



Municipal Infrastructure Support Agent (MISA)

REPUBLIC OF SOUTH AFRICA

MISA/PRPH/ELM/NC/024/2026/27

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN
HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

PROCUREMENT DOCUMENT

(Based on NEC3 Engineering and Construction Contract – Option B: Priced Contract with
Bill of Quantities)

OCTOBER 2026

Issued by:

Chief Executive Officer
Municipal Infrastructure Support Agent
1303 Heuwel Avenue
Riverside Office Park, Letaba House
Centurion, PRETORIA 0046
TEL: 012 848 5300

Name of Tenderer: _____

Total Bid Price: _____



MUNICIPAL INFRASTRUCTURE SUPPORT AGENT

MISA/PRPH/ELM/NC/024/2026/27

APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN
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**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN
HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

Tender Procedure: Open Tender Procedure

Based on

MISA Supply Chain Management Policy dated 12 February 2026

SANS 10845-1, Construction procurement Part 1: Processes, methods and procedures

SANS 10845-2, Construction procurement Part 2: Formatting and compilation of procurement documentation

SANS 10845-3, Construction procurement Part 3: Standard conditions of tender

Preferential Procurement Regulations 2022 (*Ref: government gazette no. 47452; dated: 04 November 2022 issued according to the preferential procurement policy framework act (PPPFA), act no. 5 of 2000*)

Contract Documents

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APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE

T1 Tendering Procedure

T1.1 TENDERING NOTICE AND INVITATION TO TENDER

Municipal Infrastructure Support Agent (MISA) hereby, invites proposals from suitably qualified bidders for the – **APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

Tenderers should have a CIDB contractor grading of **3CE or higher**.

Contracts will be based on the NEC3 Engineering and Construction Contract (**Option B: Priced Contract with Bill of Quantities**).

TENDER NO.	PROJECT NAME	COMPULSORY BRIEFING SESSION & SITE VISIT: PLACE, DATE & TIME	TENDER CLOSING DATE & TIME
MISA/PRPH/ELM/NC/024/2026/27	Appointment of a contractor for the lining of two ponds in Hanover in the northern cape – completion phase	A Compulsory Briefing session will be held as follows: Date: 26 October 2026 Time: 12:00am Venue: Emthanjeni Local Municipality, Hanover, Northern Cape	09 November 2026 @11.00 AM All Bid Proposals to be submitted to: 1303 Heuwel Avenue, Riverside Office Park, Letaba House, Centurion, PRETORIA 0046 TEL: 012 848 5300

A Compulsory Briefing Session & Site Visit will be held as follows:

Venue: Emthanjeni Local Municipality, Hanover, Northern Cape.

Tenderers must attend the compulsory briefing session & site visit in person at the venue. Attendance will be regarded as compliance with the compulsory briefing session requirement.

The requirements for submissions are detailed in the Tender Data (Ref: T1.2 Tender Data). The tenderers who satisfy the eligibility criteria as set out in the tender documents (Ref: T 1.2 Tender Data) are to submit their tenders.

Bidders must note that by submitting bid proposal you give MISA permission to process or access bidders, members and its director's information in compliance with Protection OF Personal Information Act (POPIA).

Telegraphic, telephonic, telex, facsimile, e-mail and late tenders will not be accepted. Tenderers must submit their tenders using only the tender documentation issued.

Tenders will be evaluated in accordance with the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000), the Preferential Procurement Regulations, 2022, the CIDB Standard for Uniformity in Construction Procurement and the MISA Supply Chain Management Policy.

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

Issued by: **Municipal Infrastructure Support Agent (MISA)**

1303 Heuwel Avenue

Riverside Office Park, Letaba House, Centurion, PRETORIA 0046

TEL: 012 848 5300

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T1.2 TENDER DATA

The conditions of tender are as contained in the latest edition of SANS 10845-3, Standard conditions of tender.

SANS 10845-3 makes 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 itself and the provisions of SANS 10845-3 as contained in **the Standard for Uniformity in Construction Procurement (Board Notice 423 of 2009 Government Gazette No 42622 of August 2019), as termed as SFU.**

Clause number	Tender Data
3.1	The employer is the Municipal Infrastructure Support Agent (MISA), an entity within the South African Ministry for Cooperative Governance and Traditional Affairs (CoGTA), established in terms of Presidential Proclamation No. 29 of 2012.
3.3	The Tender documents issued by the employer comprise the documents listed on the contents page.
3.4	The Employer's Representative is: Name: Ms. E.M Kgomo Physical Address: 1303 Heuwel Avenue, Riverside Office Park, Letaba House, Centurion, Pretoria 0046 Private Bag X 105, Centurion 0046 Telephone: 012 848 5300 Email: tenders@misa.gov.za
3.5	The language of communications is English
4.1	ONLY those tenderers who satisfy the following ELIGIBILITY CRITERIA and who provide the required evidence in their tender submissions are eligible to submit tenders and have their tenders evaluated:

Clause number	Tender Data
	The tenderer: 1. Only those tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions and have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations, for a CIDB Grade 3CE or Higher class of construction work are eligible to have their tenders evaluated, provide the proof of valid registration with CIDB. 2. In case of Joint ventures, bidders are eligible to submit tenders provided that every member of the joint venture is registered with CIDB: • the lead partner has a contractor grading designation of 3CE or higher class of construction work; or not lower than one level below the required grading designation in the class of works under consideration and possess the required recognition status. • the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 3CE or higher class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. 3. In case of a Joint Venture/ Consortium submission, shall submit a Joint Venture Agreement signed by all parties. 4. Is registered in terms of the Companies Act, 2008 (Act 71 of 2008) or Close Corporation Act, 1984, (Act No. 69 of 1984) or, if a partnership, has a partnership agreement (buy and sell agreement for participating partners in this tender) in place that enables the partnership to automatically continue to function in the event of death or withdrawal of one of the partners. 5. None of the documents with correction fluid on them. Any wrong entry, in case of correction, it must be cancelled by a single stroke and initialled by the Authorised signatory. This APPLICABLE TO FORM OF OFFER AND PRICING DATA 6. Attendance of Compulsory Physical Briefing session with a site visit and completion of the attendance register.
4.7	The arrangements for a compulsory clarification meeting & site visit are as stated in the Tender Notice and Invitation to Tender (ref: T1.1). Tenderers/their authorised representatives must register company name on attendance register and detailed contacts in favour of the tendering entity therein. Addenda, if any, will be issued to all tenderers who attended the compulsory physical briefing session and registered their attendance.
4.12	No alternative tender offer will be considered.
4.13	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: Reception area of MISA Offices Municipal Infrastructure Support Agent's Office Physical Address: 1303 Heuwel Avenue, Riverside Office Park,

Clause number	Tender Data
	Letaba House, 1st Floor, Centurion, Pretoria 0046 Private Bag X 105, Centurion 0046 Telephone: 012 848 5300 Identification details on the Tender package(s): 1. Name and Reference number of the tender; 2. Address of the employer; 3. Names of the tendering entity and the contact person; 4. Physical address and contacting details of the tenderer; 5. Date of submission
4.13.4	The tenderer is required to meet the following conditions in addition to the requirement for eligibility criteria as mentioned in Clause 4.1.
4.13.5	Tender offer shall be submitted as original, one copy of the original and one scanned copy of the original completed and signed tender documents in a memory stick.
4.13.6	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
4.15	The closing time for submission of tender is as stated in the Tender Notice and invitation to Tender (ref: T1.1)
4.16	The tender offer validity period is 90 days, exclusive of closing date but inclusive of the 90 th day.
5.1	The employer will respond to requests for clarification received up to 7 working days before the tender closing time.
5.2	The employer shall issue addenda until 10 working days before tender closing time.
5.4	The time and location for opening of the Tender offers are as detailed in the Tender notice and invitation to tender (ref: T1.1) or in any addendum thereafter if applicable.
SFU (clause 4.3.1)	The procedure for the evaluation of responsive tenders is Functionality, Financial offer & Preference as explained in the CIDB'S Standard for Uniformity in Construction Procurement August 2019 (clause 4.3.1). Breakdown points for Functionality points are outlined in 5.11.9 below. The procedure for the evaluation of responsive tenders is detailed as follows: Phase 1: Responsiveness to the eligibility criteria, bid and mandatory requirements and rules: Phase 2: Tenderers must meet the minimum requirements outlined in the functionality criteria and score the at least the minimum functionality points to be considered for further evaluation in Stage 3. Tenderers who do not meet minimum functionality points will then be rejected. Phase 3: Price and preference (80/20 system)

Clause number	Tender Data
	<u>PHASE ONE: RESPONSIVENESS TO THE ELIGIBILITY CRITERIA, BID AND MANDATORY REQUIREMENTS AND RULES:</u> As per 4.1 above Other Conditions of bid (Non eliminating, unless expressly mentioned in the document): 1. The bidder must be registered on the Central Supplier Database (CSD) prior to the award 2. All tenderer's tax matters must be in order prior to the award. Bidders' tax matters will be verified through CSD. 3. Failure to complete section 7: SUB-CONTRACTING as per the SBD 6.1, will automatically results in the non-awarding of points for B-BBEE. 4. Should the tenderer intend to sub-contract more than 25%, it is compulsory to submit valid B-BBEE certificates, or a valid original or certified copy of a CSC000 sector code Sworn Affidavit attested by a Commissioner of Oaths (for EMEs/QSEs) for all proposed sub-contractors. Failure will automatically result in no points awarded for B-BBEE, irrespective of the main tenderer having submitted an original or certified copy of his/her own B-BBEE certificate. 5. A valid original or certified copy of amended Construction Sector Codes (CSC000) B-BBEE Certificate verified by SANAS must be submitted with the tender OR a valid original or certified copy of an attested by a commissioner of Oaths prepared and issued in terms of the amended B-BBEE Construction Sector Codes (CSC000) must be submitted with the tender in order to qualify for preference points for B-BBEE. In case of a joint venture or consortium a valid original or certified copy of consolidated amended Construction Sector Codes (CSC000) B-BBEE Certificate verified by SANAS B-BBEE Certificate verified by SANAS must be submitted. Failure to comply, will automatically results in the non-awarding of points for B-BBEE. 6. Tenderers which are EMEs or QSEs should make use of the attached Construction Sector Codes (CSC000) compliant Sworn affidavits, if not having their own, to claim B-BBEE points. A tenderer should only select an appropriate Sworn affidavit, complete it in full and have it attested by a commissioner of oaths, signed and dated before submission. Generic sector codes or any other sector code sworn affidavits (which are not Construction Sector Codes) will not be accepted for purposes of claiming B-BBEE points. 7. Bill of quantities or Pricing schedule and or Form of offer/Total tender amount shall not contain correction fluid on them. Any wrong entry, in case of correction, must be cancelled by a single stroke and initialled by the Authorised signatory.

Clause number	Tender Data								
	<u>2. PHASE TWO: TENDER WHO PASS STAGE 1 WILL THEN BE EVALUATED ON FUNCTIONALITY CRITERIA, AS OUTLINED BELOW:</u> 8. The tender will be expected to submit substantial information (valid copies and detailed information as ordered) in order to claim points for each of the criteria or sub criteria set. 9. The tenderer must demonstrate to the satisfaction of the Employer that it has sufficient skill and capacity to execute the works. 10. The form or the evaluation criteria and maximum score in respect of each of the criteria listed in 5.11.9. 11. Bidders must achieve the minimum required points in each category, as specified in this specification Failure to meet the minimum threshold for any category will result in disqualification. 12. Non-submission or poorly completed schedule or incomplete information will result in a tenderer losing points on Functionality. CVs which do not substantially detail relevant experience will also lead to a bidder losing points on Functionality. It is the responsibility of the tenderer to ensure that all copies are clear and certified where the conditions require them to be so. 13. No second chance will be given to a tenderer to submit some information after tender closure on this stage of evaluation i.e. functionality. <u>3. PHASE THREE: EVALUATION FOR PRICE AND SPECIFIC GOALS</u> The 80/20 preference point system shall be applied for the purposes of this bid as per the requirements of the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) and B-BBEE/ PPPFA Regulations of 2022. <table border="1" data-bbox="359 1417 1423 1630"> <thead> <tr> <th>Criteria</th><th>Points</th></tr> </thead> <tbody> <tr> <td>POINTS ON PRICE</td><td>80</td></tr> <tr> <td>SPECIFIC GOALS</td><td>20</td></tr> <tr> <td>TOTAL</td><td>100</td></tr> </tbody> </table> SPECIFIC GOALS The Employer reserves the right to apply other specific goals in accordance with PPPF Regulations 2022 as contemplated in section 2(1)(d)&(e) of the PPPF Act No 5 of 2000 which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the implementation of programmes of the Reconstruction and Development Programme as published in Government Gazette No. 16085 dated 23 November 1994.	Criteria	Points	POINTS ON PRICE	80	SPECIFIC GOALS	20	TOTAL	100
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	Table 1: Specific goals for the tender and points claimed are indicated per table below: <table> <tr> <th>The specific goals allocated points in terms of this tender</th><th>Number of points allocated (80/20 system) (To be completed by the organ of state)</th></tr> <tr> <td>Who are women (51% or more)</td><td>5</td></tr> <tr> <td>Who is a youth (18 to 35 years) (51% or more owned)</td><td>5</td></tr> <tr> <td>Location of enterprise (Northern Cape Province)</td><td>5</td></tr> <tr> <td>B-BBEE status level contributors from level 1 to 2 which are QSE or EME</td><td>5</td></tr> <tr> <td>Total scored points</td><td>20</td></tr> </table> The specific goals may include— - Contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender or disability. - Implementing the programmes of the Reconstruction and Development Programme as published in Government Gazette No. 16085 dated 23 November 1994. Definitions Specific goals": means specific goals as contemplated in section 2(1)(d) of the PPPFA Act which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the implementation of programmes of the Reconstruction of Development Programme as published in <i>Government Gazette No. 16085</i> date 23 November 1994 "Ownership" means the percentage ownership and control, exercised by individuals within and enterprise. Documents required for verification of points allocation are as follows: <table> <tr> <th>Procurement Requirement</th><th>Required Proof Documents</th></tr> <tr> <td>Women</td><td>Certified ID copies of Directors + CIPC Company Registration Documents</td></tr> <tr> <td>Youth</td><td>Certified ID copies of Directors + CIPC Company Registration Documents</td></tr> <tr> <td>Location</td><td>Municipal bill/Lease agreement/ letter from Local authority</td></tr> <tr> <td>B-BBEE status level contributors from level 1 to 2 which are QSE or EME</td><td>Valid certificate/ sworn affidavit Consolidated BEE certificate in cases of Joint Venture & Full CSD Report</td></tr> </table> Failure on the part of a Bidder to submit proof of documentation required in terms of this tender to claim for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed	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)	Who are women (51% or more)	5	Who is a youth (18 to 35 years) (51% or more owned)	5	Location of enterprise (Northern Cape Province)	5	B-BBEE status level contributors from level 1 to 2 which are QSE or EME	5	Total scored points	20	Procurement Requirement	Required Proof Documents	Women	Certified ID copies of Directors + CIPC Company Registration Documents	Youth	Certified ID copies of Directors + CIPC Company Registration Documents	Location	Municipal bill/Lease agreement/ letter from Local authority	B-BBEE status level contributors from level 1 to 2 which are QSE or EME	Valid certificate/ sworn affidavit Consolidated BEE certificate in cases of Joint Venture & Full CSD Report
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5.11.9	A Tender scoring below the minimum in Quality shall be considered as DISQUALIFIED for evaluation and shall be discarded from further evaluation.																						

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	<table><tr><th>Quality criteria</th><th>Evaluation schedule</th><th>Maximum number of points (A)</th><th>Minimum points (B)</th></tr><tr><td>The experience of the tenderer as a company (as opposed to key staff members) in the construction and rehabilitation of water and sanitation projects for municipalities and / or other organs of state.</td><td>Schedule 1</td><td>40</td><td>24</td></tr><tr><td>Experience of Key Personnel<table><tr><td>Contract Manager</td><td>20</td></tr><tr><td>Site Agent</td><td>15</td></tr><tr><td>Foreman/Supervisor</td><td>15</td></tr><tr><td>Health and Safety Officer</td><td>10</td></tr><tr><td>Total</td><td>60</td></tr></table></td><td>Schedule 2</td><td>60</td><td>36</td></tr><tr><td>Maximum possible score for quality (M_s)</td><td></td><td>100</td><td>60</td></tr><tr><td colspan="4">Bidders must achieve the minimum required points in each category, as specified in Column B. Failure to meet the minimum threshold for any category will result in disqualification.</td></tr></table>	Quality criteria	Evaluation schedule	Maximum number of points (A)	Minimum points (B)	The experience of the tenderer as a company (as opposed to key staff members) in the construction and rehabilitation of water and sanitation projects for municipalities and / or other organs of state.	Schedule 1	40	24	Experience of Key Personnel <table><tr><td>Contract Manager</td><td>20</td></tr><tr><td>Site Agent</td><td>15</td></tr><tr><td>Foreman/Supervisor</td><td>15</td></tr><tr><td>Health and Safety Officer</td><td>10</td></tr><tr><td>Total</td><td>60</td></tr></table>	Contract Manager	20	Site Agent	15	Foreman/Supervisor	15	Health and Safety Officer	10	Total	60	Schedule 2	60	36	Maximum possible score for quality (M _s)		100	60	Bidders must achieve the minimum required points in each category, as specified in Column B. Failure to meet the minimum threshold for any category will result in disqualification.						
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5.13	Tender offers will only be accepted if: - the tenderer or any of its directors/ shareholders 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; - the tenderer has not: - abused the Employer's Supply Chain Management System; or - failed to perform on any previous contract and has been given a written notice to this effect; - the tenderer is registered with the CIDB in the appropriate CE class of works and grading designation applicable to the estimated contract value. - the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract; - the tenderer/s is registered on CSD prior submitting bids (open tenders). Any prospective bidder found to have Tax matters not in order with SARS (verified through CSD) during the evaluation process (after being given an opportunity to rectify tax matters) will be eliminated																																	

