste generated on site via the Integrated Pollutant Waste Information System (IPWIS).	Contractor	Construction phase
All stored fuels to be maintained within a sealed bund and on a sealed surface. The bund must be at least 110% of the volume of the total containers adhering to the requirements of SABS 089:1999 Part 1	Contractor	Construction phase
Fuelling areas situated around fuel tanks must be provided with an impervious layer or drip trays must be used during refuelling;	Contractor	Construction phase
Fuel storage areas must be inspected regularly to ensure bund stability, integrity, and function	Contractor	Construction phase
Oily water from bunds at the substations must be removed from site by licensed contractors	Contractor	Construction phase
The storage of any flammable and combustible liquids such as oils will be in designated areas which are appropriately bunded, and stored in compliance with MSDS files	Contractor	Construction phase
Any storage and disposal permits/approvals which may be required for hazardous substances must be obtained, and the conditions attached to such permits and approvals will be compiled with and copies kept on site in the environmental file	Contractor	Construction phase
Transport, storage and disposal of all hazardous substances must be in accordance with the relevant legislation and regulations	Contractor	Construction phase
Washing of construction vehicles and equipment will only be allowed at the construction camp in bunded areas.	Contractor	Construction phase
Spill kits must be made available on-site for the clean-up of spills and leaks of contaminants. Corrective action must be undertaken immediately if a complaint is received, or potential/actual leak or spill of polluting substance identified. This includes stopping the contaminant from further escaping, cleaning up the affected environment as much as practically possible and implementing preventive measures.	Contractor	Construction phase
Implement an effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.	Contractor	Construction phase

Leakage of fuels must be avoided at all times and if spillage occurs, it must be remediated immediately.		
In the event of a major spill or leak of contaminants, the relevant administering authority must be immediately notified as per the notification of emergencies/incidents Spilled cement, fly ash and concrete must be cleaned up as soon as possible and disposed of at a suitably licensed waste disposal site. Any contaminated/polluted soil removed from the site must be disposed of at a licensed hazardous waste disposal facility.	Contractor	Construction phase
Hydrocarbon waste must be contained and stored in sealed containers within an appropriately bunded area. Waste and surplus dangerous goods must be kept to a minimum and must be transported by approved waste transporters to sites designated for their disposal and copies of the safe disposal slips must be kept in the environment file on site.	Contractor	Construction phase
Documentation (waste manifest) must be maintained detailing the quantity, nature, and fate of any regulated waste. Waste disposal records must be available for review at any time.	Contractor	Construction phase
An incident/complaints register must be established and maintained on-site.	Contractor	Construction phase
The sediment control and water quality structures used on-site must be monitored and maintained in a fully operational state at all times	Contractor	Construction phase
Upon the completion of construction, the area must be cleared of potentially polluting materials	Contractor	Construction phase
Dispose of all solid waste collected at an appropriately registered waste disposal site. Waste disposal shall be in accordance with all relevant legislation and under no circumstances may waste be burnt on site	Contractor	Construction phase
Where a registered waste site is not available close to the construction site, provide a method statement with regard to waste management.	Contractor	Construction phase
The storage of waste must comply with the National Environmental Management: Waste Act, (Act No. 59 of 2008) National Norms and Standards for Storage of Waste, 2013	Contractor	Construction phase
Waste may not be stored for a period exceeding 90 days during construction and operations of the proposed development without adherence to the National Norms and Standards for the Storage of Waste in terms of Government Notice (GN) No.926 of 29 November 2013, if the volumes stored exceed 80m3 of hazardous waste or 100m3 of general waste. If these thresholds are triggered, the Facility must also be registered on the Department's Integrated Pollutant and Waste Information System (http://ipwis.pgwc.gov.za/ipwis3/public) and the information must be updated regularly thereafter.	Contractor	Construction phase
Vegetation removed during the construction phase	Contractor	Construction

must be chipped for composting or be disposed of appropriately and may not be disposed of on the adjacent land.		phase
All waste oils, fuels and lubricants are considered hazardous waste to be stored separately in bunded areas and disposed of at a licensed hazardous waste handling facility and for which safe disposal certificates must be kept.	Contractor	Construction phase
It is the responsibility of each landowner, lease holder or developer to ensure that they are aware of and adhere to the requirements of the NEM:WA as it pertains to their operations.	Contractor/landowner/ lease owner/developer	Construction phase
The disposal of waste should be considered as a last resort after having considered waste minimization, such as avoidance, reuse and recycling of waste.	Contractor	Construction phase
Clear signage pertaining to waste handling and disposal must be displayed including storage bins for the separation of waste on site.	Contractor	Construction phase
No waste must be buried or burnt on site during construction or operation stages.	Contractor	Construction phase
Performance indicator	Limited chemical spills outside of designated storage areas No water or soil contamination by spills No complaints received regarding waste on site or indiscriminate dumping Provision of all appropriate waste manifests for all waste streams. No construction waste outside of designated waste storage areas. No overflowing waste storage areas	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase	

OBJECTIVE C21: FIRES

Project Component/s	Construction site Construction camp		
Potential Impact	Uncontrolled fire on/off site, resulting in damage to the environment, property, injuries/death to personnel on site, or injuries/death to the public.		
Activities/Risk Sources	Activities associated with site construction		
Mitigation: Target/Objective	To protect and mitigate the safety of people, property, and the environment on and off site.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
No open fires will be allowed on site and adequate firefighting equipment should be available on site in good working order at all times as prescribed by the fire management protocols.		Contractor	Construction phase
Performance indicator	No fire occurred due to construction activities and no fires allowed.		

Contractor	Witness for Contractor	Employer	Witness for Employer

	Management actions are in place should a fire occur.
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase

OBJECTIVE C22: MEASURES TO PROTECT SURFACE AND GROUNDWATER

Project Component/s	Construction site Construction camp Adjacent natural environments/features	
Potential Impact	Destruction of natural hydrological systems and the pollution of ground water resources.	
Activities/Risk Sources	Activities associated with site construction	
Mitigation: Target/Objective	To protect and mitigate impacts on the environment and hydrological features.	
Mitigation: Action/Control	**Responsibility**	**Timeframe**
All relevant sections and regulations of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.	Contractor	Construction phase
No pollution of surface water or ground water resources may occur due to any activity on the property.	Contractor	Construction phase
Runoff must not be polluted and allowed to pool in construction areas, as this could cause contamination to the ground water resources.	Contractor	Construction phase
No activities, including swimming, washing, recreation, ablution, vehicle washing, etc. will be permitted in any of the watercourses. Water is to be protected and conserved at all times.	Contractor	Construction phase
The disturbed areas should receive ongoing monitoring and management of erosion and invasive plant growth	Contractor Park Management	Construction phase
All potential hazardous materials i.e. fuels, cement etc. should be properly stored and contained within the construction camp.	Contractor	Construction phase
Disposal of waste from the site should also be properly managed.	Contractor	Construction phase
Construction workers should be given ablution facilities at the construction site and regularly serviced.	Contractor	Construction phase
All construction activities and personnel on site to stay within demarcated construction areas	Contractor	Construction phase
Proper waste bins to be provided to construction staff and all waste to be regularly removed to municipal landfill site	Contractor	Construction phase
Any oil or diesel spills etc. must be reported to the site manager and rehabilitation measures must be taken immediately and contaminated soil disposed of at a licensed landfill site	Contractor	Construction phase

Construction vehicles must be checked for leakages on a daily basis and repaired before allowed to work within watercourses if a leakage is detected	Contractor	Construction phase
Control access to roads and construction areas to avoid disturbance of areas outside the development footprint	Contractor	Construction phase
Undertake storm water management measures as required	Contractor Park Management	Construction phase
Rehabilitate or stabilise eroded areas immediately to prevent increase in erosion.	Contractor Park Management	Construction phase
Monitor construction areas frequently for sign of erosion and if signs of erosion are detected implement repair and preventative measures immediately	Contractor	Construction phase
All infrastructure areas should be kept free of debris, intrusive growth of invasive alien plants and sediment build-up.	Contractor Park Management	Construction phase
All concrete mixing to be contained within a suitably bunded area preventing any runoff from the concrete mixing area.	Contractor	Construction phase
Ground water contamination must be prevented. Wastewater from the construction and the associated operational activities must be on par with the quality standards of the relevant authority.	Contractor	Construction phase
No work camps or construction phase stockpiling may be located within 50m of the channel of the River or such that construction associated material or waste will flow, blow or leach into the channel.	Contractor	Construction phase
Any activities involving cement must be tightly controlled to prevent its passage into the river – uncured cement will increase pH and thus potentially affect ammonia toxicity.	Contractor	Construction phase
All refuelling areas must be adequately bunded.	Contractor	Construction phase
Construction work (i.e. site clearance and construction) must be carried out and completed in the low flow and low rainfall season (mid to late summer) as far as possible to minimise the impact on the flow in the drainage line.	Contractor	Construction phase
Should the construction works take place during the rainfall period, any contaminated runoff from the construction site or activities should be prevented from entering the environment.	Contractor	Construction phase
Appropriate and effective storm water management measures must be put in place to ensure that erosion and environmental degradations outside of the proposed development footprint area does not occur, but the storm water measures implemented must not impede storm water flow to such an extent that it is completely stopped. Current hydrological processes outside of the proposed development footprint area must continue to function as is.	Contractor	Construction phase
Performance indicator	Impacts on hydrological features minimized and mitigated.	
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted)	

	• to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase

OBJECTIVE C23: CONCRETE/CEMENT MIXING

Project Component/s	Concrete/cement mixing		
Potential Impact	Environmental pollution		
Activities/Risk Sources	Contaminated runoff from concrete mixing area		
Mitigation: Target/Objective	To protect and mitigate impacts on the environment and surrounding land users.		
Mitigation: Action/Control		**Responsibility**	**Timeframe**
Concrete mixing to be sited only on proposed development footprint area which must be demarcated at least 32m away from the edge of any watercourses and such that impacts on the environment are minimised.		Contractor	Construction phase
The concrete mixing areas should demonstrate good maintenance practices, including regular sweeping to prevent dust build-up.		Contractor	Construction phase
The concrete mixing area should be designed and constructed such that clean storm water is diverted away from contaminated areas		Contractor	Construction phase
The concrete mixing area should be bunded and lined with an impervious liner capable of containing all contaminants found within the water they are designed to collect.		Contractor	Construction phase
Where possible, waste concrete should be used for construction purposes at the project site		Contractor	Construction phase
Performance indicator	No concrete/cement mixing taking place within 32m of the edge of a watercourse or on un-bunded and permeable surfaces. No runoff escaping from bunded concrete mixing area.		
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase		

OBJECTIVE C24: REHABILITATION AND SITE CLEAN UP AFTER CONSTRUCTION

Project Component/s	All areas affected during construction
Potential Impact	Un-stabilised disturbed areas, environmental pollution due to construction waste, unfinished construction sites
Activities/Risk Sources	Activities associated with construction completion
Mitigation: Target/Objective	To protect and mitigate the safety of people, property, and the environment on and off site.

Mitigation: Action/Control	Responsibility	Timeframe
Stabilisation and rehabilitation of disturbed sites must take place immediately after construction operations have been completed.	Contractor Park Management	Construction phase
No construction equipment, vehicles or unauthorised personnel must be allowed onto areas that have been stabilised/rehabilitated.	Contractor	Construction phase
The contractors must ensure that all temporary structures, equipment, waste, materials and facilities used or created on site for, or during construction activities, are removed once the project has been completed.	Contractor	Construction phase
Only indigenous vegetation must be used to rehabilitate disturbed areas.	Contractor Park Management	Construction phase
The disturbed areas should receive ongoing monitoring and management of erosion and invasive plant growth.	Contractor Park Management	Construction and rehabilitation phase

Performance indicator	Constructions site are cleared of any temporary works forming part of the construction phase and disturbed areas have been rehabilitated to the satisfaction of the ECO and freshwater ecologist
Monitoring	This will be monitored by the ECO during site visits and recorded, reported and proof included in the audit reports to be submitted: • to the site manager monthly during the construction phase (or if construction will be less than a month at least one ECO audit will be conducted) • to the DFFE, site manager and Park Management as part of the annual compliance report during the construction phase • to the DFFE, site manager and Park Management at the completion of the construction phase

OPERATIONAL PHASE

This following section defines the management programme for each of the identified goals during the operational phase. The programme is presented in the form of a table, which includes the components described. This programme consists of the following components:

Goals
Over-arching environmental goals for the management phase of the development

Objectives
The objectives are in place in order to meet these goals. These take into account the findings from existing studies and monitoring programmes.

Management Actions
The actions needed to achieve the objectives, taking into consideration factors such as responsibility, methods, frequency, resources required and prioritisation.

Monitoring
Key actions to verify that objectives are being achieved, taking into consideration responsibility, frequency, methods, and reporting.

Criteria/ Targets
The criteria or targets indicate the efficacy of the management programme. The targets should be readily measurable, understandable to the layperson, cost-effective to monitor, and meet legal requirements.

Remedial Actions
Specifies actions needed to be taken if the targets are not met; or if there is an unforeseen event.