Clause number	Tender Data
	and not be considered further in the process. Preferred bidder/s will be afforded an opportunity to rectify their tax affairs within 7 days. A bidder that fails to rectify its tax matters with SARS will be eliminated. 6. A Resolution of signatory form has been completed and signed by director/s or a letter bearing a letterhead of the tenderer has been attached (specific to this bid) to the bid submission; it must be duly signed by all directors and submitted the bid. Only a duly authorised official can sign the bid.
5.14	The number of paper copies of the signed contract to be provided by the employer is one to the successful Tenderer.
5.15	The additional conditions of tender are: Wherever a brand name is specified in this document (i.e. specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better.
5.16	Cancellation and re-invitation of tenders MISA may, prior to the award of the tender, cancel the tender if- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or (b) funds are no longer available to cover the total envisaged expenditure; or (c) no acceptable tenders are received; or (d) Tender validity period has expired; or (e) Gross irregularities in the tender processes and/or tender documents; or (f) No market related offer received (after attempts of negotiation processes) Where applicable, the decision to cancel the tender will be published in the CIDB website and in the Tender Bulletin or the media in which the original tender invitation as advertised.
	TENDER AWARD A. The tender obtaining the highest number of total points may be awarded the contract, unless the Employer decided otherwise (ref: T1.1 Tender notice and invitation to tender). B. Preference point shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts. C. Point scored must be rounded off to the nearest 2 decimal places. <i>(If the value of the 3rd decimal place is 1 up-to 4, the points up to 2nd decimal place will be considered and</i>

Clause number	Tender Data
	<i>if it is 5 up to 9, 1 will be added to the number at 2nd decimal place and the resulting point will be considered.)</i> D. In the event that two or more Tenders have scored equal total points, the successful Bid must be the one scoring the highest number of preference points for Specific goals. E. However, in the event that two or more Tenders have scored equal points, including equal preference points for Specific goals, the successful tender must be the one scoring the highest points for Functionality. F. Should two or more Tenders be equal in all respects, the award shall be decided by drawing of lots by the Employer. Additional Conditions A. Costs incurred by Bidder. The Employer will neither be responsible for nor pay any expenses incurred or losses suffered by any Tenderer in the preparation of the tender or in attending the compulsory physical briefing session & site visit in connection therewith. B. Acceptance of Bid The Employer does not bind itself to accept the lowest or any Tender or to furnish any reason for the acceptance or rejection of a tender. C. Withdrawal of Tender during validity or Failure in signing Contract Agreement at Award Should a Tenderer a) Withdraw his Tender during the period of its validity; <u>or</u> b) Give notice of his inability to execute the Contract or fail to execute the Contract; <u>or</u> c) Fail to sign the Contract Agreement or furnish the required security/ insurance(s) within the period fixed in the Contract Data (ref: C1.2) in the Tender documents or any extended time agreed to by the Employer;

Clause number	Tender Data
	then the Tenderer shall be liable for and pay to the Employer – i. All expenses incurred in calling for fresh Tender, if it should be deemed necessary by the Employer to do so; ii. The difference between Tender's tender and any less favourable tender accepted either by fresh tender being called or by another tender being accepted from those already received; iii. Any escalation of the Final Contract Price resulting from any delay caused in calling for fresh tender or accepting another tender from those already received, as the case may be. And the Employer shall have the right to recover such sums by set-off against any money which may be due or become due to the Tenderer, under this or any other tender or Contract between the Employer and the Tenderer, or against any guarantee or deposit which may have been furnished by or on behalf of the Tenderer for the due fulfilment of this or any other tender or Contract between the Employer and the Tenderer. Pending the ascertainment of the amount of the Tenderer's liability to the Employer in terms of this Condition of Tender, the Employer may retain such monies, guarantee or deposit as security for any loss, which the Employer may sustain by reason of the Tenderer's default. Provided always that the Employer may exempt a Tenderer from the provisions hereof, if it is of the opinion that the circumstances justify such exemption. D. Repudiation of Tender or Invalidation of Contract If the Employer is satisfied that the Tenderer or any person is being an employee, partner, director, member or shareholder of the Tenderer or a person acting on behalf of or with the knowledge of the Tenderer has offered, promised or given a bribe or other gift or remuneration to any person in connection with obtaining or execution of a Contract; a) has acted in a fraudulent or corrupt manner in obtaining or executing a Contract; b) has approached an officer or employee of the Employer with the object of influencing the award of a Contract in the Tenderer's favour; c) has entered into any agreement or arrangement, whether legally binding or not, with any other person, firm or company: d) to refrain from Tendering for this Contract; e) as to the amount of the Tender to be submitted by either party;

Clause number	Tender Data
	f) has disclosed to any other person, firm or company other than the Employer, the exact or approximate amount of his proposed Tender except where the disclosure, in confidence, was necessary in order to obtain insurance premium and surety quotations required for the preparation of the Bid. The Employer may, in addition to using any other legal remedies, repudiate the Bid or declare the Contract invalid should it have been concluded already. E. South African Jurisdiction The laws of the Republic of South Africa shall be applicable to each Contract created by the acceptance of a Tender and each Tenderer shall indicate a place in the Republic and specify it in his Tender as his domicilium citandi et executandi where any legal process may be served on him. Each Tenderer shall bind her/ himself to accept the jurisdiction of the Courts of Law of South Africa. F. Amendments to Tender by Employer a) Arithmetical Errors The Employer shall check and correct arithmetical errors for responsive Tenders in the following manner as per CIDB guideline (Ref: Practice # 2, version 1 – August 2006): i. Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern. ii. If the pricing (or bills of quantities or schedule of quantities or schedule of rates) 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. iii. 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 bidder'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. b) Imbalance in Tender Rates In the event of there being Tendered rates or lump sums being declared by the Employer to be unacceptable to him because they are either excessively low or high or not in proper balance with other rates or lump sums, the Tenderer may be required to produce evidence

Clause number	Tender Data
	and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or prices objected to, s/he may request the Tenderer to amend these rates and prices along the lines indicated by him. The Tenderer will then have the option to alter and/ or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the total tendered sum.

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO
PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION
PHASE**

T2 Returnable Documents

T2.1 LIST OF RETURNABLE DOCUMENTS

A. Documentation to demonstrate eligibility to have tenders evaluated.

The required documentation as listed in **Clause 4.1 of T1.2 Tender Data**, must be submitted along with the tender for determining the eligibility of the tender.

Failure to provide these documents (A) shall result in the tenderer's tender not being evaluated.

B. Returnable schedules required for tender evaluation purposes

The tenderer must complete the following returnable schedules as relevant, which are attached here with the tender documents.

1. SBD 1 - Invitation to Bid
2. SBD 4 - Declaration on Interest
3. SBD 6.1 – Preference Points claim form.
4. Samples of CSC000 sector coders Sworn Affidavits- A. EMEs and B. QSES (For tenderers with no B-BBEE Certificates)
5. CSD report Annexure
6. Tender's certificates Annexure
7. Resolution for Signatory
8. Schedule 1 Experience of the bidder
9. Schedule 2 Experience of key personnel

C. Other documents contained herein in the tender documents required for tender evaluation purposes as listed below.

1. Record of Addenda to Tender Documents
2. Proposed Amendments and Qualifications

D. Documentation that will be used for evaluation and to incorporate into the contract, if the tender offer resulted in an award

1. The offer portion of C1.1 Form of offer and acceptance
2. Part 2 of C1.2 Contract data relevant to tenderer
3. C2.2 Price List

1. PART A – INVITATION OF BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (MUNICIPAL INFRASTRUCTURE SUPPORT AGENT)					
BID NUMBER:	MISA/PRPH/ELM/NC/024/2026/27	CLOSING DATE:	09 NOVEMBER 2026	CLOSING TIME:	11:00am
DESCRIPTION:	APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
1303 Heuwel Avenue, Riverside Office Park, Letaba House					
1 st Floor, Centurion, Pretoria 0046					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Mandya Batyi	CONTACT PERSON	Kananelo Moloi		
TELEPHONE NUMBER	012 848 5300	TELEPHONE NUMBER	012 848 5300		
FACSIMILE NUMBER		FACSIMILE NUMBER			
E-MAIL ADDRESS	tenders@misa.gov.za	E-MAIL ADDRESS	tenders@misa.gov.za		
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] ☐ Yes ☐ No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] ☐ Yes ☐ No		
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE ISSUED BY AGENCY ACCREDITED BY SANAS / SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, COMPLETE 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.					

PART B – TERMS AND CONDITIONS TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
- 1.4. **THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).**

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
- 2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
- 2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

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

SIGNATURE OF BIDDER:

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

DATE:

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

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.

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**

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.

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.

3.4 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.

3.5 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.

3.6 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.

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

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.

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.

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

$$\begin{array}{ccc} 80/20 & \text{or} & 90/10 \\ \\ Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right) & \text{or} & Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right) \end{array}$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

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

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

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

The specific goals allocated points in terms 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)
Who are women (51% or more)	5	
Who is a youth (18 to 35 years) (51% or more owned)	5	
Location of enterprise (Northern Cape Province)	5	
B-BBEE status level contributors from level 1 to 2 which are QSE or EME	5	
Total scored points	20	

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.

.....	
SIGNATURE(S) OF TENDERER(S)	
SURNAME AND NAME:	
DATE:	
ADDRESS:	
	

**3. SAMPLES OF GENERIC SECTOR CODERS SWORN AFFIDAVITS-
A. EMES AND B. QSES (FOR TENDERERS WITH NO B-BBEE
CERTIFICATES SWORN AFFIDAVIT - TEMPLATES**

(IF APPLICABLE, CHOOSE THE CORRECT FORM AND COMPLETE)

B-BBEE EXEMPTED AFFIDAVIT FOR EXEMPTED MICRO ENTERPRISES (EME)

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorized to act on its behalf:

Enterprise Name:			
Trading Name (If Applicable):			
Registration Number:			
Enterprise Physical Address:			
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):			
Nature of Construction Business:	BEPs (Built Environment Professional)	Contractor	Supplier
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) Who are citizens of the Republic of South Africa by birth or descent; or (b) Who became citizens of the Republic of South Africa by naturalization- i. Before 27 April 1994; or ii. On or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date		

3. I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good

Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____ % Black Owned
- The Enterprise is _____ % Black woman Owned
- The Enterprise is _____ % Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)
 - o Black Youth % _____ %
 - o Black Disabled % _____ %
 - o Black Unemployed % _____ %
 - o Black People living in Rural areas % _____ %
 - o Black Military Veterans % _____ %

Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____ (DD/MM/YY), the annual Total Revenue was equal to/or less than the applicable amount confirmed **by ticking the applicable box below.**

Contractor / Consultancy	R10 million	
Supplier	R10 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

☐ Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
At least 51% Black Owned but less than 100% black owned	Level Two (125% B-BBEE procurement recognition level)	
Less than 51% black owned	Level Four (100% B-BBEE procurement recognition level)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Date: _____ Deponent Signature: _____

Commissioner of Oaths

Signature & stamp

Date: _____

B-BBEE EXEMPTED AFFIDAVIT FOR QUALIFYING SMALL ENTERPRISES (QSE)

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorized to act on its behalf:

Enterprise Name:		
Trading Name (If Applicable):		
Registration Number:		
Enterprise Physical Address:		
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):		
Nature of Construction Business:	Supplier / Service provider	Consultancy services Supplier
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) Who are citizens of the Republic of South Africa by birth or descent; or (b) Who became citizens of the Republic of South Africa by naturalization- i. Before 27 April 1994; or ii. On or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date	

3. I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good Practice

issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____ % Black Owned
- The Enterprise is _____ % Black Female Owned
- The Enterprise is _____ % Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)
 - o Black Youth % _____ %
 - o Black Disabled % _____ %
 - o Black Unemployed % _____ %
 - o Black People living in Rural areas % _____ %
 - o Black Military Veterans % _____ %

Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____ (DD/MM/YY), the annual Total Revenue was equal to/or less than the applicable amount confirmed **by ticking the applicable box below.**

Contractor / Consultancy services	R50 million	
Supplier	R50 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

☐ Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
At least 51% Black Owned but less than 100% black owned	Level Two (125% B-BBEE procurement recognition level)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Date: _____ Deponent Signature: _____

Commissioner of Oaths

Signature & stamp

Date: _____

**4. CSD REPORT ANNEXURE - PROOF OF REGISTRATION ON THE
NATIONAL TREASURY CENTRAL SUPPLIER DATABASE (CSD
REPORT)**

(ATTACH HERE)

5. VALID CERTIFICATES OF A TENDERER

(ATTACH HERE)

6. RESOLUTION FOR SIGNATORY

A: CERTIFICATE OF AUTHORITY FOR SIGNATORY

Signatory for companies shall confirm their authority hereto by attaching a duly signed and dated copy of the relevant resolution of the board of directors to this form or on company letter head.

An example is given below:

“By resolution of the board of directors passed at a meeting held on _____

Mr/Ms _____, whose signature appears below, has been duly authorised to

sign all documents in connection with the tender for Contract No. _____

and any Contract which may arise there from on behalf of (Block Capitals) _____

SIGNED ON BEHALF OF THE COMPANY: _____

IN HIS/HER CAPACITY AS: _____

DATE: _____

SIGNATURE OF SIGNATORY: _____

WITNESSES:

DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	

If you cannot complete this form, attach a separate sheet (in a company letter head, project specific and signed by all directors):

7. SCHEDULE 1: EXPERIENCE OF THE BIDDER (40 POINTS)

a) Requirements

The experience of the tenderer as a company (as opposed to key staff members) in the construction and rehabilitation of water and sanitation projects for municipalities and / or other organs of state.

The projects shall only include completed projects prior to closing date for submissions.

b) Points Scoring

Points will be allocated per project as per the table below.

Table : Project points allocation

No	Project Value (R2 000 000.00 and above)	Points per Project
a)	One (1) Project	24 points
b)	Two (2) Projects	30 points
c)	Three (3) Projects	40 points

1. Means of Verification: Tenderers are requested to submit appointment letters and practical or final completion certificates from the employer.

2. Listing of Completed Projects

Tenderers are requested to list a maximum of three (3) highest value projects including contactable references by completing SCHEDULE OF COMPLETED PROJECTS appended to this schedule on the next page.

SCHEDULE OF COMPLETED PROJECTS

No	Name and Brief Description of the Project	Value in Rands R'000	Points Claimed	Date		Employer		
				Started	Completed	Name of employer	Contact Person	
							Name and Surname	Tel. No
1.								
2.								
3.								
TOTAL POINTS CLAIMED								

MISA reserves the right to verify all information presented by the Bidder.

BIDDERS ARE REQUESTED TO COMPLETE THE ABOVE TABLE AND REFRAIN FROM REFERRING THE COMPLETION THEREOF TO AN ATTACHMENT. PLEASE ATACH ONLY INFROMATION REQUESTED BY THE EMPLOYER ON BLANK PAGE AHEAD AND MARKED "ATTACHMENTS".

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed	Date
-----	-----
Name	Position
-----	-----
Enterprise name	

**ATTACH
COMPLETION
CERTIFICATES AND
REFERENCE LETTERS
INFORMATION**

8. SCHEDULE 2: EXPERIENCE OF KEY PERSONNEL (60 POINTS)

a) Summary

Total Points 60 points for key personnel is allocated as follows:

- **Contract Manager = 20**
- **Site Agent = 15**
- **Foreman = 15**
- **Construction Health & Safety Officer = 10**
- **Total = 60**

b) Requirements

The experience of the key personnel who will be responsible for the management of the physical construction processes and the coordination, administration and management of resources on the Site will be evaluated in relation to the **Part C3: Scope of work** from three different points of view:

- 1) General experience (total duration of work activity), level of education and training and positions held.
- 2) The education, training, skills, experience and knowledge of issues which are pertinent to the **Part C3: Scope of Work**.
- 3) Points will be allocated per key personnel resource as per the table below. The minimum experience must be post-qualification of the minimum required qualification for all key personnel:

Personnel	Minimum Years Experience Post Qualification	Minimum Qualification	Minimum Points for Key Personnel
Contract Manager	5 Years	Diploma in Civil Engineering or equivalent built environment qualification (NQF Level 6).	12 Points
Site Agent	5 Years	N6 Certificate in Civil Engineering or equivalent built environment qualification.	8 Points
Foreman	5 Years	Matric/Grade 12/Std 10/Equivalent.	8 Points
Construction Health & Safety Officer	3 Years	SAMTRAC, Construction Health & Safety Officer (CHSO) or Equivalent.	8 Points

For Noting: All personnel submitted by the Bidder cannot be changed without prior written approval from the employer. As per clause 24.1 of the NEC3 ECC.

c) Means of Verification:

Attach proof of qualifications (Certified) and brief CV's for key personnel listed.

d) Listing of Key Personnel

Bidders are requested to list key personnel by completing **SCHEDULE OF KEY PERSONNEL** appended to this schedule on the next page.

e) Scoring

The scoring of the experience of key person staff will be as per the table below:

Key Personnel	=	60 Total Points
1. Contract Manager		(20 points)
1.1. Experience	=	10 points
The CV must demonstrate years of experience in any of the following: the construction and rehabilitation of wastewater oxidation ponds as a main contractor for municipalities and / or other organs of state. (min 5 years)		
a) 5 to below 7 years	=	5 points
b) 7 to below 10 years	=	7 points
c) 10 years and above	=	10 points
1.2. Qualification	=	10 points
a) Diploma in Civil Engineering or equivalent built environment qualification (NQF Level 6).	=	7 points
b) BSc, BEng or BTech in Civil Engineering, Construction Management, Building, Project Management, or an equivalent built environment qualification (NQF Level 7 or higher).	=	10 points
2. Site Agent		(15 points)
2.1. Experience	=	10 points
The CV must demonstrate years of experience in any of the following: Management of construction site, supervising construction staff and/or sub-contractors, general supervision of construction work in any construction field.		
a) 5 to below 7 years	=	5 points
b) 7 to below 10 years	=	7 points
c) 10 years and above	=	10 points
2.2. Qualification		5 points
c) N6 Certificate in Civil Engineering or equivalent built environment qualification.	=	3 points
d) Diploma in Civil Engineering or equivalent built environment qualification (NQF Level 6).	=	5 points
3. Foreman/Supervisor		(15 points)
3.1. Experience	=	10 points
The CV must demonstrate years of experience in any of the following: Management of construction site, supervising construction staff and/or sub-contractors, general supervision of construction work in any construction field.		
a) 5 to below 7 years	=	5 points
b) 7 to below 10 years	=	7 points
c) 10 years and above	=	10 points
3.2. Qualification		5 points
a) Matric/Grade 12/Std 10/Equivalent.	=	3 points
b) N6 certificate in civil engineering or equivalent built environment qualification.	=	5 points
4. Construction Health and Safety Officer		(10 points)
4.1. Experience	=	5 points
a) 3 to below 5 years	=	3 points
b) 5 years and above	=	5 points
4.2. Qualification: Certificate in Construction Health and Safety officer (CHSO)		5 points
a) SAMTRAC, Construction Health & Safety Officer (CHSO) or Equivalent	=	5 points

SCHEDULE OF KEY PERSONNEL

No	Key Personnel	Name and Surname	Qualifications	Total Number of years of experience after Qualification
1	Civil Engineer/ Contract Manager		Qualification:	
3	Site Agent		Qualification:	
4	Foreman		Qualification:	
1	Construction Health and Safety Officer		Qualification:	

Means of Verification: Bidders are requested to attach brief CV's, Proof of Qualification (Certified) for all the staff referred to above table.