The following 7 are specified goals:

Goal 1: Waste Management and Pollution Control
Goal 2: Water Quality and Storm Water Management
Goal 3: Erosion Control
Goal 4: Emergency Procedures
Goal 5: Vegetation Management, inclusive of Alien management
Goal 6: Infrastructure Maintenance Management

Goal 1: Waste Management and Pollution Control

Objectives	Risks	Actions	Monitoring	Criteria/Targets	Remedial Actions
Ensure allocation of sufficient resources for on-going Integrated Waste Management e.g. staff, equipment, budget.	Pollution and odours	1. The waste accumulated at the infrastructure and surrounds needs to be managed in terms of the National Environmental Management Waste Act, 2008 (Act 59 of 2008) by the Park Management and the final disposal of the waste must take place at the appropriate licensed waste disposal site or recycling facility. 2. The applicant must ensure that all waste generated during the operational phase should be separated into different waste streams for recycling purposes prior to removal by a reputable contractor from the site and disposed of at an appropriately licensed landfill facility. 3. Solid waste may only be disposed of at an authorised solid waste facility in terms of abovementioned legislation. 4. Waste accumulation to be monitored and removed from the sites and surrounds on a monthly basis by the Park Management. 5. Waste accumulated at stormwater outlets/discharge points must be removed by the Park Management at least monthly and after heavy rains. 6. All vehicles transporting waste must be closed to avoid possible pollution of waste on transport routes. 7. Waste needs to be sorted and recycled as far as possible. The	Park Management to monitor compliance in accordance with existing operational EMP requirements for the park.	No accumulated waste or pollution within watercourses and at development sites.	If pollution on site is detected immediate actions must be taken to contain the pollution. Within 24hours of detection the applicant must be informed of the incident, where after a site visit will be conducted and recommend further rehabilitation methods to be implemented. Depending on type and extent of pollution occurred specialists may be contacted to provide specific recommendations. An incident report to be compiled and sent to relevant government authorities.

Contractor	Witness for Contractor	Employer	Witness for Employer

		minimising of waste must be promoted and alternative methods of waste management must be investigated. 8. Awareness raising is important in minimising waste. It is therefore encouraged that waste awareness and training must be implemented to all staff, contractors, and visitors to the site to ensure proper waste management occurs. 9. All waste types to be handled, stored, transported and disposed of according to relevant legislature. 10. Squatting and rubble dumping adjacent to the new development is not allowed and must be controlled by the Park Management and regular inspections conducted to ensure control. 11. An integrated waste management approach must be implemented, based on waste minimisation, reduction, recycling, re-use and disposal where possible. 12. Waste may not be stored for a period exceeding 90 days without adherence to the National Norms and Standards for the Storage of Waste in terms of Government Notice (GN) No.926 of 29 November 2013, if the volumes stored exceed 80m3 of hazardous waste or 100m3 of general waste. If these thresholds are triggered, the Facility must also be registered on the Department's Integrated Pollutant and			

Contractor	Witness for Contractor	Employer	Witness for Employer

		Waste Information System (http://ipwis.pgwc.gov.za/ipwis3/public) and the information must be updated regularly thereafter. 13. During the event of environmental pollution the relevant authorities including the Directorate Pollution Management must be informed within 14 days as per Section 30(10) of NEMA, and the necessary step must be implemented as soon as possible to rehabilitate polluted areas and prevent re-occurrence of environmental pollution. 14. Dust, odour and noise must be controlled appropriately and must not cause any nuisance conditions during hours of operation of the facilities and/or infrastructure. 15. Please note that section 28 (1) of the National Environmental Management Act, 1998 (Act No 107 of 1998) as amended (NEMA) states: “Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorized by law or cannot reasonable be avoided or stopped, to minimize and rectify such pollution or degradation of the environment”. Failure to adhere to			

Contractor	Witness for Contractor	Employer	Witness for Employer

		section 28(1) of NEMA is an offence and thus particular care of the environment must be taken. 16. No waste must be buried or burnt on site during construction or operation stages.			

Goal 2: Water Quality and Storm Water Management Measures

Objectives	Risks	Actions	Monitoring	Criteria/Targets	Remedial Actions
Ensure allocation of sufficient resources for on-going Water Quality and Storm Water Management e.g. staff, equipment, budget.	Pollution, odours and erosion	1. All relevant sections and regulations of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to. 2. No storm water runoff from any premises containing waste, or water containing waste emanating from infrastructure may be discharged into a water resource. Polluted storm water must be contained. 3. Storm water infrastructure should be monitored at least on a 3 monthly basis and any degradation or faults attended to immediately. 4. Ensure no pollution of any water resources, including surface water, storm water and groundwater takes place as a result of any activities on the site. 5. Ensure that no water other than storm water be discharged in the storm water system. 6. Storm water should be directed away from the roads and into the	Park Management to monitor compliance in accordance with existing operational EMP requirements for the park.	No accumulated waste or signs of erosion or pollution within watercourses at development sites.	If pollution on site is detected immediate actions must be taken to contain the pollution. Within 24hours of detection the applicant must be informed of the incident, where after a site visit will be conducted and recommend further rehabilitation methods to be implemented. Depending on type and extent of pollution occurred specialists may be contacted to provide specific recommendations. An incident report to be compiled and

Contractor	Witness for Contractor	Employer	Witness for Employer

		existing natural flow paths/drainage lines on site. 7. All waste within the storm water channels must be removed on a monthly base and after heavy rains. 8. If any erosion and/or degradation of the channel are noticed immediate action must be taken by the Park Management to rectify the situation. (Corrective and preventative measures taken will depend upon type and extent of erosion and/or degradation occurring). 9. Operate and maintain stormwater infrastructure as per EMP requirements. 10. Monitor for erosion of surrounding undeveloped areas and implement storm water management measures as recommended in the environmental management program. 11. Stormwater discharge flow must be managed and restricted in such a manner that it does not cause erosion. 12. Rehabilitate or stabilise eroded areas immediately to prevent increase/spread of erosion. 13. Only use existing access road to the site for operational purposes and avoid disturbance of "new" areas outside the existing access roads and infrastructure footprint. 14. Stormwater infrastructure must not cause erosion of the surrounding remaining undeveloped areas, but still			sent to relevant government authorities

Contractor	Witness for Contractor	Employer	Witness for Employer

		allow current hydrological processes to continue as is. 15. The Park Management must maintain all stormwater infrastructure on a regular basis to ensure that it is working effectively and is not blocked with waste.			

Goal 3: Erosion Control

Objectives	Risks	Actions	Monitoring	Criteria/Targets	Remedial Actions
Ensure allocation of sufficient resources) for on-going erosion control management (e.g. staff, equipment, budget)	Erosion, sink-holes and or blocking of storm water systems. Damage to Infrastructure.	1. On-going monthly monitoring and management of roads, roadways and areas susceptible to erosion. 2. Ensure suitable vegetation cover or surface on non-hardened surfaces. 3. Control runoff of storm water to prevent soil erosion. 4. Avoid the formation of sink-holes on sensitive soils. 5. Ongoing maintenance and management and control of erosion within and along infrastructure, rehabilitated areas and developed areas must be implemented.	Park Management to monitor compliance in accordance with existing operational EMP requirements for the park.	No signs of erosion within watercourses at development sites.	If erosion is detected immediate actions must be taken to contain the erosion. Depending on type and extent of erosion occurred specialists may be contacted to provide specific recommendations.

Goal 4: Emergency Procedures

Objectives	Risks	Actions	Monitoring	Criteria/Targets	Remedial Actions
Ensure allocation of sufficient resources for on-going safety, security and emergency	Pollution, floods, fire and health risks.	1. Emergency plans in case of flooding, fires, pollution to be compiled and implemented by the Park Management. Local community members to be informed and made aware	Park Management to monitor compliance in accordance with existing operational EMP requirements for the park.	Necessary emergency plans in place and available to the public	Emergency response procedures to be followed as required. An incident report to be compiled and

Contractor	Witness for Contractor	Employer	Witness for Employer

procedures. e.g. staff, equipment, budget.		of emergency protocols to be followed. 2. Sufficient Fire Fighting equipment to be available at nearest fire station. 3. Yearly pre-season testing and servicing of firefighting equipment.			sent to relevant government authorities

Goal 5: Vegetation Management, inclusive of Alien Vegetation.

Objectives	Risks	Actions	Monitoring	Criteria/Targets	Remedial Actions
Ensure allocations of sufficient resources e.g. staff, equipment, budget,) for On-going alien and vegetation management	Degradation and replacement of indigenous ecosystem characteristics i.e. indigenous flora and fauna habitat.	1. No additional formal or informal walkways/pathways may be created within remaining indigenous vegetation areas surrounding the picnic site. 2. Any alien and invasive vegetation that occur on property owned by the developed should be controlled or removed as prescribed by the Alien and Invasive Species Regulations of 2014. 3. All disturbed areas should be cleared and kept clear of weeds and alien invasive plants. 4. Implement an on-going alien vegetation management plan, clearing the site and surrounds of all alien invasive plants.	Park Management to monitor compliance in accordance with existing operational EMP requirements for the park.	On-going removal of weeds and alien invasive plants at disturbed sites.	No remedial actions required, only on-going alien vegetation clearing and monitoring as indicated.

Contractor	Witness for Contractor	Employer	Witness for Employer

		5. Rehabilitate disturbed areas with locally indigenous vegetation species within one year of disturbance and monitor successful rehabilitation of disturbed sites. 6. A site specific storm water management plan must be compiled for the operational phase of the proposed development and implemented in such a manner as to prevent any additional storm water run-off entering the adjacent indigenous vegetation areas and potentially causing erosion leading to further habitat fragmentation. 7. Should any erosion, illegal waste dumping, vegetation clearance, informal settlement establishment etc. occur within the buffer and no-go areas the Park Management must ensure that these impacts are rectified as soon as possible and take active steps to rehabilitate the impacted areas and prevent these impacts from re-occurring.			

Contractor	Witness for Contractor	Employer	Witness for Employer

Goal 6: Infrastructure Maintenance Management

Objectives	Risks	Actions	Monitoring	Criteria/Targets	Remedial Actions
Ensure allocation of sufficient resources e.g. staff, equipment, budgets, for on-going infrastructure maintenance management	Degradation of built infrastructure leading to additional impacts such as traffic congestion, environmental degradation etc.	1. No pollution of surface water or ground water resources may occur due to any activity. 2. The infrastructure must be monitored and kept free of silt/sediment, waste or debris built-up and intrusive growth of invasive alien plants at least annually before the main rainfall season and all excess silt built-up, waste or debris must be removed immediately. 3. Existing access roads to the sites must be used to gain access. No new access roads may be cleared. 4. All of the sites must be constantly monitored for any sign of erosion and if erosion is detected immediate action must be taken to rehabilitate the impacted area and prevent any further erosion. 5. Undertake storm water management measures as required. 6. No water may be abstracted from any water resource without the appropriate prior authorisation from the delegated authority and all relevant sections and regulations of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.	Park Management to monitor compliance in accordance with existing operational EMP requirements for the park.	1. Adequate annual Budgets 2. On-going employment of ECO and maintenance staff	To be determined

Contractor	Witness for Contractor	Employer	Witness for Employer

		7. Infrastructure should be cleaned regularly, at least once a month and after heavy rains and runoff to ensure that all waste is removed and not washed off site. 8. Should any erosion, illegal waste dumping, vegetation clearance, informal settlement establishment etc. occur within the buffer and no-go areas the Park Management must ensure that these impacts are rectified as soon as possible and take active steps to rehabilitate the impacted areas and prevent these impacts from re-occurring. 9. All domestic waste windblown or illegally dumped within the no-go areas site must be removed by the Park Management at least on a monthly basis.			

Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

CHAPTER 8

ENVIRONMENTAL REPORTING

The facility must ensure that “Any emergency incident, originating at the facility, which falls within the definition of section 30(1) a of the National Environmental Management Act (NEMA), Act of 1998, must be dealt with by the facility in accordance with Section 30 of NEMA”. In the event of any incident the facility must ensure containment by the responsible person and notify the Sub-Directorate: pollution information and chemicals management section at (021) 483 2760 / 2968.

In order to ensure that the necessary environmental issues are adequately addressed and recorded, the following environmental reporting shall be undertaken:

- Incident reporting; and
- Compliance reporting

In terms of NEMA Section 30 the following shall apply during the occurrence of an “incident” due to the proposed activities:

NEMA SECTION 30 - CONTROL OF INCIDENTS

(1) In this section

(a) ”incident” means an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property;

(b) "responsible person" includes any person who
(i) is responsible for the incident;
(ii) owns any hazardous substance involved in the incident; or
(iii) was in control of any hazardous substance involved in the incident at the time of the incident;

(c) "relevant authority" means
(i) a Park Management with jurisdiction over the area in which an incident occurs;
(ii) a provincial head of department or any other provincial official designated for that purpose by the MEC in a province in which an incident occurs;
(iii) the Director-General;
(iv) any other Director-General of a national department

(2) Where this section authorises a relevant authority to take any steps, such steps may only be taken by

(a) the person referred to in subsection (1)(c)(iv) if no steps have been taken by any of the other persons listed in subsection (1)(c);

(b) the person referred to in subsection (1)(c)(iii) if no steps have been taken by any of the persons listed in subsection (1)(c)(i) and (c)(ii);

(c) the person referred to in subsection (1)(c)(ii) if no steps have been taken by the person listed insubsection (1)(c)(i):

Provided that any relevant authority may nevertheless take such steps if it is necessary to do so in the circumstances and no other person referred to in subsection (1)(c) has yet taken such steps.

(3) The responsible person or, where the incident occurred in the course of that person's employment, his or her employer must forthwith after knowledge of the incident, report through the most effective means reasonably available

(a) the nature of the incident;

(b) any risks posed by the incident to public health, safety and property;

(c) the toxicity of substances or by-products released by the incident; and

(d) any steps that should be taken in order to avoid or minimise the effects of the incident on public health and the environment to
(i) the Director-General;
(ii) the South African Police Services and the relevant fire prevention service;
(iii) the relevant provincial head of department or Park Management; and
(iv) all persons whose health may be affected by the incident.

(4) The responsible person or, where the incident occurred in the course of that person's employment, his or her employer, must, as soon as reasonably practicable after knowledge of the incident

(a) take all reasonable measures to contain and minimise the effects of the incident, including its effects on the environment and any risks posed by the incident to the health, safety and property of persons;

(b) undertake clean-up procedures;

(c) remedy the effects of the incident;

(d) assess the immediate and long-term effects of the incident on the environment and public health;

(5) The responsible person or, where the incident occurred in the course of that person's employment, his or her employer, must, within 14 days of the incident, report to the Director-General, provincial head of department and Park Management such information as is available to enable an initial evaluation of the incident, including

(a) the nature of the incident;

(b) the substances involved and an estimation of the quantity released and their possible acute effect on persons and the environment and data needed to assess these effects;

(c) initial measures taken to minimise impacts;

(d) causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure; and

(e) measures taken and to be taken to avoid a recurrence of such incident.