MISA reserves the right to verify all information presented by the Bidder.

BIDDERS ARE REQUESTED TO COMPLETE THE ABOVE TABLE AND REFRAIN FROM REFERRING TO THE COMPLETION OF THE ABOVE TABLE TO ATTACHMENTS. PLEASE ATTACH ONLY INFORMATION REQUESTED BY THE EMPLOYER.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

It is the bidder's responsibility to have foreign qualifications evaluated by the South African Qualification Authority (SAQA) and to provide proof of such evaluation. Failure to provide proof as mentioned above will result in your qualification not being considered.

Name of Bidder: Date:

Signature: Position:

Full name of signatory:

ATTACH

CVs, PROOF OF

QUALIFICATIONS AND

PROFESSIONAL

REGISTRATION

CERTIFICATES

**D. OTHER DOCUMENTS CONTAINED HEREIN IN THE TENDER DOCUMENTS
REQUIRED FOR TENDER EVALUATION PURPOSES AS LISTED BELOW.**

10. RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:		
	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		

Attach additional pages if more space is required.

Signed

Date

Name

Position

Tenderer

11. 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. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

Page	Clause or item	Proposal

Signed

Date

Name

Position

Tenderer



MUNICIPAL INFRASTRUCTURE SUPPORT AGENT

Reference no.: MISA/PRPH/ELM/NC/024/2026/27

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER
IN THE NORTHERN CAPE – COMPLETION PHASE**

The Contract

Based on

Based on NEC3 Engineering and Construction Contract –
Option B: Priced Contract with Bill of Quantities)



MUNICIPAL INFRASTRUCTURE SUPPORT AGENT

Reference no.: MISA/PRPH/ELM/NC/024/2026/27

APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE

C1 Agreements and Contract Data

C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The *Employer*, identified in the Acceptance signature block, has solicited offers to enter into a contract for the provision of services as described in Part 1 of the Contract Data.

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 VAT AND EXPENSES, calculated in accordance with the *conditions of contract as detailed hereunder*:

Total Amount: R_____ (in figure), (Rand _____
_____) (in word)

This Offer may be accepted by the *Employer* by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the conditions of contract identified in the Contract Data.

Signature

Date:

.....

.....

Name

.....

.....

Capacity

.....

.....

**For the
tenderer:**

.....

*(Insert name and address of
organisation)*

Name &
signature
of witness

Date

.....

.....

ACCEPTANCE

By signing this part of this Form of Offer and Acceptance, the *Employer* identified below accepts the tenderer's Offer. In consideration thereof, the *Employer* shall pay the Consultant 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 Form of Offer and Acceptance)

Part C2 Pricing Data

Part C3 Scope of Work

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable 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 Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of 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 original copy of this document, including the Schedule of Deviations (if any). Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the *Employer* in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature

Date:

Name(s) Ms Pati Kgomo
Capacity Chief Executive Officer
For the Municipal Infrastructure Support Agent
Employer

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 returnable 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.

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN
HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

C1.2 CONTRACT DATA

The *Conditions of Contract* are the core clauses and the clauses for main Option F, dispute resolution option W1 and Secondary options X7, X13, X16, Z Of the NEC3 Engineering and Construction Contract (April 2013 edition) published by the Institution of Civil Engineers (ICE), copies of which may be obtained from Engineering Contract Strategies (+27) 011 803 3008

Each item of data given below is cross-referenced to the clause in the NEC3 Engineering and Construction Contract to which it mainly applies.

C1.2.1 PART ONE - DATA PROVIDED BY THE *EMPLOYER*

Clause	Data
1 General	
10.1	<i>The Employer is</i> Municipal Infrastructure Services Agent Physical Address: Letaba House, Riverside Office Park 1303 Heuwel Avenue, Centurion, Pretoria 0046 Postal Address: Private Bag X105, Centurion 0046 Telephone: 012 848 5300
10.1	<i>The Project Manager is: Mr. Clement Chawanda</i> As stated in the Contract Quality Criteria
10.1	<i>The Supervisor is: Mr. Kananelo Moloi</i> As stated in the Contract Quality Criteria
11.2 (1)	The Accepted Programme is the programme identified in the Contract Data or the latest accepted by the Project Manager. The latest accepted programme supersedes previously accepted programmes.

Clause	Data
11.2 (1)	The Accepted Programme is the programme identified in the Contract Data or the latest accepted by the Project Manager. The latest accepted programme supersedes previously accepted programmes.
11.2 (13)	The <i>works</i> are as per the scope of work Part C3 of this document.
11.2 (14)	The following matters will be included in the Risk Register • Public Safety • Working in a hazardous environment – Oxidation Ponds
11.2 (15)	The <i>boundaries</i> of the sites are as per the proposed site layout and locality plan as per C3: Scope of Works.
11.2 (16)	The Works Information is in section Part C3: Scope of works of this tender document
12.2	The <i>law of the contract</i> is the law of the Republic of South Africa
13.1	The <i>language of this contract</i> is English
13.3	The <i>period of reply</i> is 7 days
2	The Parties' main responsibility
26.1	If the <i>Contractor</i> subcontracts work, he is required to submit a signed agreement with proposed Sub-contractor / consultant detailing the proposed scope and exclusivity of the relationship and intention to get into a subcontracting agreement based on the NEC3 Engineering and Construction Subcontract should he be successful.
26.2	The Contractor must submit proposed Sub-contractor / consultant with an ECSA registration as Professional Civil Engineer or Professional Civil Technologist who will be responsible for all engineering work as indicated under the scope of work (Qualification and proof of ECSA registration to be provided).
26.3	The conditions of contract for the Subcontractor shall be the NEC3 Engineering and Construction Subcontract Edition: 3 Reprinted with Amendments 2013, which is to be signed by both parties should the Contractor be successful.

Clause	Data
3	Time
30.1	The <i>starting date</i> is 14 days after the date of issuance (exclusive) of the award letter unless otherwise agreed by the Parties.
33.1	The <i>completion date</i> for the whole of the <i>services</i> is Three (3) Calendar Months after the start date .
11.2(2)	The <i>completion date</i> for the whole of the <i>services</i> is as per the approved program submitted within 14 days after appointment.
31	The <i>Contractor</i> submits programme with the tender according to the <i>Scope</i> , considering the <i>starting date</i> and <i>completion date</i> , which will be adjusted, if need be, based on proposed duration in the programme through consultation.
32	The <i>Contractor</i> submits revised programme at intervals no longer 4 weeks
4	Testing and Defects
42	The defects date is 52 weeks after Completion of the whole of the works.
43	The <i>defect correction period</i> is two weeks after completion of the whole of the works.
5	Payment
50.1	The <i>assessment interval</i> is monthly on or before the 20 th day of each successive month.
51.1	The <i>currency of this contract</i> is the South African Rand.
51.2	Each certified payment is made within 30 days of the assessment.
51.4	The <i>interest rate</i> is the Prime lending rate of the <i>Employer's</i> Bank.
6	Compensation events
60.1 (13)	The place where the weather is to be recorded is Hanover
60.1 (13)	The weather measurements to be recorded for each calendar month are • The cumulative rainfall (mm) • The number of days with rainfall more than 15mm

Clause	Data												
7	Title												
70.1	No data required for this section of the <i>conditions of contract</i> .												
70.2	80% of the value of materials on site could be claimed by the contractor.												
8	Indemnity, Insurance and Liabilities												
84.1	The Contractor is to provide the insurances stated in the Insurance Table in Section 84.2												
84.2	<i>The minimum amount of cover for insurance against the Contractor's liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to employees of the Contractor to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract as prescribed in section 84.2 of the NEC 3 ECC</i> <table><tr><th>Insurance against</th><th>Minimum amount of cover or minimum limit of indemnity</th><th>Period following Completion of the whole of the services or earlier termination</th></tr><tr><td>Loss of or damage of the works, Plant and Materials</td><td>The replacement cost, including the amount stated in the Contract Data for the replacement of any Plant and Materials provided by the Employer</td><td>Till the end of the <i>defects date</i>.</td></tr><tr><td>Loss of or damage to Equipment</td><td>The replacement cost</td><td>Till the end of the <i>completion date</i>.</td></tr><tr><td>Liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract.</td><td>R5 million without limit to the number of claims</td><td>Till the end of the <i>completion date</i>.</td></tr></table>	Insurance against	Minimum amount of cover or minimum limit of indemnity	Period following Completion of the whole of the services or earlier termination	Loss of or damage of the works, Plant and Materials	The replacement cost, including the amount stated in the Contract Data for the replacement of any Plant and Materials provided by the Employer	Till the end of the <i>defects date</i> .	Loss of or damage to Equipment	The replacement cost	Till the end of the <i>completion date</i> .	Liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract.	R5 million without limit to the number of claims	Till the end of the <i>completion date</i> .
Insurance against	Minimum amount of cover or minimum limit of indemnity	Period following Completion of the whole of the services or earlier termination											
Loss of or damage of the works, Plant and Materials	The replacement cost, including the amount stated in the Contract Data for the replacement of any Plant and Materials provided by the Employer	Till the end of the <i>defects date</i> .											
Loss of or damage to Equipment	The replacement cost	Till the end of the <i>completion date</i> .											
Liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract.	R5 million without limit to the number of claims	Till the end of the <i>completion date</i> .											

Clause	Data	
	Liability for death of or bodily injury to employees of the <i>Consultant</i> arising out of and in the course of their employment in connection with this contract	That which is prescribed by the Compensation injuries and Diseases Act No. 130 of 1993 as amended and whatever the <i>Consultant</i> deems desirable in addition
	Till the end of the <i>completion date</i> .	
85.1	Before the starting date and on each renewal the Contract shall provide applicable insurance policies to the Project Manager for acceptance. The certificates are signed by the Contractor's insurer or insurance broker	
86.1	The <i>Employer</i> provides no insurance cover.	
Option W1	DISPUTE RESOLUTION	
W1.2	The <i>Adjudicator</i> is the person selected by the Parties in terms of the relevant Z Clause from the Panel of NEC Adjudicators set up by ICE-SA, a Joint Division of the Institution of Civil Engineers and the South African Institution of Civil Engineering (see www.ice-sa.org.za).	
W1.2	The <i>adjudicator nominating body</i> is the Chairman of ICE-SA, a Joint Division of the Institution of Civil Engineers and the South African Institution of Civil Engineering (see www.ice-sa.org.za).	
W1.4	The <i>tribunal</i> is arbitration	
W1.4	The <i>arbitration procedure</i> is as set out in the latest edition of Rules for the Conduct of Arbitrations published by the Association of Arbitrators (Southern Africa) or its successor body The place where arbitration is to be held is to be Advised The person or organisation who will choose an arbitrator • if the Parties cannot agree a choice or • if the <i>arbitration procedure</i> does not state who selects an arbitrator, is the Chairman of the Association of Arbitrators (Southern Africa) or its successor body	
Option X1	Price adjustment for Inflation	
X1.1	Contract Price Adjustments/Increases (CPA/CPI)	

Clause	Data
	No CPA or CPI will apply for this contract
X2	Change in the law
X2.1	The <i>law of the project</i> is the law of the Republic of South Africa subject to the jurisdiction of the Courts of South Africa.
Option X7	Delay Damages
X7	The <i>delay damages</i> for completion of the wholes of the works are R2,000.00 per day
Option X13	Performance Bond
X13	The amount of the performance bond is 10 % of value of Contract
Option X16	Retention
X16	The retention percentage is 10%
Z	<i>Additional Conditions of Contract</i>
	The <i>additional conditions of contract</i> are
Z1	Selection and appointment of the <i>Adjudicator</i>
	A Party may at any time notify the other Party of the names of two persons he has chosen from the Panel of NEC Adjudicators set up by ICE-SA, a Joint Division of the Institution of Civil Engineers and the South African Institution of Civil Engineering (see www.ice-sa.org.za) whose availability to act as the <i>Adjudicator</i> the notifying Party has confirmed. The other Party selects one of the two persons chosen to be the <i>Adjudicator</i> within four days of receiving the notice, failing which the person chosen by the notifying Party will be the <i>Adjudicator</i> . The Parties appoint the selected <i>Adjudicator</i> under the NEC3 Adjudicator's Contract, April 2013.
Z2	Tax invoices
	The <i>Contractor's</i> invoice.
	Delete the first sentence of core clause 51.1 and replace by:
	The Employer makes each payment within thirty days from the date of receipt (exclusive) of the <i>Consultant's</i> invoice showing the details, which this contract

Clause	Data						
	requires or, if a different period is stated in the Contract Data, within the period stated.						
Z3	Acts or omissions by mandatories In terms of Section 37(2) of the Occupational health and Safety Act of 1993 (Act 85 of 1993), the <i>Contractor</i> hereby agrees that the <i>Employer</i> is relieved of any and all of its liabilities in terms of Section 37(1) of this Act in respect of any acts or omissions of the <i>Contractor</i> and his employees to the extent permitted by this Act, and that this contract comprises the written agreement between the <i>Employer</i> and the <i>Contractor</i> contemplated in section 37(2).						
Z4	Subcontractors The <i>Contractor</i> submits the name of each proposed subcontractor to the <i>Employer's</i> representative for acceptance. A reason for not accepting the subcontractor is that his appointment will not allow the Contractor to Provide the Works. The Contractor does not appoint a proposed subcontractor until the Project Manager has accepted him.						
Z5	Guarantee The maximum guaranteed sum is equal to 10 % of the total of the Prices and reduces to the following diminishing amounts: <table border="1"> <tr> <th>Guarantor's liability expressed as a percentage of the total of Prices</th><th>Period of liability</th></tr> <tr> <td>Maximum guaranteed sum of 10 %</td><td>From the date this demand bond comes into effect and until the date by when the Price for Work Done to Date has reached or exceeds 50 % of the total of Prices</td></tr> <tr> <td>Reducing to the guaranteed sum of 6 %</td><td>From the date by when the Price for Work Done to Date has reached or exceeds the amount stated above and until the date of Completion of the whole of the <i>works</i></td></tr> </table>	Guarantor's liability expressed as a percentage of the total of Prices	Period of liability	Maximum guaranteed sum of 10 %	From the date this demand bond comes into effect and until the date by when the Price for Work Done to Date has reached or exceeds 50 % of the total of Prices	Reducing to the guaranteed sum of 6 %	From the date by when the Price for Work Done to Date has reached or exceeds the amount stated above and until the date of Completion of the whole of the <i>works</i>
Guarantor's liability expressed as a percentage of the total of Prices	Period of liability						
Maximum guaranteed sum of 10 %	From the date this demand bond comes into effect and until the date by when the Price for Work Done to Date has reached or exceeds 50 % of the total of Prices						
Reducing to the guaranteed sum of 6 %	From the date by when the Price for Work Done to Date has reached or exceeds the amount stated above and until the date of Completion of the whole of the <i>works</i>						

Clause	Data	
	Reducing to the guaranteed sum of 3 %	From the day after the date of Completion of the whole of the <i>works</i> and until the date of issue of the last Defects Certificate.
	Reducing to the guaranteed sum of 1 %	From the day after the date of issue of the last Defects Certificate and up to and including the day on which there are no amounts due by either Party to the other.

Transfer of rights

The *Employer* owns the *Contractor's* rights over material prepared for this contract by the *Contractor* except as stated otherwise in the Works Information. The *Contractor* obtains other rights for the *Employer* as stated in the Works Information and obtains from a subcontractor equivalent rights for the *Employer* over the material prepared by the subcontractor. The *Contractor* provides to the *Employer* the documents which transfer these rights to the *Employer*

C1.2.2 PART TWO - DATA PROVIDED BY THE CONTRACTOR

The *Contractor* is advised to read the NEC3 Engineering and Construction (Third edition of June 2005) and the relevant Guidance Notes and Flow Charts, published by the Institution of Civil Engineers, in order to understand the implications of this Data, which is required. Copies of these documents may be obtained from Engineering Contract Strategies (telephone (27) 011 803 3008).

Each item of data given below is cross-referenced to the clause in the NEC3 Engineering and Construction Short Contract to which it mainly applies.

Clause	Data
10.1	<i>The Contractor is</i> Name: _____ Physical Address: _____ _____ Post Code: _____ Postal Address: _____ Post Code: _____ Telephone: _____ Fax: _____ Mobile: _____ Email: _____
11.2 (8)	The Direct fee percentage is _____
11.2 (8)	The subcontracted fee percentage is _____
11.2 (18)	The working areas are the site and _____
24.1	The <i>Contractor's</i> key persons are: 1 Name: _____ Position in the Project Team: _____ Responsibilities: _____

Qualifications:

Experience:

Physical Address: _____

Post Code: _____

Postal Address: _____ Post Code: _____

Telephone: _____ Fax: _____

Mobile: _____ Email: _____

(Please use separate pages referring to this clause for detailing this information
for all *Contractor's* key persons)

11.2(14) The following matters will be included in the Risk Register

11.2 (21) The *bill of quantities* is

11.2 (31) The tendered total of the Prices is

52.1 The percentage for overheads and profit added to the Defined Cost for people is %

52.1 The percentage for overheads and profit added to other Defined Cost is %



MUNICIPAL INFRASTRUCTURE SUPPORT AGENT

Reference no.: **MISA/PRPH/ELM/NC/024/2026/27**

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN
HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

C1.3 SECURITIES: PERFORMANCE BOND

(to be reproduced exactly as shown below on the letterhead of the Surety)

{Insert name and registered address of the Contractor}

Date:

Dear Sirs,

PERFORMANCE BOND FOR CONTRACT NO.

With reference to the above numbered contract made or to be made between

{Insert registered name and address of the Contractor}

(the Contractor), for

{Insert details of the works from the Contract Data}

(the works).

I/We the undersigned

on behalf of the Surety

of physical address

and duly authorised thereto do hereby bind ourselves as Surety and co-principal debtors in solidum for the due and faithful performance of all the terms and conditions of the Contract by the *Contractor* and for all losses, damages and expenses that may be suffered or incurred by the *Employer* as a result of non-performance of the Contract by the *Contractor*, subject to the following conditions:

1. The terms *Employer*, *Contractor*, *works* and Defects Certificate have the meaning as assigned to them by the *conditions of contract* stated in the Contract Data for the aforesaid Contract.
2. We renounce all benefits from the legal exceptions "Benefit of Excussion and Division", "No value received" and all other exceptions which might or could be pleaded against the validity of this bond, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted.
3. The *Employer* has the absolute right to arrange his affairs with the *Contractor* in any manner which the *Employer* deems fit and without being advised thereof the Surety shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the Surety. Without derogating from the foregoing compromise, extension of the construction period, indulgence, release or variation of the *Contractor's* obligation shall not affect the validity of this performance bond.
4. This bond will lapse on the earlier of
 - the date that the Surety receives a notice from the *Employer* stating that the last Defects Certificate has been issued, that all amounts due from the *Contractor* as certified in terms of the contract have been received by the *Employer* and that the *Contractor* has fulfilled all his obligations under the Contract, or
 - the date that the Surety issues a replacement Performance Bond for such lesser or higher amount as may be required by the *Employer*.
5. Always provided that this bond will not lapse in the event the Surety is notified by the *Employer*, (before the dates above), of the *Employer's* intention to institute claims and the particulars thereof, in which event this bond shall remain in force until all such claims are paid and settled.
6. The amount of the bond shall be payable to the *Employer* upon the *Employer's* demand and no later than 7 days following the submission to the Surety of a certificate signed by the *Employer* stating the amount of the *Employer's* losses, damages and expenses incurred as a result of the non-performance aforesaid. The signed certificate shall be deemed to be conclusive proof of the extent of the *Employer's* loss, damage and expense.
7. Our total liability hereunder shall not exceed the sum of:

R _____

8. This Performance Bond is neither negotiable nor transferable and is governed by the laws of the Republic of South Africa, subject to the jurisdiction of the courts of the Republic of South Africa.

Signed at _____ on this _____ day of _____ 200_

Signature(s)

Name(s) (printed)

Position in Surety company

Signature of Witness(s)

Name(s) (printed)

C1.3 SECURITIES: REDUCING VALUE GUARANTEE

(to be reproduced exactly as shown below on the letterhead of the Surety)

{Insert name and registered address of the Employer}

Date:

Dear Sirs,

REDUCING VALUE GUARANTEE FOR CONTRACT NO.

With reference to the above numbered contract made or to be made between

{Insert registered name of the *Employer*}

(the Employer)

{Insert registered name and address of the *Contractor*}

(the Contractor)

{Insert details of the *works* from the Contract Data}

(the works).

I/We the undersigned

on behalf of the
Guarantor

of physical address

and duly authorised thereto, do hereby undertake to pay the *Employer* forthwith on receipt of written demand from the *Employer* up to the maximum guaranteed sum of

(say)

R _____

in respect of amounts due by the *Contractor* to the *Employer* for whatever reason in terms of the contract between the *Employer* and the *Contractor* in respect of the *works*. The following further terms shall apply:

- 1 The Guarantor's liability shall be limited to the diminishing amounts of the guaranteed sum as set out below:

Guarantor's Liability		Period of Liability
1.1	Maximum guaranteed sum: R _____	From the date this demand bond comes into effect and until the date by when the Price for Work Done to Date has reached or exceeds R _____

- | | | |
|-----|---|---|
| 1.2 | Reducing to the guaranteed sum of:
R _____ | From the date by when the Price for Work Done to Date has reached or exceeds the amount stated in 1.1 above and until the date of Completion of the whole of the <i>works</i> |
| 1.3 | Reducing to the guaranteed sum of R _____ | From the day after the date of Completion of the whole of the <i>works</i> and until the date of issue of the last Defects Certificate. |
| 1.4 | Reducing to the guaranteed sum of: R _____ | From the day after the date of issue of the last Defects Certificate and up to and including the day on which there are no amounts due by either Party to the other. |
- 1.5 Thereafter this demand guarantee shall lapse.
- 2 The terms *Employer*, *Contractor*, *works*, Price for Work Done to Date, Completion, Defects Certificate and Party have the meaning given to them by the *conditions of contract* stated in the Contract Data for the aforesaid Contract.
- 3 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 on account of any conduct alleged to be prejudicial to the Guarantor. Without derogating from the foregoing, any compromise, extension of the Completion Date, indulgence, release or variation of the *Contractor's* obligation shall not affect the validity of this demand guarantee.
- 4 The Guarantor chooses domicilium citandi et executandi for all purposes in connection herewith at the address appearing above.

- 5 This Reducing Value Guarantee is neither negotiable nor transferable and is governed by the laws of the Republic of South Africa, subject to the jurisdiction of the courts of the Republic of South Africa.
- 6 The *Employer* returns this Guarantee to the Guarantor when it has lapsed in terms of clause 1 above or on payment in full thereof whichever is the earlier.

Signed _____ on this _____ day of _____ 2
at _____

Guarantor: _____

Representative _____ Representative _____

Name (printed) _____ Name (printed) _____

Capacity _____ Capacity _____

As Witness _____ As Witness _____

Guarantor's
stamp or seal



MUNICIPAL INFRASTRUCTURE SUPPORT AGENT

Reference no.: **MISA/PRPH/ELM/NC/024/2026/27**

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN
HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

PART C2: PRICING DATA

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C2.1 PRICING INSTRUCTIONS

- 1) The Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications) and the Drawings shall be read in conjunction with the Bill of Quantities.
- 2) The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.
- 3) Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Project Manager is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bill. Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations
- 4) Descriptions in the Bill of Quantities are abbreviated and may differ from those in the Standardized and Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities. Should any requirement of the measurement and payment clause of the appropriate Standardized or Project Specification(s) be contrary to the terms of the Bill or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardized, Project, or Particular Specification as the case may be, shall prevail
- 5) Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste. The final design drawings and accompanying construction bill of quantities provided by the contractor and design engineer, will be approved by the assigned MISA project manager and will be required to facilitate implementation of the C.2.2 Schedule of quantities.
- 6) The amounts and rates to be inserted in the Bill of Quantities shall be the full inclusive amounts to the Employer for the work described under the project specifications. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based.

- 7) An amount or rate shall be entered against each item in the Bill of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Bill.
- 8) The Tenderer shall also fill in a rate against the items where the words "rate only" appear in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the tendered rates shall apply should work under these items actually be required.
- 9) Should the Tenderer group a number of items together and tender one sum for such group of items, the single tendered sum shall apply to that group of items and not to each individual item, or should he indicate against any item that full compensation for such item has been included in another item, the rate for the item included in another item shall be deemed to be nil.
- 10) The tendered rates, prices and sums shall, subject only to the provisions of the Conditions of Contract, remain valid irrespective of any change in the quantities during the execution of the Contract.
- 11) The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment.
- 12) Quantities for measurement and payment shall be re-measurable, this means that payment will be made for actual work done, not necessarily for quantity stated in the BoQ.
- 13) **Ordering of materials** are not to be based on the Bill of Quantities, but only on information issued for construction purposes.
- 14) Provisional Sums in the schedule of quantities shall be utilised at the discretion of the Project Manager. In addition, provisional sums may be omitted entirely by the Project Manager if so required.
- 15) Those parts of the works to be constructed using labour-intensive methods **have been marked in the schedule of quantities with the letters LI in a separate column** filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all

the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.

16) Where minimum labour intensity is specified by the design the contractor is expected to use his/her initiative to identify additional activities that can be done labour intensively in order to comply with the set minimum labour intensity target.

17) Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

18) For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit : The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications

Quantity : The number of units of work for each item

Rate : The payment per unit of work at which the Tenderer tenders to do the work

Amount : The quantity of an item multiplied by the tendered rate of the (same) item

Sum : An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

19) The units of measurement indicated in the Bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

mm = millimetre

m = metre

km = kilometre

km-pass = kilometre-pass

m² = square metre

m²-pass = square metre-pass

ha	=	hectare
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	meganeutron
MN-m	=	meganeutron-metre
R O	=	Rate Only
Sum	=	Sum
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

2.2 SCHEDULE OF QUANTITIES

The Bill of Quantities is structured as outline below. Where there is gaps and omissions in specifications and/or BOQ the applicable Standard shall apply.

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

The Contractor shall construct the works in accordance with the drawings and specifications provided by MISA. No design responsibility shall rest with the Contractor except for temporary works.

APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE –
COMPLETION PHASE

ITEM No.	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1	SANS 1200 A	GENERAL				
1.1	8.3	FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	Establishment of Facilities on the Site				
	8.3.2.2	Facilities for Contractor				
1.1.2		a) Living accommodation	Sum	1		
1.1.3		b) Ablution and latrine facilities	Sum	1		
1.1.4		c) Tools and equipment	Sum	1		
1.1.5		d) Plant	Sum	1		
1.1.6	8.3.3	Other Fixed-charge Obligations	Sum	1		
1.1.7	8.3.4	Removal of Site Establishment	Sum	1		
1.1.8		Compliance with the Site Specific Health and Safety Specification and with Occupational Health and Safety Regulations	Sum	1		
1.2	8.4	TIME-RELATED ITEMS				
1.2.1	8.4.1	Contractual Requirements	Sum	1		
1.2.2	8.4.2	Operation and Maintenance of Facilities on Site, for Duration of Construction, except where otherwise stated				
	8.4.2.2	Facilities for Contractor				
1.2.3		a) Living accommodation	Sum	1		
1.2.4		b) Ablution and latrine facilities	Sum	1		
1.2.5		c) Tools and equipment	Sum	1		
1.2.6		d) Plant	Sum	1		
Total Carried Forward						

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE –
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Brought Forward						
1.2.7	8.4.3	Supervision for Duration of Construction	Sum	1		
1.2.8	8.4.4	Company and Head Office Overhead Costs for the Duration of the Contract	Sum	1		
1.2.9	8.4.5	Other Time-related Obligations	Sum	1		
1.2.10		Compliance with the Site Specific Health and Safety Specification and the Occupational Health and Regulations	Sum	1		
1.3	8.5	SUMS STATED PROVISIONALLY BY ENGINEER (Subclause 8.1.2.1 (d))				
1.3.1		Community Liason Officer	Prov. Sum	1	R 24 000.00	R 24 000.00
1.3.2		Overheads, charges and profit on 1.3.1 above	%	1		
1.3.3		Allowance for Nominated Health and Safety Officer	Prov. Sum	1	R 60 000.00	R 60 000.00
1.3.4		Overheads, charges and profit on 1.3.5 above	%	1		
1.3.5		Allowance for the supply of safety apparel (safety boots, reflectors, vests, orange overalls bearing the EPWP logo and large EPWP logo on the back and safety gloves for all targeted labour)	Sum	1		
1.4	8.7	DAYWORK				
		Labour				
1.4.1		a) Artisans	hr	40		Rate Only
1.4.2		b) Skilled labourers	hr	40		Rate Only
1.4.3		c) Semi-skilled labourers	hr	40		Rate Only
1.4.4		d) Unskilled labourers	hr	40		Rate Only
		Plant - intended for use on contract				
1.4.5		a) Excavator	hr	40		Rate Only
1.4.6		b) Tipper truck	hr	40		Rate Only
1.4.7		c) Pedestrian compactor	hr	40		Rate Only
		Other plant type				Rate Only
1.4.8		d) Welding plant: (type.....)		40		Rate Only
1.4.9		e) Hand held equipment type tools: (type.....)		40		Rate Only
Total Carried Forward						

APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE.

ITEM No.	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
2	SANS 1200 C	SITE CLEARANCE AND POND PREPARATION				
2.1	8.2.1	Clear and grub pond areas, including removal of vegetation, weeds, organic matter and existing debris, and shall load, haul and dispose of all resulting material at an approved disposal facility. The Contractor shall allow for all costs associated with loading, transportation and disposal in the applicable rate.	m ²	10867		
Total Carried Forward To Summary						

APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE.

ITEM No.	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
3	SANS 1200 D	EARTHWORKS				
3.1	8.3.3(a)	Rip, reshape and recompact existing pond subgrade, including localised excavation where required, filling of minor depressions, backfilling and treatment of unsuitable areas, and compaction in a 100 mm layers to achieve a minimum density of 90% Mod AASHTO, including disposal of surplus material to an approved location.	m ²	10867		
3.2		Import, place and compact approved selected material where required to achieve a smooth, stable and puncture-free subgrade for the geomembrane.	m ³	5		
3.3		Dewatering and drying out of all ponds to allow for lining, including temporary works, pumping and management of water not elsewhere measured.	Sum	1		
3.4		Provide, maintain and remove temporary drainage trenches and temporary collection pond/sump for management of underground/seepage water encountered during construction.	Sum	1		
3.5		Supply and place 200 mm thick gravel ballast over the flat surface of the HDPE liner, including spreading and trimming. RATE ONLY ITEM, subject to Engineer's instruction and available budget.	m ³			Rate Only
Total Carried Forward To Summary						

APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE.

ITEM No.	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
4	SANS 1526	POND LINING				
4.1		Supply and install 1.5 mm HDPE geomembrane liner to pond floors and side slopes, including material, handling, laying, cutting, wastage and all ancillary accessories.	m ²	10867		
4.2		Perimeter anchoring of HDPE geomembrane to prevent sliding, uplift and leakage, complete in accordance with the Engineer's detail/drawing in section C4.	Sum	1		
Total Carried Forward To Summary						

SUMMARY OF SECTIONS		
SECTION	DESCRIPTION	TENDERED AMOUNT (R)
1	SANS 1200 A - GENERAL	
2	SANS 1200 C - SITE CLEARANCE AND POND PREPARATION	
3	SANS 1200 D - EARTHWORKS	
4	SANS 1526 - POND LINING	
A) Sub-total 1		
B) 15% Value Added Tax (VAT)		
C) Total BID Amount (All Inclusive): (A+B)		

Signed _____ Date _____

Name _____ Position _____

Enterprise
name _____



MUNICIPAL INFRASTRUCTURE SUPPORT AGENT

Reference no.: **MISA/PRPH/ELM/NC/024/2026/27**

**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS IN
HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

PART C3: SCOPE OF WORK

PART C3: SCOPE OF WORK

C3.1 PROJECT DESCRIPTION AND SCOPE OF CONTRACT

C3.1.1 BACKGROUND

The existing Wastewater Treatment Plant (WWTP) in Hanover is currently in a severely deteriorated condition. Major challenges include extensive vandalism and the absence of lining in the ponds, which has resulted in environmental contamination of the surrounding area. This project aims to address the identified challenges through the lining of selected ponds and the refurbishment and upgrading of the existing pump station. These interventions form a critical step towards restoring the overall functionality of the wastewater treatment system and ensuring the effective and compliant treatment of wastewater for the community of Hanover.

When it is operational, the Hanover WWTW has a design capacity of 1Ml/day Average Dry Weather Flow (ADWF). It services a town population of 4,594 people, an estimated 1,044 households (Census 2011). However, with a calculated annual growth rate of 1.69%, the population is projected to reach approximately 5,080 by 2031.

C3.1.2 OVERVIEW OF THE WORKS

The Works will include the lining of two maturation ponds within the Hanover Wastewater Treatment Works (WWTW) using a nominal 1.5 mm HDPE geomembrane lining system complying with the requirements specified under C3.5 – PSVC 3 Materials, including the associated earthworks, subgrade preparation, temporary drainage, thermal fusion welding, seam testing and perimeter anchoring required to provide a complete and functional pond lining system.

C3.1.3 EXTENT OF THE WORKS

The Works will include the dewatering of the ponds, temporary drainage of underground water where encountered, earthworks and compaction of the subgrade, preparation of the pond surfaces, installation of a nominal 1.5 mm HDPE geomembrane liner complying with C3.5 – PSVC 3 Materials, thermal fusion welding and testing of the liner, perimeter anchoring and associated works required for the completion of the pond lining.

C3.1.4 DELIVERABLES

The deliverables shall include the completed earthworks and compacted subgrade, installation of the specified nominal 1.5 mm HDPE geomembrane lining system, completed thermal fusion-welded seams, tested and accepted liner joints, perimeter anchoring and all associated works necessary to provide a functional and watertight pond lining system.

C3.1.5 DESCRIPTION OF WORKS

C3.1.5.1 SCOPE OF WORKS

OXIDATION PONDS

The proposed lining and rehabilitation of the two existing oxidation ponds, approximately **85 m × 40 m and 131 m × 57 m** respectively, will comprise the following activities:

1. Establishment of the Contractor's site camp, storage and office space will be provided by the municipality.
2. Dewatering of the ponds and maintaining the designated work areas in a suitable condition for construction.
3. Temporary drainage of underground water, including excavation of temporary drainage trenches and construction of temporary collection ponds/sumps where required, followed by pumping and management of accumulated water.
4. Clearing and removal of vegetation, organic material, sludge, debris and other unsuitable material from the pond floors and side slopes.
5. Earthworks to the pond floors and side slopes, including ripping and recompacting as required to achieve the levels and profiles shown on the approved drawings.
6. Preparation and compaction of the pond subgrade to provide a smooth, stable and puncture-free surface suitable for installation of the HDPE geomembrane.
7. Treatment of soft, unstable or unsuitable areas, including removal and replacement with approved suitable material where required.
8. Preparation of the existing concrete pond-edge lining to receive the HDPE lining and perimeter anchoring system.
9. Supply and installation of a nominal 1.5 mm HDPE geomembrane liner complying with the requirements of C3.5 – PSVC 3 Materials, over the prepared pond surfaces.
10. Perimeter anchoring of the HDPE liner to prevent sliding, uplift and leakage, in accordance with the approved Engineer's detail.
11. Sealing and detailing of interfaces between the HDPE liner and existing concrete, pipework, inlet/outlet structures and other associated structures.
12. Inspection and testing of the completed lining system, including testing of welded seams and rectification of defective areas.
13. Protection of the completed HDPE lining against damage during construction.
14. Removal of temporary drainage installations and temporary works upon completion, where applicable.
15. Removal and disposal of surplus materials, waste and debris from the site.
16. Reinstatement of disturbed areas and leaving the site in a clean, safe and satisfactory condition.
17. Submission of all relevant quality-control and handover documentation, including material certificates, welding records, testing results, warranties and as-built information where required.

C3.1.5.2 DEWATERING AND TEMPORARY DRAINAGE

The Contractor shall dewater the two ponds and maintain the work areas in a suitable condition for execution of the lining works.

Where underground water or seepage is encountered, the Contractor shall provide temporary drainage measures, including temporary drainage trenches, temporary collection ponds/sumps and pumping arrangements as required.

The Contractor shall submit a method statement for dewatering and temporary drainage for approval before commencing the Works.

The Contractor shall ensure that temporary drainage and pumping activities do not cause erosion, instability or damage to the existing pond embankments, concrete lining, pipelines or other infrastructure.

C3.1.5.3 EARTHWORKS AND SUBGRADE PREPARATION

The Contractor shall undertake all earthworks necessary to prepare the pond floors and side slopes for installation of the HDPE geomembrane.

The works shall include, where required:

- clearing and grubbing;
- removal of vegetation, roots and organic material;
- removal of sludge, debris and unsuitable material;
- excavation and filling;
- reshaping and grading of pond floors and side slopes;
- filling of depressions, voids and eroded areas;
- removal and replacement of soft or unsuitable material;
- placement of approved suitable fill;
- moisture conditioning and compaction;
- final trimming and preparation of the subgrade.