(6) A relevant authority may direct the responsible person to undertake specific measures within a specific time to fulfil his or her obligations under subsections (4) and (5): Provided that the relevant authority must, when considering any such measure or time period, have regard to the following:

(a) the principles set out in section 2;

(b) the severity of any impact on the environment as a result of the incident and the costs of the measures being considered;

(c) any measures already taken or proposed by the person on whom measures are to be imposed, if applicable;

(d) the desirability of the state fulfilling its role as custodian holding the environment in public trust for the people;

(e) any other relevant factors.

(7) A verbal directive must be confirmed in writing at the earliest opportunity, which must be within seven days.

(8) Should:

(a) the responsible person fail to comply, or inadequately comply with a directive under subsection (6);

(b) there be uncertainty as to who the responsible person is; or

(c) there be an immediate risk of serious danger to the public or potentially serious detriment to the environment, a relevant authority may take the measures it considers necessary to
  (i) contain and minimise the effects of the incident;
  (ii) undertake clean-up procedures; and
  (iii) remedy the effects of the incident.

(9) A relevant authority may claim reimbursement of all reasonable costs incurred by it in terms of subsection (8) from every responsible person jointly and severally.

(10) A relevant authority which has taken steps under subsections (6) or (8) must, as soon as reasonably practicable, prepare comprehensive reports on the incident, which reports must be made available through the most effective means reasonably available to

(a) the public;

(b) the Director-General;

(c) the South African Police Services and the relevant fire prevention service;

(d) the relevant provincial head of department or Park Management; and

(e) all persons who may be affected by the incident

See below for a template of an Incident Report to serve as a guideline for the recording and addressing of emergency incidents as and when they occur.

Document Type:	Emergency Incident Report		
	Title:	**(PROPERTY WHERE INCIDENT OCCURRED, DATE AND TYPE OF INCIDENT)**	
	Document Status:	Pilot reporting format	
Reference:	[A reference that may be used in future correspondence]	**Initial Submission Date:**	[Date of initial submission of the report to the Department: Environmental Affairs and Tourism]
Revision No.:	example	**Compiled by:**	[Full name and contact details of the person submitting the report]

This form provides a template for the emergency incident report required in terms of section 30(5) of the National Environmental Management Act (Act No. 107 of 1998) (hereinafter "NEMA") in which the responsible person or, where the incident occurred in the course of that person´s employment, his or her employer, must, within 14 days of the incident, report to the Director General, provincial head of department and Park Management such information as is available to enable an initial evaluation of the incident, including: (a) the nature of the incident; (b) the substances involved and an estimation of the quantity released and their possible acute effect on persons and the environment and data needed to assess these effects; (c) initial measures taken to minimise impacts; (d) causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure; and (e) measures taken and to be taken to avoid a recurrence of such incident.

In terms of section 30(1)(a) of NEMA, an "incident" means an unexpected sudden occurrence, including a major emission, fire or explosion leading to serious danger to the public or potentially serious pollution of or detriment to the environment, whether immediate or delayed.

In line with section 24 of the Constitution of the Republic of South Africa (Act No. 108 of 1996), "serious" is taken to be a measure of the impact of an incident where such an incident has had, could have had, is having, or will have a negative impact on human health or well-being.

RESPONSIBLE PERSON			
In terms of section 30(1)(b) of NEMA, the "responsible person" includes any person who: (i) is responsible for the incident; (ii) owns any hazardous substance involved in the incident; or (iii) was in control of any hazardous substance involved in the incident at the time of the incident			
Name:	[Full name of person, company, etc.]	**Designation:**	[designation of responsible person (n/a for companies, etc.)]
Postal Address:	[Full postal address including postal code]	**Physical Address:**	[Full physical address]
Telephone (B/H)	[Business hours contact telephone number and area code]	**Telephone (A/H)**	[After hours contact telephone number and area code]
Nature of Business:	[Brief summary of the nature of the business]		

EMERGENCY INCIDENT SUMMARY INFORMATION							
Mark the appropriate boxes							
Fire:		**Spill:**		**Explosion:**		**Gaseous Emission:**	
Injuries		**Reportable injuries:**		**Hospitalisation:**		**Fatalities:**	
Open water impacts:		**Ground water impacts:**		**Atmospheric impacts:**		**Soil impacts:**	
Own emergency response involved		**Fire prevention services involved**		**Government hazardous materials emergency response involved**		**More than 1 governmental emergency response service involved**	
Emission of non-toxic substances at low concentrations		**Emission of non-toxic substances at high concentrations**		**Emission of toxic substances at low concentrations**		**Emission of toxic substances at high concentrations**	
No evacuation required		**Immediate area evacuated**		**Immediate surrounds evacuated**		**Evacuation of the general public**	

INITIAL EMERGENCY INCIDENT REPORT				
In terms of section 30(3) of NEMA, the responsible person or, where the incident occurred in the course of that person´s employment, his or her employer must forthwith after knowledge of the incident, report through the most effective means reasonably available: (a) the nature of the incident; (b) any risks posed by the incident to public health, safety and property; (c) the toxicity of substances or byproducts released by the incident; and (d) any steps that should be taken in order to avoid or minimise the effects of the incident on public health and the environment to: (i) the Director General; (ii) the South African Police Services and the relevant fire prevention service; (iii) the relevant provincial head of department or Park Management; and (iv) all persons whose health may be affected by the incident.				
Description	**Date:**	**Time:**	**Medium:**	**Contact Details:**
Director General:	[submission date]	[submission time]	[Fax, phone, SMS, letter, etc.)	[who was the report made to?]
SAPS:				
Relevant fire prevention service:				
Relevant province or Park Management				

INITIAL EMERGENCY INCIDENT REPORT				
In terms of section 30(3) of NEMA, the responsible person or, where the incident occurred in the course of that person´s employment, his or her employer must forthwith after knowledge of the incident, report through the most effective means reasonably available: (a) the nature of the incident; (b) any risks posed by the incident to public health, safety and property; (c) the toxicity of substances or byproducts released by the incident; and (d) any steps that should be taken in order to avoid or minimise the effects of the incident on public health and the environment to: (i) the Director General; (ii) the South African Police Services and the relevant fire prevention service; (iii) the relevant provincial head of department or Park Management; and (iv) all persons whose health may be affected by the incident.				
Description	**Date:**	**Time:**	**Medium:**	**Contact Details:**
Affected persons:			Provide details of who was contacted and how they were contacted as Annexure A to this report	