The completed subgrade shall be smooth, stable, adequately compacted and free from sharp stones, roots, protrusions and other materials that could damage the HDPE liner.

No HDPE geomembrane shall be installed until the prepared subgrade has been inspected and accepted by the Employer's Representative.

C3.1.5.4 HDPE GEOMEMBRANE LINING

The Contractor shall supply and install a nominal 1.5 mm HDPE geomembrane liner complying with the requirements specified under C3.5 – PSVC 3 Materials.

The HDPE geomembrane sheets shall be joined by thermal fusion welding to provide continuous watertight seams.

The Contractor shall undertake trial welds prior to production welding and shall ensure that all production welds are carried out by suitably trained and experienced personnel using appropriate welding equipment.

All welded seams shall be inspected and tested in accordance with the applicable geomembrane seam testing requirements, approved quality-control procedures and the Engineer's requirements.

Any defective weld or damaged section of geomembrane shall be repaired and re-tested at the Contractor's cost.

The Contractor shall maintain complete records of geomembrane installation, welding, seam testing and repairs for submission to the Employer's Representative.

C3.1.5.5 THERMAL FUSION WELDING

The specified nominal 1.5 mm HDPE geomembrane sheets shall be joined by thermal fusion welding to provide continuous watertight seams.

The Contractor shall undertake trial welds and shall ensure that all production welds are carried out by suitably trained personnel using appropriate welding equipment.

All welded seams shall be inspected and tested in accordance with the approved quality-control procedure.

Any defective weld shall be repaired and re-tested at the Contractor's cost.

The Contractor shall maintain records of welding and seam testing for submission to the Employer's Representative.

C3.1.5.6 PERIMETER ANCHORING

The Contractor shall provide a perimeter anchoring system to secure the HDPE geomembrane and prevent sliding, uplift and leakage.

The HDPE liner shall be securely anchored at the pond perimeter and at its interface with the existing concrete pond-edge lining.

The perimeter anchoring system shall be constructed in accordance with the approved Engineer's perimeter anchoring detail.

The Contractor shall carefully prepare the existing concrete before installation of the anchoring system.

Where existing concrete is found to be cracked, deteriorated or otherwise unsuitable for anchoring, the Contractor shall notify the Employer's Representative before proceeding.

The final anchoring arrangement, fixing details and dimensions shall be as shown on the approved Engineer's drawing/sketch.

C3.1.5.7 CONCRETE-TO-HDPE INTERFACE

The existing concrete lining at the perimeter of the ponds shall be retained and incorporated into the lining system where suitable.

The Contractor shall prepare the existing concrete surface to provide a suitable interface with the specified HDPE geomembrane and perimeter anchoring system.

The Contractor shall ensure that the HDPE geomembrane is securely terminated against the existing concrete and that the completed interface prevents leakage and displacement of the liner.

Any defective or deteriorated concrete that may compromise the anchoring or watertightness of the lining system shall be repaired in accordance with the Engineer's instructions.

All HDPE-to-concrete transition details shall be constructed in accordance with the approved Engineer's drawings.

C3.1.5.8 GRAVEL BALLAST

Where instructed by the Employer and subject to the availability of the project budget, the Contractor shall supply, deliver and place a 200 mm thick layer of clean, suitably graded gravel ballast over the flat surface of the completed HDPE geomembrane liner.

The gravel shall be clean and free from organic material, deleterious matter and sharp particles capable of puncturing, cutting or otherwise damaging the HDPE geomembrane.

The gravel shall be placed carefully to prevent puncturing, tearing, displacement or excessive stress of the geomembrane. Mechanical equipment shall not operate directly on the exposed geomembrane during placement unless specifically approved by the Engineer and adequate protection is provided.

The ballast layer is intended to provide additional protection to the HDPE geomembrane and additional dead load to assist in limiting movement or uplift of the liner when the pond is empty.

The gravel shall only be placed after the HDPE geomembrane has been fully installed, inspected, seam-tested and accepted by the Engineer.

The final extent and quantity of the gravel ballast shall be determined by the Engineer based on site conditions, the requirements for protection and ballast, and the available project budget.

The gravel ballast shall be measured and paid for under the applicable Rate Only item in the Bill of Quantities when instructed.

C3.1.5.9 INSPECTION, TESTING AND QUALITY CONTROL

The Contractor shall implement an approved Quality Control Plan covering the lining works.

Inspection and testing shall include, as applicable:

- earthworks and subgrade preparation;
- compaction;
- HDPE geomembrane material compliance and certification;
- trial welds;
- thermal fusion welds;
- seam testing;
- repaired areas;
- perimeter anchoring;
- concrete-to-HDPE interfaces; and
- completed lining system.

The Contractor shall provide all labour, equipment and facilities necessary for testing.

Any work that does not comply with the Specification shall be repaired or replaced by the Contractor at no additional cost to the Employer.

C3.1.5.10 PROTECTION OF COMPLETED WORKS

The Contractor shall protect the completed HDPE geomembrane lining from damage until Practical Completion.

No plant, vehicles or other equipment shall be permitted to operate directly on the completed liner unless specifically approved and adequate protection is provided.

Any damage to the liner caused by the Contractor shall be repaired and re-tested at the Contractor's cost.

C3.1.5.11 SITE REINSTATEMENT AND CLEANING

Upon completion of the Works, the Contractor shall:

- remove all temporary drainage installations and temporary works, where applicable;
- remove surplus materials and construction waste;
- dispose of waste at approved disposal facilities;
- reinstate disturbed areas;
- remove temporary facilities no longer required; and
- leave the site clean, safe and satisfactory to the Employer's Representative.

C3.1.5.12 DOCUMENTATION AND HANDOVER

The Before Practical Completion, the Contractor shall submit:

- Manufacturer's technical data sheet for the HDPE geomembrane;
- GRI-GM13 compliance documentation;
- Applicable SANS 1526 compliance documentation;
- Geomembrane material test certificates and batch/roll identification records;
- Inspection records;
- Warranties;
- As-built information; and
- Any other documentation required by the Employer's Representative.

C3.1.5.13 DESCRIPTION OF SITE AND ACCESS

The project site is situated in **Hanover, Northern Cape Province**, approximately 60 km from De Aar and is accessible via an access road off the National Route N1.

The Works will be undertaken at the existing Hanover Wastewater Treatment Works (WWTW), specifically at the oxidation ponds identified for lining.

The approximate location of the oxidation ponds is as follows:

Site Coordinates

Area	Latitude (S-Coordinates)	Longitude (E-Coordinates)
Oxidation Ponds	31°04'18,83"	24°27'36,31"

C3.2 ENGINEERING

3.2.1 Contractor's Programme

Within fourteen (14) days of the Starting Date, the Contractor shall submit a detailed programme in accordance with Clause 31 of the NEC3 Engineering and Construction Contract.

The programme shall, as a minimum, indicate:

- Site establishment and preparation;
- Procurement and delivery of materials, plant and equipment;
- Setting out and verification of existing pond dimensions, levels and conditions;
- Dewatering of the existing ponds;
- Provision and maintenance of temporary drainage and collection facilities;
- Clearing, cleaning and preparation of the pond areas;
- Earthworks, subgrade preparation, trimming and compaction;
- Preparation of existing concrete interfaces and other structures;
- Procurement and installation of the specified nominal 1.5 mm HDPE geomembrane lining system ;
- Thermal fusion welding and testing of HDPE liner seams;
- Installation and completion of perimeter anchoring and terminations;
- Detailing and sealing around existing structures and pipe penetrations, where applicable;
- Installation of the 200 mm gravel ballast layer where instructed by the Engineer and subject to the available project budget ;
- Inspection, testing and quality control;
- Protection of completed works;
- Removal of temporary works and site reinstatement;
- Submission of completion and handover documentation; and
- Practical Completion.

The Contractor shall update the programme monthly, or as instructed by the Employer's Representative, to reflect actual progress and any approved changes.

The Contractor shall programme the Works in such a manner that the operation and protection of the existing wastewater treatment facility are maintained throughout the construction period.

3.2.2 Site Establishment

The Contractor shall establish and maintain all temporary facilities required for the execution of the Works, including but not limited to:

- Site offices (where required).
- Secure storage areas for materials, HDPE liner and equipment;
- Temporary ablution facilities;
- Waste collection and storage areas;
- Temporary fencing, barricading and warning signage;

- Areas suitable for liner preparation and thermal fusion welding;
- Temporary facilities required for dewatering and pumping; and
- Temporary utilities required for construction.

The Contractor shall maintain the site in a neat, safe and orderly condition throughout the Contract.

The Contractor shall ensure that all materials, plant and temporary facilities are positioned so as not to interfere unnecessarily with existing municipal operations or infrastructure.

3.2.3 Setting Out

The Contractor shall be responsible for the accurate setting out of all works in accordance with the Contract Drawings.

Prior to commencing construction, the Contractor shall verify the existing site conditions, including:

- Pond dimensions and configuration;
- Existing ground and pond levels;
- Pond floor and embankment profiles;
- Extent of the proposed liner;
- Locations and levels of existing concrete edges, aprons and other structures;
- Locations of existing inlet, outlet and other pipe penetrations; and
- Existing underground and overhead services that may be affected by the Works.

Any discrepancies between the Contract Drawings, specified dimensions and existing site conditions shall immediately be reported to the Employer's Representative before the affected work proceeds.

The Contractor shall be responsible for the preservation of all survey control points and benchmarks during construction.

Setting out shall be carried out by competent personnel using suitable survey equipment.

C3.2.4 Site Access and Traffic Control

The Contractor shall maintain safe access to the wastewater treatment works throughout the construction period.

Construction vehicles and plant shall use approved access routes only.

The Contractor shall ensure that construction activities do not unnecessarily obstruct municipal operations or create hazards to employees, visitors or members of the public.

Where required, temporary traffic control measures, barricading and warning signage shall be provided and maintained in accordance with the approved Health and Safety Plan.

The Contractor shall make suitable arrangements for the movement and operation of construction plant and equipment within the existing wastewater treatment works.

C3.2.5 Temporary Security

The Contractor shall provide suitable temporary security measures to protect the construction areas, plant, equipment, materials and completed Works against unauthorised access, theft or damage.

Particular attention shall be given to restricting unauthorised access to:

- Open ponds and excavated areas;
- Dewatering and temporary drainage installations;
- Construction plant and equipment;
- Stored HDPE liner and associated materials; and
- Areas where construction activities present a safety risk.

The Contractor shall maintain the security of the construction areas throughout the construction period and shall comply with any additional security requirements issued by the Employer's Representative.

C3.2.6 Material Approval

All materials shall comply with the Contract Specifications, Contract Drawings and applicable South African National Standards (SANS), where applicable.

The Contractor shall submit manufacturer's product data, technical information, compliance certificates, material certificates and samples where requested by the Employer's Representative.

Particular attention shall be given to the submission and approval of documentation for the proposed nominal 1.5 mm HDPE geomembrane lining system, including the manufacturer's technical data, material test certificates, batch/roll identification and evidence of compliance with the requirements of C3.5 – PSVC 3 Materials.

No HDPE geomembrane shall be delivered to Site or incorporated into the Works until the required documentation has been submitted and the material has been accepted by the Engineer.

Approval of materials by the Employer's Representative shall not relieve the Contractor of responsibility for ensuring that the materials are suitable and comply with the Contract requirements.

C3.2.7 Environmental Protection

The Contractor shall comply with all applicable environmental legislation, the Contract Environmental Requirements and the Environmental Management Plan, and shall take all reasonable measures to minimise environmental impacts during construction.

The Contractor shall:

- Prevent uncontrolled discharge of wastewater, contaminated water or sediment during dewatering;
- Manage temporary drainage and pumping activities to prevent pollution of surrounding areas and water resources;
- Prevent fuel, oil, chemical and other hazardous substance spills;
- Prevent contamination or damage to the HDPE liner and other materials;
- Control dust generated during construction;
- Dispose of vegetation, sludge, debris and construction waste at approved disposal facilities;
- Prevent unnecessary damage to existing vegetation and infrastructure;
- Control erosion and stormwater runoff;
- Maintain good housekeeping throughout the Contract; and
- Reinstate areas disturbed by the Works upon completion.

Any environmental damage resulting from the Contractor's activities shall be rectified by the Contractor at no additional cost to the Employer.

The Contractor shall comply with the project-specific environmental requirements contained elsewhere in the Contract.

C3.2.8 Health and Safety

The Contractor shall comply with the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), the Construction Regulations, 2014, the latest applicable MISA Occupational Health and Safety Specification for Construction Works Contracts, and all other applicable legislation and regulations.

Prior to commencement of the Works, the Contractor shall submit:

- An approved Health and Safety Plan;
- Task-specific risk assessments;
- Required legal appointments;
- Emergency procedures;
- Safe work procedures and method statements where required; and
- Proof of induction of all personnel.

The Contractor shall specifically address risks associated with:

- Working within and around wastewater ponds;
- Pond dewatering and temporary pumping;
- Excavation and earthworks;
- Working on pond embankments and slopes;
- Construction plant and vehicle movement;
- HDPE liner handling and installation;
- Thermal fusion welding; and
- Open excavations, trenches and temporary drainage facilities.

No work shall commence until the required Health and Safety documentation has been accepted by the Employer.

C3.2.9 Housekeeping

The Contractor shall maintain the Works and surrounding areas in a clean and orderly condition throughout the Contract.

Construction waste, surplus materials and debris shall be removed regularly and shall not be allowed to accumulate on site.

Materials and equipment shall be stored in designated areas in a manner that does not obstruct access, municipal operations or construction activities.

Upon completion of the Works, all temporary works, surplus materials, waste and construction debris shall be removed from site.

C3.2.10 Inspections

The Contractor shall provide reasonable notice to the Employer's Representative before any work is covered, concealed or otherwise made inaccessible for inspection.

The Employer's Representative may inspect any portion of the Works before, during or after construction.

The Contractor shall make available all relevant records, measurements and test results required to demonstrate compliance with the Contract.

Particular attention shall be given to inspection and acceptance of:

- Prepared and compacted pond subgrades;
- Pond levels and profiles;
- Existing concrete surfaces forming part of the liner termination;
- HDPE geomembrane installation;
- Welded seams and joints;
- Perimeter anchoring and liner terminations;
- Pipe penetrations and structural interfaces;
- Repairs to damaged or defective liner; and
- Completed protective or ballast layers, where applicable.

Inspection or acceptance by the Employer's Representative shall not relieve the Contractor of responsibility for the quality and compliance of the Works.

Any defective or non-compliant work shall be rectified by the Contractor at no additional cost to the Employer, unless otherwise instructed under the Contract.

C3.2.11 Practical Completion and Handover

Practical Completion shall only be certified when:

- The lining of both specified ponds has been completed in accordance with the Contract Documents;
- The required earthworks and subgrade preparation have been completed and accepted;
- The specified nominal 1.5 mm HDPE geomembrane has been installed and all required seams and joints have been inspected and tested;
- Perimeter anchoring and liner terminations have been completed;
- Interfaces with existing concrete, structures and pipe penetrations, where applicable, have been completed;
- Any gravel ballast instructed by the Engineer has been placed in accordance with the Contract Documents and the Engineer's instructions;
- All identified defects have been rectified;
- The Works have been inspected and accepted;
- Temporary works and construction facilities have been removed where no longer required;
- The site has been cleaned and reinstated; and
- All required completion and handover documentation has been submitted.

The Contractor shall submit, as applicable:

- Material compliance certificates and manufacturer's technical documentation;
- HDPE geomembrane certificates and documentation;
- Welding and seam inspection/testing records;

- Quality control and inspection records;
- Records of repairs and remedial works;
- Manufacturer's warranties;
- As-built drawings and survey information;
- Completion documentation; and
- Operation and Maintenance information for any mechanical or electrical equipment installed under the Contract.

3.3 MANAGEMENT

1 CONTRACTOR'S MANAGEMENT REQUIREMENTS

1.1 General

The Contractor shall manage, coordinate and execute the Works in accordance with the Contract, the approved programme, the Contract Drawings, Specifications, Bill of Quantities and instructions issued by the Engineer.

The Contractor shall:

- a) Submit a fortnightly progress report covering progress of the Works, including completed activities, activities in progress, planned activities, programme status, key constraints, risks, quality matters, health and safety matters and environmental matters.
- b) Attend regular progress meetings with the Employer, Engineer and other relevant stakeholders.
- c) Ensure that suitably qualified and competent personnel are available for the execution, supervision and quality control of the Works.
- d) Coordinate the activities of all subcontractors, specialist suppliers and other parties engaged by the Contractor.
- e) Maintain adequate records relating to construction activities, inspections, testing, materials, labour, plant and progress.

1.2 Health and safety

The Contractor shall manage health and safety in accordance with the latest edition of the MISA Occupational Health and Safety Specification for Construction Works Contracts, the Occupational Health and Safety Act, the Construction Regulations and all other applicable legislation and requirements.

The Contractor shall ensure that the health and safety requirements applicable to the Works are incorporated into the construction programme, method statements and risk assessments.

Particular attention shall be given to risks associated with:

- Working within and around existing wastewater treatment ponds;
- Dewatering and pumping operations;
- Temporary drainage trenches and collection facilities;
- Excavation and earthworks;
- Working on pond embankments and slopes;
- Construction plant and earthmoving equipment;
- Handling and installation of HDPE geomembranes;
- Thermal fusion welding;
- Open excavations and temporary works; and
- Access by personnel and construction vehicles within the existing WWTW.

The existing project-specific Health and Safety Specification shall apply in conjunction with this section. The existing tender already requires compliance with the MISA H&S specification.

1.3 Completion strategy

The Contractor shall develop and implement a completion strategy aimed at achieving Completion on or before the Completion Date and minimising defects and remedial work at the end of the Contract.

The completion strategy shall include:

- a) Progressive inspection and acceptance of completed work;
- b) Progressive identification and correction of defects;
- c) Inspection and testing of prepared pond surfaces before installation of the geomembrane;
- d) Inspection and testing of HDPE welded seams as the lining progresses;
- e) Verification of perimeter anchoring and structural interfaces;
- f) Adequate allowance for corrective work and repairs; and
- g) Final inspection, testing, cleaning and handover of each pond.

The Contractor shall not defer quality control and defect correction until the end of the Works.

This retains the useful completion philosophy from the existing document, which requires systematic acceptance and testing as the Works proceed.

1.4 Programme

The Contractor shall maintain the approved construction programme in accordance with the requirements of the Contract.

The programme shall, where applicable, identify:

- Site establishment;
- Procurement and delivery of HDPE geomembrane and other materials;
- Setting out and verification of existing pond conditions;
- Dewatering and temporary drainage;
- Pond cleaning and preparation;
- Earthworks and subgrade preparation;
- HDPE geomembrane installation;
- Thermal fusion welding;
- Seam testing and repairs;
- Perimeter anchoring and terminations;
- Concrete-to-HDPE interfaces;
- Installation of any instructed gravel ballast;
- Final inspection and testing;
- Reinstatement and cleaning; and
- Practical Completion and handover.

The programme shall identify critical activities, key dependencies, resources and activities affecting the Completion Date.

The Contractor shall update the programme at the intervals required by the Contract and shall reflect approved changes or revised sequencing instructed by the Engineer.

The existing tender requires programme information relating to National Treasury infrastructure procurement and delivery requirements. This can be retained where applicable to the project.

1.5 Reporting

The Contractor shall provide the information required by the Employer and Engineer to monitor progress and performance of the Works.

Reports shall include, as applicable:

- Physical progress against the approved programme;
- Work completed during the reporting period;
- Planned work for the following period;
- Labour employed, including local labour;
- Plant and equipment on Site;
- Materials delivered and utilised;
- Inspection and testing undertaken;
- Quality-control records;
- Health and safety matters;
- Environmental matters;
- Delays, risks and constraints;
- Subcontractor performance; and
- Any matters requiring action by the Employer or Engineer.

The Contractor shall report on socio-economic indicators, including employment of local labour, where such requirements are included in the Contract or Package Order. This requirement is already present in the current tender.

1.6 Communications

All formal communications between the Contractor, Employer and Engineer shall be undertaken in accordance with the communication requirements of the Contract.

Where MISA standard templates are prescribed, the Contractor shall use the applicable templates.

Instructions, notices, submissions, approvals, requests for information and other formal communications shall be properly recorded and retained in the project records.

The Contractor shall ensure that all relevant subcontractors and personnel are informed of instructions and requirements affecting their work.

The existing tender's requirement to use MISA standard communication templates can therefore remain.

1.7 Invoices

Invoices submitted by the Contractor shall be valid tax invoices and shall comply with the requirements of the Employer.

Payment applications shall be supported by detailed payment documentation clearly indicating the work executed and the quantities claimed.

Payment claims shall be based on actual verified progress and shall be subject to measurement and certification in accordance with the Contract and Bill of Quantities.

Where required, the Contractor shall submit supporting documentation, including:

- Measurement sheets;
- Site records;
- Delivery notes;
- Test results;
- Inspection records; and
- Other documentation reasonably required to substantiate the claim.

The existing tender already requires detailed payment certificates before invoices are issued and payment based on actual verified progress.

2 LEGISLATIVE AND STATUTORY REQUIREMENTS

The contractor shall comply with all applicable legislation, regulations, permits, licences, authorisations and statutory requirements relevant to the execution of the Works.

Where required, the Contractor shall obtain or assist in obtaining the necessary approvals, permits, wayleaves and authorisations before commencing the affected work.

These may include, where applicable:

- a) Requirements of the Department of Water and Sanitation;
- b) Environmental authorisations or approvals;
- c) Municipal approvals;
- d) Wayleaves and service-owner approvals;
- e) Occupational Health and Safety requirements; and
- f) Any other statutory requirements applicable to the Works.

The Contractor shall notify the Engineer of any statutory requirement that may affect the programme, cost or execution of the Works.

3 PROJECT MANAGEMENT STRUCTURES

The Works shall be managed through the project management structure established by the Employer.

The Contractor shall liaise with the Employer, Engineer, Quantity Surveyor and other members of the professional team as applicable.

All contractual, technical, commercial and administrative matters shall be dealt with through the designated representatives in accordance with the Contract.

Progress reporting shall be aligned with payment certification and the actual progress achieved on Site.

The existing tender places project administration under MISA and requires progress reporting to reflect actual site progress.

4 TIME FRAMES

The estimated period for completion of the Works is three (3) months from the Starting Date, subject to the provisions of the Contract and the approved programme.

The Contractor shall programme the Works to achieve Completion within the contractual Completion Date.

The Contractor shall make adequate allowance in the programme for:

- Site establishment;
- Procurement and delivery of long-lead materials;
- Dewatering;
- Temporary drainage;
- Weather conditions;
- Earthworks and surface preparation;
- HDPE installation and welding;
- Testing and inspections;
- Rectification of defects; and
- Final completion and handover.

5 FACILITIES AND EQUIPMENT TO BE PROVIDED BY THE EMPLOYER

The Employer shall provide no construction plant, equipment or temporary facilities unless specifically stated elsewhere in the Contract.

Any facilities or equipment specifically identified as being provided by the Employer shall be made available subject to the conditions stated in the Contract.

6 FACILITIES AND EQUIPMENT TO BE PROVIDED BY THE CONTRACTOR

The Contractor shall provide all plant, equipment, temporary facilities, tools, transport and resources necessary for the proper and timely execution of the Works.

This shall include, where applicable:

- Earthmoving plant;
- Dewatering pumps and associated equipment;
- Temporary drainage and collection equipment;
- Survey equipment;
- HDPE handling and welding equipment;
- Seam testing equipment;
- Compaction equipment;
- Generators and temporary power supplies;
- Water supply arrangements;
- Temporary storage facilities;
- Safety equipment and barricading; and
- Any other equipment necessary for completion of the Works.

The existing tender already places responsibility for the facilities and equipment required for successful completion on the Contractor.

7 MEASUREMENT AND PAYMENT

The Contractor shall allow in the applicable rates and Prices for all management, supervision, coordination, temporary works and general obligations necessary for completion of the Works.

Unless specifically measured as separate items in the Bill of Quantities, the tendered rates shall be deemed to include all associated costs for:

- Supervision and management;
- Labour;
- Plant and equipment;
- Transport;
- Temporary works;
- Site administration;

- Quality control;
- Testing required under the Specifications;
- Protection of completed Works;
- Compliance with health and safety requirements;
- Environmental management;
- Removal of temporary works;
- Site cleaning and reinstatement; and
- Contractor's overheads and profit.

Payment shall be made in accordance with the Bill of Quantities and the provisions of the Contract.

However, specific measurable items such as HDPE liner, seam testing, anchoring, concrete interface works and the 200 mm gravel ballast Rate Only item shall be measured and paid under their respective BOQ items.

8 TEMPORARY WORKS

The Contractor shall provide, maintain and remove all temporary works necessary for the safe and proper execution of the Works.

Temporary works shall include, where applicable:

- Temporary barricades and warning signs;
- Temporary access arrangements;
- Temporary drainage;
- Dewatering and pumping arrangements;
- Temporary collection ponds or sumps;
- Temporary protection of completed liner;
- Temporary pedestrian and vehicle control measures; and
- Any temporary support or protection required during construction.

Temporary works shall be adequately designed, constructed, maintained and removed upon completion unless otherwise instructed.

The Contractor shall make provision for temporary works in the tendered rates unless a separate BOQ item is provided.

9 ENGINEERING DESIGN, PROGRAMMING WORK AND ACTIVITY MATRIX

The Contractor shall programme and execute the Works in consultation with the Engineer.

The Contractor's programme shall identify the critical path, resources, dependencies and activities required to achieve Completion within the contractual period.

Where specialist installation information, shop drawings, method statements or technical submissions are required for the HDPE lining system, the Contractor shall submit such information to the Engineer for review and acceptance before the affected work commences.

The Contractor shall provide all information reasonably required by the Engineer for completion of the project records and as-built documentation.

The Contractor shall not alter the approved construction methodology or sequencing where such alteration may affect the performance or integrity of the Works without obtaining the required approval or instruction in accordance with the Contract.

The existing tender requires the programme to be critical-path based and to identify resources and dependencies.

9.1 As-Built Information

The Contractor shall maintain accurate records of the Works and shall submit all information required for preparation of the as-built documentation.

This shall include, where applicable:

- Final pond dimensions and levels;
- Liner extents;
- Locations of liner terminations and anchorages;
- Locations of penetrations and interfaces;
- Changes to existing structures;
- Locations of repairs or modifications;
- Survey information; and
- Other information reasonably required by the Engineer.

Only figured dimensions shown on the approved Drawings shall be used for interpretation of the Drawings unless otherwise instructed by the Engineer.

10 EMPLOYER'S DESIGN

The Works shall be executed in accordance with the Contract Drawings, Specifications and details issued by the Employer/Engineer.

Where additional details are required for construction, the Contractor shall notify the Engineer sufficiently in advance to allow the necessary information to be provided.

The Contractor shall not proceed with work where a required design detail or instruction has not been issued, unless authorised by the Engineer.

11 DESIGN SUBMISSIONS AND TECHNICAL DOCUMENTATION

Before incorporation into the Works, the Contractor shall submit, where required:

- Manufacturer's technical data;
- HDPE geomembrane product information;
- Material certificates;
- Welding procedures;
- Welding equipment information;
- Proposed seam testing procedures;
- Method statements;
- Details of liner terminations and anchorage;
- Details of interfaces with existing concrete and structures;
- Details of pipe penetrations and seals; and
- Other technical information reasonably requested by the Engineer.

Acceptance of a submission by the Engineer shall not relieve the Contractor of responsibility for the proper execution and performance of the Works.

12 SUBCONTRACTING

Where the Contractor proposes to subcontract any portion of the Works, the Contractor shall comply with the subcontracting provisions of the Contract.

Details of proposed specialist subcontractors shall be submitted where required, including their proposed scope of work and relevant experience.

Particular attention shall be given to specialist subcontractors responsible for:

- HDPE geomembrane installation;
- Thermal fusion welding; and
- Specialist liner testing.

The Contractor shall remain fully responsible for the performance of all subcontractors.

This retains the useful principle from the current tender, which requires proposed subcontracting arrangements to be submitted.

13 CONSTRUCTION STANDARDS

Construction shall comply with the applicable standards, specifications, manufacturer's requirements and project-specific requirements identified elsewhere in the Contract.

The Contractor shall comply with the applicable requirements for:

- Earthworks and compaction;
- Concrete works;
- Geomembrane materials and installation;
- Geosynthetic materials;

- Welding and seam testing;
- Surveying and setting out;
- Occupational health and safety; and
- Environmental management.

Where a conflict exists between a referenced standard and a project-specific requirement, the applicable order of precedence in the Contract shall apply.

14 EXISTING SERVICES

The Contractor shall identify, locate and protect all existing services and infrastructure that may be affected by the Works.

Particular care shall be taken around:

- Existing wastewater pipelines;
- Inlet and outlet structures;
- Valve chambers;
- Electrical services;
- Existing concrete structures;
- Access roads; and
- Other municipal infrastructure.

The Contractor shall verify the location and condition of services before undertaking excavation or other work that may affect them.

Any damage caused by the Contractor's operations shall be repaired at the Contractor's cost, subject to the provisions of the Contract.

15 SITE ESTABLISHMENT

Site establishment shall comply with the project-specific site establishment requirements and the applicable MISA requirements.

The Contractor shall provide suitable facilities for:

- Site management;
- Secure storage of materials and equipment;
- HDPE geomembrane storage;
- HDPE welding and preparation;
- Worker welfare and ablutions;
- Waste management;
- Temporary drainage/dewatering equipment; and
- Emergency and first-aid arrangements.

The site establishment layout shall be submitted where required and shall be subject to acceptance by the Engineer.

16 SITE USAGE AND PROTECTION OF EXISTING FACILITIES

The Contractor shall take all reasonable measures to ensure that construction activities do not unnecessarily interfere with the operation of the existing Hanover WWTW.

The Contractor shall:

- a) Maintain safe access to the WWTW throughout construction;
- b) Keep construction activities within approved working areas;
- c) Prevent unauthorised access to construction areas;
- d) Protect existing infrastructure and municipal property;
- e) Keep access routes free of unnecessary obstruction;
- f) Store materials and equipment in designated areas; and
- g) Maintain the Site in a clean and orderly condition.

17 PERMITS AND WAYLEAVES

The Contractor shall obtain all permits, approvals and wayleaves required for activities falling within the Contractor's responsibility before commencing the affected work.

The Contractor shall allow sufficient time in the programme for obtaining such approvals.

No work requiring statutory or third-party approval shall commence without the required approval.

18 ALTERATIONS TO EXISTING WORKS

No alteration, modification, removal or disturbance of existing WWTW infrastructure shall be undertaken without prior notification to and, where required, approval or instruction from the Engineer.

Where existing concrete, structures, pipelines, chambers or other infrastructure are found to differ materially from the Contract Drawings or information provided, the Contractor shall notify the Engineer before proceeding with the affected work.

19 WATER FOR CONSTRUCTION PURPOSES

The Contractor shall make all necessary arrangements for sourcing, transporting, storing and supplying water required for construction purposes.

The cost of construction water shall be borne by the Contractor unless otherwise provided for in the Contract.

The Contractor shall ensure that construction water does not adversely affect the existing wastewater treatment process or completed Works.

20 SURVEY CONTROL AND SETTING OUT

The Contractor shall be responsible for all setting out required for the Works.

The Contractor shall verify the available survey control, benchmarks, levels and dimensions before commencing affected construction activities.

Particular attention shall be given to:

- Existing pond dimensions;
- Pond floor and embankment levels;
- Pond slopes;
- Liner extents;
- Existing concrete edges;
- Anchor locations;
- Pipe penetrations; and
- Other structures affecting the lining system.

Any discrepancy shall immediately be reported to the Engineer before proceeding with the affected work.

21 MANAGEMENT OF THE WORKS

21.1 Site Administration

Site administration, acceptance control, record keeping and payment documentation shall be maintained in accordance with the requirements of the Engineer and the Contract.

21.2 Daily Site Diary

The Contractor's Representative shall maintain an up-to-date daily site diary recording, as applicable:

- Weather conditions;
- Labour;
- Plant and equipment;
- Work undertaken;
- Materials delivered;
- Instructions received;
- Delays;
- Safety incidents;
- Environmental incidents;
- Inspections and tests; and
- Other relevant site activities.

21.3 Plant Records

The Contractor shall maintain records of construction plant and equipment on Site, including periods during which major equipment is unavailable or out of service.

21.4 Labour Records

The Contractor shall maintain records of supervisory staff, skilled and general labour, local labour and subcontractor personnel engaged on the Works.

21.5 Site Instructions

All formal Site instructions issued by the Engineer shall be properly recorded and retained by the Contractor.

21.6 Site Meetings

The Contractor and authorised representatives shall attend Site meetings convened by the Employer or Engineer.

21.7 Payment Certificates

Progress payment documentation shall be submitted in accordance with the Contract and within the periods required by the Engineer to allow checking, reconciliation and certification.

21.8 Community Liaison and Relations

The Contractor shall maintain good relations with the local community and shall cooperate with the Employer and Community Liaison Officer regarding matters affecting local labour and community interests.

The Contractor shall not make commitments to the community that conflict with the Contract without the prior written approval of the Employer or Engineer.

21.9 Workmanship and Quality Control

The Contractor shall establish and maintain an effective quality-control system throughout the Works.

The Contractor shall provide suitably qualified and competent personnel, equipment and resources necessary to control the quality of the Works.

Particular attention shall be given to:

- Earthworks and subgrade preparation;
- Compaction;
- Pond surface smoothness and suitability;
- HDPE material quality;
- Geomembrane installation;
- Thermal fusion welding;
- Seam testing;
- Liner repairs;
- Perimeter anchoring;
- Concrete interfaces; and
- Final inspection and acceptance.

The Contractor shall submit relevant test results, measurements and levels with requests for inspection where required.

22 ENVIRONMENTAL MANAGEMENT

The Contractor shall comply with the project-specific Environmental Management requirements and all applicable environmental legislation.

Particular attention shall be given to:

- Preventing uncontrolled discharge of wastewater during dewatering;
- Managing contaminated water and sludge;
- Preventing pollution of water resources;
- Preventing fuel, oil and chemical spills;
- Controlling erosion and stormwater;
- Proper disposal of waste and unsuitable materials;
- Preventing damage to existing vegetation outside approved work areas;
- Preventing damage to the completed HDPE liner; and
- Maintaining good housekeeping.

Any environmental damage caused by the Contractor shall be rectified at the Contractor's cost, subject to the Contract.

C3.4: PROJECT SPECIFICATIONS

PREAMBLE

In the event of any discrepancy between a part or parts of the Standard or Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

1. General

The Works shall be carried out in accordance with the Contract Documents, approved Contract Drawings, Project Specifications, Bill of Quantities and instructions issued by the Engineer.

Where discrepancies occur between the Contract Drawings, Specifications and Bill of Quantities, the Contractor shall immediately notify the Engineer before proceeding with the affected work.

The order of precedence shall be as stated in the Contract.

The Contractor shall satisfy himself as to the nature and extent of the Works, existing site conditions and the requirements for successful completion of the Works.

2. STANDARDS

All materials, workmanship and construction methods shall comply with the latest applicable editions of relevant South African National Standards (SANS), recognised industry standards, manufacturer's recommendations and the requirements of the Contract.

Where a project-specific requirement differs from a referenced standard, the applicable Contract requirements shall take precedence.

The geomembrane lining system shall comply with the requirements of SANS 1526, SANS 10409 and the latest applicable edition of GRI-GM13 for HDPE geomembranes. The geomembrane material shall meet the specific physical, mechanical and durability requirements specified under C3.5 – PSVC 3 Materials.

Where the requirements of the referenced standards and the Project Specifications differ, the more stringent requirement shall apply, unless otherwise instructed by the Engineer.

3. MATERIALS

Only new, approved and fit-for-purpose materials shall be incorporated into the Works.

All materials shall:

- Be suitable for their intended purpose;
- Be free from defects, contamination and damage;
- Comply with the specified requirements;
- Be compatible with adjacent materials;

- Be suitable for the wastewater environment; and
- Be stored, handled and installed in accordance with the manufacturer's requirements.

The Contractor shall submit manufacturer's technical information, certificates of compliance, test certificates and other supporting documentation requested by the Engineer.

No material shall be incorporated into the Works before the required approval has been obtained.

4. STORAGE AND HANDLING OF MATERIALS

The Contractor shall store and handle all materials in a manner that prevents deterioration, contamination, deformation or damage.

HDPE geomembrane rolls shall be:

- Stored on a firm, level surface;
- Protected from damage and contamination;
- Kept clear of standing water, mud, sharp objects and construction debris;
- Handled using suitable equipment; and
- Protected from unnecessary exposure to conditions that may adversely affect the material.

Damaged or contaminated geomembrane shall not be incorporated into the Works unless the Engineer has determined that it remains suitable for use.

The Engineer may instruct the Contractor to remove unsuitable or damaged material from Site.

5. WORKMANSHIP

All workmanship shall be carried out by suitably trained, experienced and competent personnel.

The Contractor shall execute the Works in a manner that achieves the specified line, level, profile, tolerances and performance requirements.