INCIDENT DETAILS			
In terms of NEMA section 30(5)(a) and (d), the responsible person must report on the nature of the incident as well as the causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure			
Incident start time:	[The exact time that the unexpected event started]	**Incident duration:**	[the duration of the unexpected event]
Duration of danger:	[The time taken from the start of the event to the time when the impacts of the event no longer posed a threat to anyone's health or well-being]	**Duration of exposure:**	[The duration of conditions that had a direct impact anyone's health or well-being]
Incident description	[Brief description of the incident detailing, but not limited to, a description of: (i) what happened; (ii) how it happened; (iii) where it happened; (iv) the timing and sequence of events; and (v) why it happened. A detailed discussion may be included as an annex.]		
	Plans, diagrams, maps or any other graphical material relating to the incident description must be attached as annexures B1, B2, etc.		
Wind speed and direction	[The wind speed and direction at the point of the incident at the time of the incident]	**Ambient air temperature**	[ambient air temperature at the time of the incident]
Weather conditions	[Sunny, light rain, mist, heavy rain, etc.]	**Other relevant meteorological conditions**	[Temperature inversion, floods, etc]

POLLUTANTS RELEASED DURING INCIDENT					
In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity.					
List all the pollutants directly released during the incident (i.e. exclude those pollutants that resulted from mitigation measures, e.g. flaring, treatment, dilution etc.)					
Substance or mixture of substances	**Reference Number**	**Phase**	**Total Quantity emitted**	**Unit**	**Nature of emission**
[The name recognised by any national or internationally recognised chemical referencing system]	[Reference to any national or internationally recognised chemical referencing system]	[solid, semi-solid, liquid or gas]	[the total measured or estimated quantity released into the environment]	[the unit of measure in respect to the quantity]	[emitted from truck, underground pipe, stack, etc.]

POLLUTANTS RELEASED DURING INCIDENT					
In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity.					
List all the pollutants directly released during the incident (i.e. exclude those pollutants that resulted from mitigation measures, e.g. flaring, treatment, dilution etc.)					
Substance or mixture of substances	**Reference Number**	**Phase**	**Total Quantity emitted**	**Unit**	**Nature of emission**

SECONDARY POLLUTANTS RESULTING FROM INCIDENT					
In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity released.					
List all the pollutants that resulted from mitigation measures, e.g. flaring, treatment, dilution etc.					
Substance or mixture of substances	**Reference Number**	**Phase**	**Total Quantity emitted**	**Unit**	**Nature of emission**
[The name recognised by any national or internationally recognised chemical referencing system]	[Reference to any national or internationally recognised chemical referencing system]	[solid, semi-solid, liquid or gas]	[the total measured or estimated quantity released into the environment]	[the unit of measure in respect to the quantity]	[emitted from truck, underground pipe, stack, etc.]

1. POLLUTANT CONCENTRATIONS					
In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity released.					
List all the pollutants detailed in sections **Error! Reference source not found.** and **Error! Reference source not found. Error! Reference source not found.**.					
1.1 Substance or mixture of substances	**1.2 Reference Number**	**1.3 Estimated pollutant concentration**			
		1.4 10m	**1.5 100m**	**1.6 500m**	**1.7 Concentration unit (e.g. ppm)**
[The name recognised by any national or internationally recognised chemical referencing system]	[Reference to any national or internationally recognised chemical referencing system]	[estimate the concentration of the pollutant in water, soil and/or air within a 10m radius of the epicentre of the incident]	[estimate the concentration of the pollutant in water, soil and/or air within a 100m radius of the epicentre of the incident]	[estimate the concentration of the pollutant in water, soil and/or air within a 500m radius of the epicentre of the incident]	[[Provide the unit of concentration used in columns 1.4, 1.5 and 1.6.]

1. POLLUTANT CONCENTRATIONS					
In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity released.					
List all the pollutants detailed in sections **Error! Reference source not found.** and **Error! Reference source not found. Error! Reference source not found.**.					
1.1 Substance or mixture of substances	**1.2 Reference Number**	**1.3 Estimated pollutant concentration**			
		1.4 10m	**1.5 100m**	**1.6 500m**	**1.7 Concentration unit (e.g. ppm)**

INCIDENT IMPACT	
In terms of NEMA section 30(5)(b), the responsible person must report on possible acute effect on persons and the environment and data needed to assess these effects;	
Minor injuries	[Describe the number and types of any minor injuries that resulted from the incident or efforts to manage the incident or the impacts thereof]
Reportable injuries	[Describe the number and types of any injuries requiring statutory reporting that resulted from the incident or efforts to manage the incident or the impacts thereof]
Hospitalisation	[Describe the number and types of any injuries that required professional medical care that resulted from the incident or efforts to manage the incident or the impacts thereof]
Fatalities	[Describe the number and cause of any fatalities that resulted from the incident or efforts to manage the incident or the impacts thereof]
Biological impacts	[Describe any impacts on biological life, other than human life, e.g. fish kills, plant mortality, etc.]
Impact area	[Describe the area possibly affected by the incident or the impacts thereof including: (i) size of the area; (ii) socio-economic context; (iii) population density; (iv) sensitive environments (if any), etc.]
Data	Attach relevant impact reports, medical reports, death certificates, post mortem reports, environmental monitoring data, etc. as Annexes C1, C2,… to this report

EXISTING PREVENTION PROCEDURES AND/OR SYSTEMS	
Foresight	[Briefly describe whether the incident could have, or had, been foreseen, e.g. was it included in any environmental impact assessment, risk assessment, health and safety plan, etc.]
Procedures and/or systems	Attach any relevant safety, health and environmental plans (including any statutory planning requirements) that detail what actions should be taken in the event of the incident that is the subject of this report
Procedure and/or systems failures	[Describe any failures or shortfalls in procedures and/or systems that may have contributed to the incident]
Technical measures	[Describe any technical measures, equipment, 'fail-safe' devices, etc. that are in place to prevent the occurance of the incident]
Technical failure	[Describe any failures of technical measures, equipment, 'fail-safe' devices, etc. that are in place to prevent the occurance of the incident]

2. INITIAL INCIDENT MANAGEMENT	
In terms of NEMA section 30(5)(c), the responsible person must report on initial measures taken to minimise impacts.	
2.1 Evacuation	[Describe any evacuation activities including information on the number of people evacuated and whether these people were staff or otherwise]
2.2 Technical measures	[Describe all technical measures taken to address the incident]
2.3 Mitigation measures	[Describe all measures taken to minimise the impact]
2.4 Emergency Services	[Describe any governmental emergency services involvement]

3. CLEANUP AND/OR DECONTAMINATION	
In terms of NEMA section 30(5)(c), the responsible person must report on initial measures taken to minimise impacts.	
3.1 Cleanup and/or decontamination	[Provide a detailed description of all cleanup and/or decontamination activities and the environmental quality and impacts resulting from these activities as well as contact details for any contracted service providers in an annex.]