Completed work shall:

- Comply with the Contract Drawings and Specifications;
- Be properly aligned and finished;
- Be free from defects;
- Be suitable for its intended function; and
- Be protected from damage until Practical Completion.

Defective work shall be rectified or replaced by the Contractor at no additional cost to the Employer, subject to the provisions of the Contract.

6. SETTING OUT

The Contractor shall be responsible for all setting out required for the Works.

Before commencing construction, the Contractor shall verify:

- Existing pond dimensions;
- Pond floor and embankment levels;
- Pond profiles and slopes;
- Extent of the proposed lining;
- Existing concrete edges, aprons and structures;
- Locations of inlet and outlet structures;
- Pipe penetrations and other interfaces; and
- Existing services that may affect the Works.

Any discrepancy between the Contract Drawings and actual Site conditions shall immediately be reported to the Engineer.

No permanent work affected by such discrepancy shall proceed until the Engineer has provided the necessary instruction.

7. EXISTING SERVICES AND INFRASTRUCTURE

The Contractor shall locate, identify and protect all existing services and infrastructure that may be affected by the Works.

Particular care shall be taken in the vicinity of:

- Existing pipelines;
- Inlet and outlet structures;
- Valve chambers;
- Electrical services;
- Existing concrete structures;
- Existing pond infrastructure;
- Access roads; and
- Other municipal infrastructure.

The Contractor shall exercise caution when undertaking excavation or earthworks in areas where existing services may be present.

Any damage caused by the Contractor shall be repaired in accordance with the Contract and at the Contractor's cost where the Contractor is responsible for such damage.

8. EARTHWORKS AND SUBGRADE PREPARATION

The Contractor shall prepare the existing pond surfaces to provide a suitable foundation for installation of the HDPE geomembrane.

The work shall include, where applicable:

- Clearing of vegetation and organic material;
- Removal of unsuitable material;
- Removal of loose debris, stones and sharp objects;
- Removal of protrusions that could damage the geomembrane;
- Excavation and filling as required to achieve the specified profile;
- Trimming of pond floors and slopes;
- Treatment of soft or unstable areas;
- Moisture conditioning;
- Compaction; and
- Final preparation and inspection of the surface before liner installation.

The completed subgrade shall be:

- Firm and stable;
- Properly compacted;
- Smooth and uniformly graded;
- Free from sharp projections;
- Free from standing water unless otherwise approved;
- Free from debris and organic material; and
- Suitable for direct placement of the geomembrane.

No geomembrane shall be installed over an area that has not been inspected and accepted by the Engineer.

9. CONCRETE AND HDPE INTERFACE

Existing concrete edge and perimeter elements shall be retained and incorporated into the lining system where they are structurally sound and suitable for this purpose.

Before installation, the Contractor shall inspect the existing concrete for:

- Cracking;
- Spalling;
- Honeycombing;
- Deterioration;
- Loose material;
- Sharp edges; and
- Other defects that may affect the liner termination or anchorage.

Defective or unsuitable areas shall be brought to the Engineer's attention before the liner is installed.

The HDPE geomembrane shall be terminated and anchored to the existing concrete in accordance with the approved construction detail.

The interface shall provide a secure and durable termination capable of preventing movement, leakage and separation of the liner.

Where the existing concrete is unsuitable to receive the specified anchoring arrangement, the Contractor shall notify the Engineer. Any additional concrete anchor beam or other modification shall only be constructed in accordance with an approved Engineer's detail.

10. HDPE GEOMEMBRANE LINER

The Contractor shall supply and install a nominal 1.5 mm HDPE geomembrane liner to the two existing ponds, complying with the requirements of C3.5 – PSVC 3 Materials.

The HDPE geomembrane shall:

1. Be **1.5 mm nominal thickness, smooth HDPE geomembrane**.
2. Comply with the latest applicable revision of **GRI-GM13 – Standard Specification for Test Methods, Test Properties and Testing Frequency for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes**.
3. Comply with the applicable requirements of **SANS 1526**, where applicable.
4. Have a minimum formulated sheet density of **0.940 g/cm³**.
5. Have a minimum tensile strength at yield of **22 kN/m**, tested in accordance with **ASTM D6693, Type IV**.
6. Have a minimum tensile strength at break of **40 kN/m**, tested in accordance with **ASTM D6693, Type IV**.
7. Have a minimum elongation at yield of **12%**, tested in accordance with **ASTM D6693, Type IV**.
8. Have a minimum elongation at break of **700%**, tested in accordance with **ASTM D6693, Type IV**.
9. Have a minimum tear resistance of **187 N**, tested in accordance with **ASTM D1004**.
10. Have a minimum puncture resistance of **400 N**, tested in accordance with **ASTM D4833**.
11. Have carbon black content within the range of **2.0% to 3.0%**, tested in accordance with **ASTM D4218**.
12. Have carbon black dispersion complying with **ASTM D5596**.
13. Have a minimum standard oxidative induction time (OIT) of **100 minutes**, tested in accordance with **ASTM D3895**.
14. The geomembrane shall be manufactured from virgin HDPE resin, with any permitted rework material complying with the requirements of GRI-GM13. Post-consumer recycled material shall not be incorporated into the geomembrane.
15. The geomembrane shall be supplied with the manufacturer's product data sheet, certificate of compliance, material batch/roll identification and relevant manufacturing quality-control test certificates prior to installation.
16. The minimum average thickness shall comply with the requirements of GRI-GM13 for a nominal 1.5 mm geomembrane. Thickness shall be verified in accordance with the applicable ASTM test method specified by GRI-GM13.
17. All geomembrane rolls shall be clearly identified with the manufacturer's name, product designation, nominal thickness, roll number and manufacturing batch/lot number.
18. The Contractor shall submit the proposed geomembrane manufacturer's technical data and compliance documentation to the Employer's Representative for approval prior to delivery and installation.
19. Products from other manufacturers may be accepted, provided that the proposed geomembrane is demonstrated to be **equal to or better than the specified requirements** and complies with GRI-GM13 and the applicable SANS requirements.

10.1 GEOMEMBRANE WELDING AND QUALITY CONTROL

The HDPE geomembrane panels shall be joined using approved thermal fusion welding techniques suitable for 1.5 mm HDPE geomembrane.

Before production welding commences, the Contractor shall undertake trial welds to establish and verify the appropriate welding temperature, speed, pressure and other relevant welding parameters.

All welding shall be undertaken by suitably trained and experienced personnel using calibrated and properly maintained welding equipment.

All production seams shall be inspected and tested in accordance with the approved quality-control procedure and applicable geomembrane welding standards.

Defective or failed welds shall be repaired and re-tested at the Contractor's cost.

The Contractor shall maintain complete records of panel identification, weld identification, welding parameters, trial welds, seam testing, repairs and final acceptance.

10.2 MATERIAL APPROVAL

No HDPE geomembrane material shall be incorporated into the Works until the Contractor has submitted, and the Employer's Representative has accepted:

- Manufacturer's technical data sheet;
- Certificate of compliance with GRI-GM13;
- Applicable SANS 1526 compliance documentation;
- Manufacturing quality-control test certificates;
- Material batch and roll identification;
- Relevant test results; and
- Manufacturer's warranty, where applicable.

The accepted material shall be used consistently throughout the Works unless an alternative product is submitted and approved in writing by the Employer's Representative.

11. THERMAL FUSION WELDING

All geomembrane seams shall be formed using an approved thermal fusion welding process suitable for the specified HDPE geomembrane.

Welding shall be undertaken by competent personnel using suitable and properly maintained equipment.

Before production welding commences, the Contractor shall:

- Submit the proposed welding procedure;
- Confirm compatibility of the welding equipment with the geomembrane;

- Undertake trial/test welds where required;
- Confirm acceptable welding parameters; and
- Obtain the required acceptance of the welding procedure.

Welding shall not be undertaken on contaminated, wet or otherwise unsuitable surfaces.

The Contractor shall maintain records of welding activities, including identification of seams, welding personnel, equipment and relevant test results.

12. SEAM TESTING AND REPAIRS

All geomembrane seams shall be inspected and tested in accordance with the approved quality-control procedure and applicable requirements.

Testing shall be undertaken progressively during installation to identify defective seams before they are covered or otherwise rendered inaccessible.

Defective welds shall be repaired using an approved method and shall be retested.

The Contractor shall maintain records of:

- Seam identification;
- Welded lengths;
- Test results;
- Failed tests;
- Repairs;
- Retesting; and
- Final acceptance.

No defective seam shall remain in the completed lining system.

13. PERIMETER ANCHORING AND TERMINATIONS

The HDPE geomembrane shall be securely anchored around the perimeter of each pond in accordance with the approved Engineer's anchoring detail.

The anchoring system shall be designed and installed to prevent:

- Sliding of the geomembrane;
- Excessive movement;
- Uplift;
- Separation from the perimeter;
- Loss of liner coverage; and
- Leakage at the termination.

The liner shall be securely terminated at all designated perimeter locations.

All anchoring components shall be installed in accordance with the approved drawings and manufacturer's requirements.

14. PIPE PENETRATIONS AND STRUCTURAL INTERFACES

Where the geomembrane interfaces with existing pipes, structures, inlet/outlet arrangements or other penetrations, the liner shall be detailed and installed to provide a continuous and watertight transition.

The Contractor shall submit details of proposed penetrations and structural interfaces for acceptance where such details are not already provided on the Contract Drawings.

All seals, boots, collars, clamps, termination systems and associated components shall be compatible with the HDPE geomembrane and the wastewater environment.

No pipe penetration or structural interface shall be left incomplete or inadequately sealed.

15. PROTECTIVE LAYERS AND GRAVEL BALLAST

Where instructed by the Engineer and subject to the availability of the project budget, a 200 mm thick layer of clean, suitably graded gravel ballast shall be placed over the flat surface of the completed HDPE geomembrane liner.

The gravel shall be free from sharp particles or other material capable of damaging the geomembrane.

The gravel shall be placed in a manner that prevents puncturing, tearing or displacement of the geomembrane.

Mechanical equipment shall not operate directly on an exposed geomembrane during placement unless specifically approved and suitable protection has been provided.

The gravel ballast shall be measured and paid for under the Rate Only item in the Bill of Quantities, when instructed by the Engineer.

16. INSPECTION AND QUALITY CONTROL

The Contractor shall implement a documented quality-control system covering all stages of the Works.

Inspections shall include, as applicable:

- Existing pond condition;
- Earthworks;
- Subgrade preparation;
- Compaction;
- Final surface preparation;
- Geomembrane material;
- Liner deployment;
- Welded seams;

- Seam testing;
- Repairs;
- Perimeter anchoring;
- Concrete interfaces;
- Pipe penetrations; and
- Protective/ballast layers.

The Contractor shall provide the Engineer with relevant inspection records, test results, measurements and certificates before requesting acceptance of completed work.

The Engineer may reject any work that does not comply with the Contract.

17. PROTECTION OF COMPLETED WORKS

The Contractor shall protect the completed lining system from damage until Practical Completion.

No plant, vehicles, sharp materials or other equipment shall be placed on or operated over the exposed liner in a manner that could cause damage.

Where damage occurs as a result of the Contractor's activities, the Contractor shall repair the affected area using an approved repair procedure at no additional cost to the Employer, subject to the Contract.

The completed lining shall remain protected until the Engineer has accepted the Works.

18. SITE REINSTATEMENT AND CLEANING

Upon completion of the Works, the Contractor shall:

- Remove surplus materials;
- Remove temporary works and facilities no longer required;
- Remove construction waste and debris;
- Remove temporary drainage and dewatering installations when no longer required;
- Reinstate areas disturbed by the Contractor;
- Clean access routes and surrounding areas; and
- Leave the Site in a safe, clean and orderly condition.

19. INSPECTION, TESTING AND ACCEPTANCE

The Engineer shall be entitled to inspect the Works at any stage.

The Contractor shall provide reasonable notice before work is covered, concealed or otherwise becomes inaccessible for inspection.

Inspection or acceptance by the Engineer shall not relieve the Contractor of responsibility for complying with the Contract.

The Contractor shall rectify defective or non-compliant work before Practical Completion.

20. DOCUMENTATION

The Contractor shall submit the documentation required for completion and handover, including where applicable:

- Manufacturer's HDPE geomembrane certificates;
- Material certificates;
- Product technical data;
- Welding procedure;
- Welding records;
- Seam test results;
- Repair records;
- Inspection records;
- Survey records;
- As-built information;
- Warranties;
- Relevant operation and maintenance information; and
- Completion documentation.

21. MEASUREMENT AND PAYMENT

Measurement and payment shall be in accordance with the Bill of Quantities and the provisions of the Contract.

Tendered rates shall include all labour, supervision, materials, plant, equipment, transport, handling, installation, testing, temporary works, protection, wastage, overheads, profit and incidental work necessary to complete the relevant item.

No additional payment shall be made for incidental work necessary to complete an item unless such work is specifically measured as a separate item in the Bill of Quantities.

C3.5 STANDARD AND VARIED SPECIFICATIONS

PSVC 1 SCOPE

This specification covers delivery, installation, testing and completion of a geomembrane lining system to two existing oxidation/maturation ponds at the Hanover Wastewater Treatment Works (WWTW).

The Works shall include, but not be limited to:

- establishment of the Contractor's site facilities;
- dewatering of the existing ponds;
- temporary drainage and management of underground, seepage and other water encountered during construction;
- clearing, cleaning and preparation of the existing pond surfaces;
- Rip, reshape and recompact existing pond subgrade, including localised excavation where required, filling of minor depressions, backfilling and treatment of unsuitable areas, and compaction in 100 mm layers to achieve a minimum density of 90% Mod AASHTO, including disposal of surplus material to an approved location.
- preparation of existing concrete perimeter/edge elements where these are incorporated into the lining system;
- supply and installation of a nominal 1.5 mm HDPE geomembrane liner complying with PSVC 3 Materials;
- preparation and thermal fusion welding of HDPE liner sheets;
- testing and inspection of welded seams and repair of defective areas;
- perimeter anchoring and termination of the HDPE liner;
- sealing and detailing around pipe penetrations, structures and interfaces with existing concrete, where applicable;
- site cleaning and reinstatement; and
- submission of quality-control records, material certificates, testing records, as-built information and other documentation required for completion and handover.

The Contractor shall provide all labour, supervision, plant, equipment, temporary works, transport, materials and incidentals necessary to complete the Works in accordance with the Contract Documents.

PSVC 2 APPLICABLE STANDARDS

All materials, workmanship, installation, testing and quality control shall comply with the latest applicable editions of the relevant SANS standards, applicable international standards where specified, recognised industry practice, the manufacturer's requirements and the Contract Documents.

Particular attention shall be given to the following:

- SANS 1526 – Thermoplastics polyolefin sheeting for use as a geomembrane;
- SANS 10409 – Design, selection and installation of geomembranes;

- GRI-GM13 – Standard Specification for Test Methods, Test Properties and Testing Frequency for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes;
- Applicable requirements for geomembrane seam welding and testing;
- Earthworks and compaction;
- Concrete repair and preparation;
- Surveying and setting out;
- Occupational health and safety; and
- Environmental protection.

Where a conflict exists between a referenced standard and the Contract Documents, the requirements of the Contract Documents shall apply, subject to the applicable conditions of contract.

PSVC 3 MATERIALS

All materials incorporated into the Works shall be:

- new and free from defects;
- suitable for their intended purpose;
- compatible with wastewater and the conditions prevailing at the Hanover WWTW;
- suitable for the environmental conditions at the Site;
- manufactured from suitable virgin polyethylene resin and free from post-consumer recycled material;
- supplied with the manufacturer's technical data and certificates of compliance; and
- approved by the Engineer prior to incorporation into the Works.

3.1 HDPE GEOMEMBRANE

The principal lining material shall be a **nominal 1.5 mm HDPE geomembrane** suitable for wastewater containment applications.

The geomembrane shall comply with the latest applicable edition of **GRI-GM13** and applicable requirements of **SANS 1526 and SANS 10409**.

For the nominal 1.5 mm smooth HDPE geomembrane, the material shall meet or exceed the following minimum requirements:

Property	Minimum Requirement	Test Method
Nominal thickness	1.50 mm	ASTM D5199
Formulated density	≥ 0.940 g/cm ³	ASTM D1505 / D792
Tensile strength at yield	≥ 22 kN/m	ASTM D6693 Type IV
Tensile strength at break	≥ 40 kN/m	ASTM D6693 Type IV
Elongation at yield	≥ 12%	ASTM D6693 Type IV
Elongation at break	≥ 700%	ASTM D6693 Type IV
Tear resistance	≥ 187 N	ASTM D1004

Property	Minimum Requirement	Test Method
Puncture resistance	≥ 480 N	ASTM D4833
Stress crack resistance	≥ 500 hours	ASTM D5397
Carbon black content	2.0–3.0%	ASTM D4218
Oxidative Induction Time (Standard OIT)	≥ 100 minutes	ASTM D8117

The geomembrane shall be manufactured specifically for geosynthetic lining applications and shall be suitable for prolonged exposure to wastewater and the environmental conditions applicable to the Site.

The geomembrane shall be supplied in clearly identified rolls/panels, with each roll/panel identification traceable to the manufacturer's production and quality-control records.

The Contractor shall submit the following for approval prior to delivery and installation:

1. manufacturer's product data sheet;
2. manufacturer's declaration of compliance with GRI-GM13;
3. applicable SANS 1526 compliance documentation;
4. applicable SANS 10409 compliance/installation information;
5. manufacturer's quality-control test certificates;
6. batch/roll identification and traceability information;
7. relevant material test results; and
8. manufacturer's installation recommendations.

No geomembrane shall be delivered to Site or incorporated into the Works until the required documentation has been submitted and the material has been accepted by the Engineer.

An equivalent or superior geomembrane product may be proposed by the Contractor, provided that it complies with or exceeds all the requirements specified herein and is subject to the Engineer's approval.

Any proposed equivalent product shall be submitted for approval before procurement and shall not be used without written acceptance by the Engineer.

PSVC 4 EXISTING POND CONDITIONS

The Contractor shall inspect the existing ponds prior to commencing the lining works and shall satisfy himself as to the existing conditions that may affect construction.

The existing ponds comprise earth embankments and pond surfaces, with areas of vegetation, weeds, erosion, deterioration and other surface irregularities.

Existing concrete perimeter and edge elements occur around portions of the ponds. Such elements shall be inspected and may be incorporated into the lining system where they are found to be suitable and structurally sound.

The Contractor shall identify and report to the Engineer any conditions that may affect the successful installation of the lining system, including:

- unsuitable or unstable soil;
- excessive soft areas;
- standing or underground water;
- erosion or unstable slopes;
- protruding stones, concrete or other sharp objects;
- significant cracking or deterioration of existing concrete;
- exposed services or structures;
- pipe penetrations; and
- any other obstruction or condition that may damage the liner.