Permissions and Instructions

Provide details of any permissions and/or instructions received from any organ of state during initial incident management, cleanup and/or decontamination

3.2 Type	3.3 Statuate	3.4 Issued By	3.5 Details
[Describe the nature or type of permission or instruction]	[Provide a reference to the legal mandate for the permission or instruction]	[Provide contact details for the permitting or instructing authority]	[provide a summary of the activities carried out in terms of the permission or instruction]

MITIGATION MEASURES			
In terms of NEMA section 30(5)(e), the responsible person must report on measures taken and to be taken to avoid a recurrence of such incident.			
Measure	**Objective**	**Cost**	**Timing**
[Briefly describe each of the measures taken, and to be taken, to avoid a recurrence of such incident]	[Briefly describe the objective of the measure, i.e. the desired outcome of the measure]	[Estimate the cost of the measure in terms of capital costs and/or recurrent costs]	[Provide information on the timing for the full implementation of the measure]

4. AUTHORISATIONS			
Provide detail on all authorisations (including permits, licenses, certificates, etc.) in respect of the activity to which the incident relates.			
4.1 Type	**4.2 Statuate**	**4.3 Issued By**	**4.4 Issue & Expiry Date**
[Describe the nature or type of authorisation, e.g. Registration Certificate]	[Provide the reference for the authorisation, e.g. section X of the National	[Provide contact details for the issuing authority]	[provide the date of issue and expiry]

4. AUTHORISATIONS			
Provide detail on all authorisations (including permits, licenses, certificates, etc.) in respect of the activity to which the incident relates.			
4.1 Type	**4.2 Statuate**	**4.3 Issued By**	**4.4 Issue & Expiry Date**
	Environmental Management Act (Act No. 107 of 1989)]		

HISTORY			
Provide details on any and every similar incident involving the responsible person in the last 24 months. Similar incidents include those that: (i) involved similar circumstances; (ii) involved similar emissions; (iii) involved similar personal; and/or (iv) involved similar impacts.			
Incident title	**Report reference**	**Date of incident**	**Summary of event**
[Provide the title used in the relevant emergency incident report]	[Provide the reference in respect of the relevant emergency incident report]	[Date of incident]	[Provide a summary of the event]

Signed by, or as a mandated signatory for, the responsible person:		Date:	

CHAPTER 9

DECOMMISSIONING PHASE

As the final phase in the project cycle, decommissioning may present positive environmental opportunities associated with the return of the land for alternative use and the cessation of impacts associated with operational activities. However, depending on the nature of the operational activity, the need to manage risks and potential residual impacts may remain well after operations have ceased.

Examples of potential residual impacts and risks include contamination of soil and groundwater, stock that has been abandoned (e.g. oil drums, scrap equipment, old chemicals) and old (unserviceable) structures.

Closure and decommissioning impacts are likely to be similar to the construction phase impacts. The management actions and control under the Construction Phase need to be implemented to mitigate the negative impacts on the environment and to restore the property to its natural state. It is however highly unlikely that the development will be decommissioned and closed in the near future.

A decommissioning phase is where a structure is removed or otherwise modified to make it incapable for re use for the original design purpose.

The results of environmental monitoring during the decommissioning phase will be used to assess the impact of the decommissioning on the surrounding environment and demonstrate compliance with regulatory requirements.

The actual scope of the decommissioning environmental monitoring will be established following consultation with the regulatory authorities. The format of decommission management strategy will probably be similar to that of earlier development phases and consist of the following:

- Management Principles
    - Develop monitoring procedures in accordance with standard protocols and the requirements of the environmental legislation.
    - Undertake environmental monitoring during the decommissioning phase as shown below.

Environmental monitoring during the decommissioning phase will include terrestrial and aquatic indigenous habitat rehabilitation monitoring.

CHAPTER 10

REHABILITATIONS AND SITE CLEAN-UP

The contractors must ensure that all temporary structures, equipment, materials and facilities used or created on site for, or during construction, operational and decommissioning activities, are removed once the phase has been completed.

Stabilisation and rehabilitation must take place immediately after the construction/decommissioning operations have been completed. No vehicles or unauthorised personnel must be allowed onto areas that have been rehabilitated.

The areas impacted must be stabilised and shaped according to the natural surrounding contours. If topsoil was removed the topsoil must be used to stabilise the impacted areas.

Erosion and Alien vegetation monitoring of the rehabilitated areas and surrounds must be conducted by the park management on an ongoing basis and if sign of erosion or alien vegetation return is detected it must be managed as according to the requirements of the EMP.

CHAPTER 11

ENVIRONMENTAL AWARENESS INDUCTION COURSE MATERIAL

This section of the report is included in compliance with Section 24N (3) (c) of the National Environmental Management Act 107 of 1998.

INTEGRATED WASTE MANAGEMENT

An integrated waste management approach that is based on waste minimisation must be used and must incorporate reduction, recycling, re-use and disposal where appropriate. Where practically possible, construction and general wastes on-site must be reused or recycled. Bins and skips must be available on-site for collection, separation, and storage of waste streams (such as wood, metals, general refuse etc.).

Make sure that you are aware of the location of the various types of waste storage areas and make use of the appropriate temporary waste storage areas when disposing of and collecting waste from the construction site. Make use of the correct waste storage area when disposing of recyclable and non-recyclable waste and do not mix the different types of recyclable waste i.e. wood, paper, metal, plastic.

When waste storage areas as full immediately inform the site manager so that recyclable and non-recyclable waste can be disposed at the correct facilities and to prevent windblown waste.

Chance Fossil Finds Protocol

Potential fossils	Petrified wood (*e.g.* logs), plant compressions, bones and teeth of dinosaurs, mammals and other vertebrates, non-marine shell beds in Kirkwood Formation bedrocks. Reworked petrified wood and dinosaur bones in superficial deposits.	
ECO protocol	1. Once alerted to fossil occurrence(s): alert site foreman, stop work in area immediately (*N.B.* safety first!), safeguard site with security tape / fence / sand bags if necessary.	
	2. Record key data while fossil remains are still *in situ:* • Accurate geographic location – describe and mark on site map / 1: 50 000 map / satellite image / aerial photo • Context – describe position of fossils within stratigraphy (rock layering), depth below surface • Photograph fossil(s) *in situ* with scale, from different angles, including images showing context (*e.g.* rock layering)	
	3. If feasible to leave fossils *in situ*: • Alert Heritage Resources Authority and project palaeontologist (if any) who will advise on any necessary mitigation • Ensure fossil site remains safeguarded until clearance is given by the Heritage Resources Authority for work to resume	3. If *not* feasible to leave fossils *in situ* (emergency procedure only): • *Carefully* remove fossils, as far as possible still enclosed within the original sedimentary matrix (*e.g.* entire block of fossiliferous rock) • Photograph fossils against a plain, level background, with scale • Carefully wrap fossils in several layers of newspaper / tissue paper / plastic bags • Safeguard fossils together with locality and collection data (including collector and date) in a box in a safe place for examination by a palaeontologist • Alert Heritage Resources Authority and project palaeontologist (if any) who will advise on any necessary mitigation
	4. If required by Heritage Resources Authority, ensure that a suitably-qualified specialist palaeontologist is appointed as soon as possible by the developer.	
	5. Implement any further mitigation measures proposed by the palaeontologist and Heritage Resources Authority	
Specialist palaeontologist	Record, describe and judiciously sample fossil remains together with relevant contextual data (stratigraphy / sedimentology / taphonomy). Ensure that fossils are curated in an approved repository (e.g. museum / university / Council for Geoscience collection) together with full collection data. Submit Palaeontological Mitigation report to Heritage Resources Authority. Adhere to best international practice for palaeontological fieldwork and Heritage Resources Authority minimum standards.	

ATTENDANCE REGISTER FOR ……	
PLACE ……	TRAINER……
NAME & SURNAME	SIGNED
SIGNED ……	DATE & TIME ……

CHAPTER 12

COMPLIANCE WITH THE ENVIRONMENTAL AUTHORISATION

All conditions of the Environmental Authorisation must be adhered to onsite during the construction-, operational-, decommissioning- and rehabilitation phases of the proposed project. A copy of the Environmental Authorisation (and all other relevant license, permits, legislation etc.) must be available on site together with the EMP and all contractors on site must sign the Declaration of Understanding as proof of awareness and understanding of all the conditions to be adhered to on site in terms of the EA and EMP.

CHAPTER 13

UPDATING/ADAPTING THE EMPr

Although care has been taken to address all known relevant environmental issues for the development, it might become necessary to add or amend certain procedures or instructions to improve the efficiency of the EMP. Only those additions to, or amendments of, this EMP that will either improve environmental protection or can be proven not to have any negative effects would be considered to be included, and any amendments to the EMP must first be approved by the ECO and competent authority/ies i.e. DFFE before the EMP can be amended and implemented as such.

The name, address and contact phone number of the site supervisor/s must be included in the EMPr once appointed by the applicant.

REFERENCES

City of Cape Town (2002) Environmental Management Programme (Version 5) for Civil Engineering Construction Activities.

DEA&DP: ENVIRONMENTAL MANAGEMENT PROGRAMME. VER 5 (04/2002). Guideline Document for the ECO / ESO and the ER

Department of Water Affairs and Forestry, February 2005. Environmental Best Practice Specifications: Construction Integrated Environmental Management Sub-Series No. IEMS 1.6. Third Edition. Pretoria.

Annexure C

Code of Conduct for Working in a National Park

Contractor	**Witness for Contractor**		**Employer**	**Witness for Employer**

South African NATIONAL PARKS

SOUTH AFRICAN NATIONAL PARKS

Project: THE CONSTRUCTION OF A SWIMMING POOL AT DIE STROOM PICNIC SITE IN BONTEBOK NATIONAL PARK

CODE OF CONDUCT FOR WORKING IN A NATIONAL PARK

OUTSIDE ORGANISATIONS WORKING TEMPORARILY IN A NATIONAL PARK

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 residing in 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;

Contractor	Witness for Contractor	Employer	Witness for Employer

2.2.2 Be in possession of an unsealed weapon, explosives, traps or poison in the park or convey the same into a park;

2.1.3 Hunt or kill an animal, collect, damage or destroy a bird's nest or it's eggs;

2.1.4 Purposely or negligently cause a veld fire or damage any object of geological, archaeological, historical, ethnological or of any other scientific value to SANParks;

2.1.5 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;

2.1.6 Remove any animal (dead or alive) or parts thereof from the park (unless lawfully brought into the park);

2.1.7 Cut down trees or remove plants from a park or in any way damage any tree, plant or seeds;

2.1.8 Feed animals in national parks;

2.1.9 Drive a vehicle without a licence or allow a minor to drive a vehicle under his control;

2.1.10 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;

2.1.11 Enter a national park in an:

- Unlicensed (or unregistered) vehicles;
- Enter or use any closed road (no entry);

2.1.12 Vehicles may not be driven recklessly or negligently in a national park.

2.1.13 All drivers must consider other drivers and all animals.

2.1.14 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.

2.1.15 Without special permission, no person may organize or perform public entertainment or fund-raising campaigns.

2.1.16 Angling in rivers or dams is prohibited.

2.1.17 Angling, where permitted, is only allowed from sunrise to sunset.

2.1.18 Swimming is prohibited at designated angling areas.

2.1.19 No person may damage property or endanger property belonging to SANParks.

2.1.20 No person may use a radio or musical instruments in such a way as to cause a disturbance to others.

2.1.21 No person may dispose of any article or rubble other than in containers provided by SANParks.

2.1.22 No person may remove sand, stone or wood without the permission of SANParks.

2.1.23 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.

2.1.24 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.

1.2 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.

1.3 Stone, sand and/or soil may not be removed 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.

1.4 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.

1.5 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.

1.6 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.

1.7 No animals may be killed in the park.

1.8 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 authorised to do so by SANParks. A report of all animals killed and the circumstance surrounding if, must be sent to the Park Manager or designated person as soon as possible.

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.*

Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

4. FIREARMS

Only authorised 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 organization's authority, they have to be aware of all activities and especially extraordinary activities in their park. It is therefore not only a matter of courtesy but of necessity to report all activities to the Park Manager. It is very important that all new building activities, the construction of new roads, etc., be reported by the supervisor to the Park Manager. It is just as important to report the use of firebreak roads as well as unscheduled night trips to the Park Manager.

7.2 No person residing or working in a rest camp may leave the rest camp gate after gate closing times, without the Park Manager's or designated person's permission.

8. TRAVELLING TIMES AND TRANSPORT MATTERS

8.1 All private and official trips within a national park, must be undertaken during daylight hours and permission to travel after-hours will only be given in emergencies, by the Park Manager or designated person.

8.2 No person (employee or visitor) may transport passengers on the back of an open vehicle within a national park, unless in the execution of official duties.

9. ROAD RULES AND SPEED LIMITS

9.1 Road Rules

All personnel, whether in an official or private capacity, must ensure that their driving sets an example to other drivers. Although all people working in a park with the necessary approval, may drive at a faster speed than the tourists, they must do this as unobtrusively as possible by approaching another vehicle at a decreased speed, passing it and then accelerating slowly to the required speed. As soon as an oncoming vehicle is in sight, speed must once again be decreased until the vehicle is out of sight.

9.2 Speed limit for personnel

All employees of SANParks, as well as employees from outside organizations with written consent working in a national park, may travel at a maximum speed of 65km/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 65km/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 anyone 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 preferable 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.

Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

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 unauthorised person, assist him or give him permission to enter or live in any designated living areas;
13.2.2 Behave in such a way as to be detrimental to maintaining discipline, order for health in such living areas;

13.3 Without written permission from the Park Manager or designated person;

13.3.1 Keep live animals or poultry;
13.3.2 Excavate or have excavations made
13.3.3 Build or make any alterations to existing building;

13.4 In any way, either directly or indirectly, hinder any employee, Security Officer, Ranger or anyone authorised by the Park Manager, in the execution of their duties; inspections or any investigations deemed necessary or purposely hinder, obstruct, mislead or refuse to divulge information when requested to, or refuse to assist in any way or heed legitimate request or command.

13.5 Purposely disturb the peace by making a noise, shouting, screaming, arguing, causing violence or acting violently or improperly.

13.6 Enter or leave a Park or living quarters other than through the official gates.

13.7 Gamble in any way.

13.8 Defecate in a place or manner as to offend any other person.

13.9 Dispose of rubble or leftovers in any place other than in bins provided.

13.10 Aimlessly loiter or hang around near or in a rest camp or personnel accommodation at any time.

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.

END

Contractor	Witness for Contractor	Employer	Witness for Employer