No liner shall be installed over an unsuitable or unapproved surface.

PSVC 5 DEWATERING AND TEMPORARY DRAINAGE

The Contractor shall completely dewater the affected pond areas prior to commencement of liner installation.

The Contractor shall provide all temporary drainage, pumping, collection and discharge arrangements necessary to control water during construction.

Where underground water, seepage or groundwater is encountered, the Contractor shall provide suitable temporary drainage measures, which may include:

- temporary drainage trenches;
- collection sumps or temporary collection ponds;
- temporary pumping arrangements; and
- other temporary measures necessary to maintain the working area in a suitable condition.

The Contractor shall ensure that uncontrolled water does not undermine, erode or otherwise damage the prepared subgrade or completed lining system.

All discharge of water shall be managed in accordance with the applicable environmental requirements and instructions of the Engineer.

Temporary drainage and dewatering facilities shall remain operational for as long as necessary to protect the Works and shall be removed upon completion.

PSVC 6 EARTHWORKS AND SUBGRADE PREPARATION

The existing pond surfaces shall be prepared to receive the HDPE geomembrane.

The Works shall include, where required:

- removal of vegetation, organic material, sludge, debris and unsuitable material;
- excavation and removal of unsuitable material;
- filling of depressions and low areas;
- trimming and shaping of pond slopes and floors;

- treatment of soft or unstable areas;
- moisture conditioning;
- compaction;
- removal of stones and sharp projections; and
- final preparation of the surface to receive the geomembrane.

The completed subgrade shall be firm, stable, adequately compacted and sufficiently smooth to prevent damage to the geomembrane.

The surface shall be free of:

- sharp stones;
- roots;
- organic material;
- protrusions;
- debris;
- standing water; and
- other objects or conditions capable of damaging the liner.

The Engineer shall inspect and accept the prepared subgrade before installation of the geomembrane commences.

PSVC 7 POND LINING SYSTEM

The specified HDPE geomembrane shall only be installed after the underlying surface has been inspected and accepted by the Engineer.

The lining shall be installed continuously over the required pond floor and side slopes and shall be securely terminated and anchored around the perimeter.

The Contractor shall ensure that the liner installation provides a continuous containment barrier without gaps, unsealed joints, exposed damaged areas or other defects that may compromise the performance of the system.

The Contractor shall allow sufficient material for:

- thermal movement;
- welding;
- perimeter anchoring;
- transitions;
- penetrations; and
- other detailing required to complete the lining system.

PSVC 8 HDPE GEOMEMBRANE INSTALLATION

The geomembrane shall only be installed after the underlying surface has been inspected and accepted.

The Contractor shall prepare a panel layout and installation sequence that minimises the number of seams and facilitates proper welding, inspection and testing.

During installation:

- the geomembrane shall not be dragged unnecessarily over the prepared surface;
- excessive tension shall be avoided;
- panels shall be positioned without folds or wrinkles that could compromise the completed lining;
- the liner shall be protected against wind uplift;
- construction plant shall not operate directly on exposed geomembrane unless specifically permitted and adequately protected; and
- damaged sections shall be repaired in accordance with the approved repair procedure.

The Contractor shall take appropriate precautions to prevent contamination, puncturing or mechanical damage to the geomembrane during installation.

PSVC 9 THERMAL FUSION WELDING

All HDPE geomembrane seams shall be formed using an approved thermal fusion welding process suitable for the specified nominal 1.5 mm HDPE geomembrane.

Welding shall be undertaken by competent and suitably experienced personnel using equipment appropriate for the geomembrane thickness and material.

Prior to production welding, trial welds shall be undertaken where required to confirm the suitability of the welding equipment, temperature, pressure, speed and other welding parameters.

The Contractor shall maintain records of welding activities, including, where applicable:

- date and location of weld;
- welding equipment;
- welding operator;
- welding parameters; and
- test results.

The Engineer may require additional trial welds or testing where the quality of the welding is in doubt.

PSVC 10 SEAM TESTING AND REPAIRS

All welded seams shall be inspected and tested in accordance with the applicable standards, approved quality-control procedures and the Engineer's requirements.

Testing shall be undertaken progressively during installation to ensure that defects are identified before subsequent work covers or obstructs the affected area.

Any defective, incomplete or otherwise unacceptable weld shall be repaired and retested.

The Contractor shall maintain a seam inspection and testing record identifying the location and status of tested seams.

No defective seam shall be accepted as part of the completed lining system.

PSVC 11 PERIMETER ANCHORING AND TERMINATIONS

The HDPE geomembrane shall be securely anchored around the perimeter of the ponds to prevent movement, sliding, uplift, separation or loss of containment.

Anchoring and termination shall be undertaken in accordance with the Engineer's approved detail.

The Contractor shall allow for all materials, labour, drilling, fixing, sealing and associated works required to achieve a secure and watertight termination.

The final anchoring arrangement shall be constructed in accordance with the perimeter anchoring detail to be issued by the Engineer.

Where the existing concrete perimeter is suitable for incorporation into the anchoring system, the liner shall be securely terminated to the existing concrete in accordance with the approved detail.

Where the existing concrete is found to be unsuitable, the Contractor shall notify the Engineer before proceeding. Any modification or additional anchoring arrangement shall only be constructed in accordance with an approved Engineer's detail.

PSVC 12 CONCRETE-TO-HDPE INTERFACE AND PENETRATIONS

Existing concrete surfaces forming part of the lining termination shall be inspected and prepared before installation.

Loose, cracked, spalled, honeycombed or otherwise defective concrete that may compromise the lining system shall be reported to the Engineer.

The interface between the HDPE geomembrane and existing concrete shall be detailed to provide a secure and durable termination and to prevent leakage.

Where the liner interfaces with existing pipes, inlet/outlet structures, chambers or other structures, the Contractor shall provide suitable detailing to maintain the continuity and watertightness of the lining system.

No alteration to existing structures or services shall be undertaken without the Engineer's approval.

PSVC 13 GRAVEL BALLAST – RATE ONLY

Where instructed by the Engineer and subject to the availability of the project budget, the Contractor shall supply, deliver and place a 200 mm thick layer of clean, suitably graded gravel ballast over the flat surface of the completed HDPE geomembrane liner.

The gravel shall be clean and free from organic material, deleterious matter and sharp particles capable of puncturing, cutting or otherwise damaging the geomembrane.

The gravel shall be placed carefully to prevent puncturing, tearing, displacement or excessive stress of the geomembrane.

No mechanical plant shall be operated directly on exposed geomembrane during placement unless specifically approved by the Engineer and suitable protection measures are provided.

The gravel ballast layer shall provide additional protection to the HDPE geomembrane and additional dead load to assist in limiting movement or uplift of the liner when the pond is empty.

The gravel shall only be placed after the HDPE geomembrane has been fully installed, inspected, seam-tested and accepted by the Engineer.

The provision of the gravel ballast shall be measured and paid for only where instructed and shall be included in the Bill of Quantities as a Rate Only item.

PSVC 14 INSPECTION, TESTING AND QUALITY CONTROL

The Contractor shall implement a quality-control system covering all stages of the lining works.

Inspection and quality-control activities shall include, as applicable:

- existing pond condition;
- setting out;
- earthworks;
- subgrade preparation;
- compaction;
- concrete interface preparation;
- geomembrane material compliance;
- panel installation;
- welding;
- seam testing;
- repairs;
- perimeter anchoring;
- pipe and structural penetrations;
- protective or ballast layers; and
- final inspection.

The Contractor shall provide the Engineer with reasonable notice before work is covered or becomes inaccessible for inspection.

Inspection or acceptance by the Engineer shall not relieve the Contractor of responsibility for the quality and performance of the completed Works.

PSVC 16 ENVIRONMENTAL PROTECTION

The Contractor shall execute the Works in a manner that prevents pollution, uncontrolled discharge of wastewater, erosion, sedimentation and damage to the surrounding environment.

The Contractor shall:

- manage pond water and dewatering activities appropriately;
- prevent uncontrolled discharge;
- prevent spills and contamination;
- manage construction waste;
- control dust and unnecessary disturbance;
- prevent damage to existing infrastructure; and
- maintain good housekeeping throughout the Works.

All waste arising from the Works shall be removed and disposed of at an appropriately authorised facility where required.

PSVC 17 COMPLETION, CLEANING AND REINSTATEMENT

Upon completion of the Works, the Contractor shall:

- remove temporary drainage and dewatering facilities;
- remove temporary works and construction facilities;
- remove surplus materials and construction waste;
- repair damage caused by construction activities;
- reinstate disturbed areas;
- clean the work area and access routes; and
- leave the site in a safe, clean and orderly condition.

The completed ponds shall be inspected by the Engineer before Practical Completion.

PSVC 18 QUALITY DOCUMENTATION AND HANDOVER

Prior to Practical Completion, the Contractor shall submit the following documentation, as applicable:

- HDPE manufacturer's technical data;
- material certificates and certificates of compliance;
- geomembrane batch/roll identification records;
- approved welding procedure;
- welding records;
- seam inspection and testing records;
- records of repairs and retesting;
- inspection and quality-control records;
- records relating to perimeter anchoring and terminations;
- survey and as-built information;
- manufacturer's warranties; and
- other completion documentation required by the Engineer.

- GRI-GM13 compliance documentation;
- SANS 1526 compliance documentation;
- HDPE geomembrane manufacturer's technical data sheet;
- Geomembrane material test certificates;
- Batch/roll identification and traceability records;

The Contractor shall provide sufficient as-built information to identify the final extent and configuration of the installed lining system, including significant interfaces, penetrations and anchoring arrangements.

PSVC 19 MEASUREMENT AND PAYMENT

Measurement and payment shall be in accordance with the Bill of Quantities and the conditions of contract.

Unless specifically measured as separate items, the tendered rates shall include full compensation for all labour, supervision, materials, plant, equipment, transport, handling, installation, testing, temporary works, protection, wastage, site establishment, quality control, environmental measures, cleaning, reinstatement, overheads and profit necessary to complete the Works.

No additional payment shall be made for work that is incidental to the completion of the Works unless specifically provided for as a separate item in the Bill of Quantities.

Items identified as **Rate Only** shall only be measured and paid for where instructed by the Engineer and where the work is executed in accordance with the Contract.

C3.6 OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

PROJECT SPECIFIC OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

FOR

Tender No. MISA/PRPH/ELM/NC/024/2026/27

**APPOINTMENT OF A CONTRACTOR THE LINING OF TWO PONDS IN HANOVER IN
THE NORTHERN CAPE – COMPLETION PHASE**

MANAGED ON BEHALF OF

**MUNICIPAL INFRASTRUCTURE SUPPORT AGENT (MISA)
(THE “CLIENT”)**

KEY ROLE PLAYERS

CLIENT

Principal Agent:

Civil Engineer

Quantity Surveyor

Land Surveyor

Mechanical Engineer

Environmental Control Officer

Health and Safety Agent

PRINCIPAL CONTRACTOR

Contracts Manager

Site Agent

H&S Officer

Other:

ANNEXURES

ANNEXURE A:	EXAMPLE HEALTH AND SAFETY AUDIT DOCUMENT
ANNEXURE B:	CLOSE OUT REQUIREMENTS
ANNEXURE C:	NON-CONFORMANCES
ANNEXURE D:	CONTRACTORS MONTHLY HEALTH AND SAFETY REPORT
ANNEXURE E:	RISK ASSESSMENT FORMAT
ANNEXURE F:	BILL OF QUANTITIES FOR OCCUPATIONAL HEALTH AND SAFETY
ANNEXURE G:	HEALTH AND SAFETY (H&S) PRE-TENDER REPORT
ANNEXURE H:	TENDER STAGE OHS PLAN EVALUATION
ANNEXURE I:	MANDATARY AGREEMENT

1. LIST OF ABBREVIATIONS

MISA	Municipal Infrastructure support Agent
AIA	Approved Inspection Authority
BoQ	Bill of Quantities
CC	Compensation Commissioner
CR	Construction Regulations
DMR	Driven Machinery Regulations
DoL	Department of Labour
FEMA	Federated Employers Mutual Association
GAR	General Administration Regulations
GSR	General Safety Regulations
HCSR	Hazardous Chemical Substances Regulations
HIRA	Hazard Identification Risk Assessment
H&S	Health and Safety
ER	Engineer's Representative
LI	Labour Intensive
OH	Occupational Health
OHS Act	Occupational Health and Safety Act No. 85 of 1993 (as amended)
OHSAS	Occupational Health and Safety Specification
PSHSS	Project Specific Health and Safety Specification
PC	Principal Contractor
PPE	Personal Protective Equipment
SANS	South African National Standards (Authority)
MSDS	Material Safety Data Sheet
SMME	Small, Micro, Medium Enterprise
SWP	Safe Work Procedure

2. DEFINITIONS

The definitions used will be those set out in the Construction Regulations, Gazette No 37305 of 7 February 2014 which are hereunder further emphasised with the following additions:

Client: **MUNICIPAL INFRASTRUCTURE SUPPORT AGENT (MISA)**

Construction Site: Means a workplace where construction work is being performed

Construction Supervisor: Means a competent person responsible for supervising construction activities on a construction site

Designer: Means a competent person appointed by the Client as Agent to design, supervise and monitor construction on their behalf.

Fall Risk: Means any potential exposure to falling either from, off or into

Hazard: Source of or exposure to danger

Hazard Identification and Risk Assessment (HIRA) and Risk Control:

Means a documented plan, which identifies hazards, assesses the risks and details the control measures and safe working procedures which are to be used to mitigate and control the occurrence of hazards and risks during construction or operation phases.

Health and Safety Agent:

Means any competent person who acts as a representative for the Client in managing the projects health and safety and who is registered with the South African Council for the Project and Construction Management Profession (SACPCMP).

Health and Safety Plan:

Means a site, activity or project specific documented plan in accordance with the Clients Health and Safety Specification.

Induction Training:

Means once off introductory training on general health and safety issues given to all employees and visitors to the site before commencement of work on site.

Risk: Means the probability or likelihood that a hazard can result in injury or damage.

Regulation/s: Shall mean the relevant regulation/s promulgated in terms of the Occupational Health and Safety Act, No. 85 of 1993.

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, unless the context indicates otherwise, the Occupational Health and Safety Act, No. 85 of 1993 and Regulations promulgated thereunder, as amended.

3. KEY REFERENCES

The following key references apply to the specifications:

- Occupational Health and Safety Act No. 85 of 1993 and Regulations (as amended)
- Compensation for Injury and Occupational Diseases Act No. 100 of 1993 (as amended)
- SANS Code 1921-6
- SANS Code 1200

4. INTRODUCTION

MISA is responsible for the provision of adequate and reliable potable water and sanitation services within the district and takes cognizance that its current scope of works pose inherent risks to the health and safety of its agents and members of the public.

Each year fatalities, serious injuries and poor attitudes of Contractors mar the reputation of the Construction Industry. MISA has a responsibility to limit its risk by ensuring a zero tolerance and better practice approach to Contractors and those affiliated to a particular project. Thus a high premium is placed on the health and safety (H&S) of MISA stakeholders, which include its employees, professional service providers, public and its physical assets. The responsibilities that the MISA and relevant stakeholders have toward its employees are captured in, but not limited to this document. The responsibilities stem from both moral, civil and a variety of legal obligations. The Principal Contractor is to take due cognisance of the above statement.

MISA, as the Client and where there is an appointed H&S Agent on its behalf, shall provide a project specific Health & Safety Specification (PSHSS) for the project and provide the Principal Contractor/s making a bid or appointed to perform construction work for the project, or parts thereof.

4.1 Purpose of the Project Specific Health and Safety Specification (PSHSS)

The PSHSS is a performance specification to ensure that the Client and any bodies that enter into formal agreements with the Client viz. Agents, Professional Service Consultants (Engineers, Quantity Surveyors and Land Surveyors), Principal Contractors and Contractors achieve an acceptable level of OHS performance. No advice, approval of any document required by the PSHSS, such as hazard identification and risk assessments, or any other form of communication from the Client shall be

construed as acceptance by the Client of any obligation that absolves the Principal Contractor from achieving the required level of performance and compliance with legal requirements. Furthermore, there is no acceptance of liability by the Client, which may result from the Principal Contractor failing to comply with the PSHSS, i.e. the Principal Contractor remains responsible for achieving the required performance levels.

A Mandatory Agreement in terms of Section 37.2 of the OHSA will be signed between parties prior to any works commencing. The PSHSS highlights the aspects to be implemented over and above the minimum requirements of current legislation. Requirements may be changed should new risks or issues are identified that could not have been foreseen during the design phase of the project, or during the construction phase. Any new legislation or standards (legislated, or determined by MISA) that are promulgated or accepted during the contract will automatically be applied.

Environmental management shall receive due attention as per the requirements of the Environmental Control Officer (ECO) but will be managed by the ECO directly.

4.2 Implementation of the Project Specific Occupational Health and Safety Specifications (PSHSS)

The project specific H&S specification (PSHSS) forms an integral part of the Contract, and PCs are required to make it an integral part of their Contracts with Contractors and Suppliers. A PSHSS will be available for each level of Contract and Contractor, and must be complied with.

This specification must be read in conjunction with the OHSA, Regulations (as amended) and any other standards relating to work being done and ensure compliance thereto. The information relative to the scope of the project, the works etc. are detailed in the tender, are to be considered when developing the H&S plan and associated documentation.

The OHSA S.37.2 Mandatory Agreement must be fully completed by the PC, supplied by the Client. These documents shall be deemed to form part of the returnable Contract Documents. No work may commence without written approval of the H&S plan by the H&S Agent, or the responsible person in the MISA.

Should there be design changes, or change in the scope of works, an amended PSHSS may be issued. Where amended PSHSSs are issued, the PC will be required to ensure a resubmission of an amended H&S plan for approval. Further to this, the PC must ensure that similar information must be provided as it applies to the works to all their Contractors, within 5 working days following notification thereof. The H&S Agent will visit the project as deemed necessary by the Designer and the H&S Agent to ensure compliance and limit risk. All activities on the site and all appropriate documentation will be monitored and reported on to the Client and the Designer.

Non-conformances will be issued and penalties or work stoppage will be issued where appropriate. Communication between the H&S Agent and the PC will be through the Designer (or Client's responsible person) as determined at the commencement of the project.

4.3 Requirements at Tender Stage

Bidders are required to undertake to employ as part of the project team a Health and Safety Officer for the duration of the contract. The Health and Safety Officer shall be registered with SACPCMP and shall be responsible for dealing with all OHS requirements on the project including preparation of the project specific OHS Plan. Items are included in the schedule of quantities for pricing for this requirement.

The OHS Officer to be employed shall also declare as part of the tender submission his acceptance of the appointment should the contractor be awarded the tender. Copies of the proposed OHS Officer's qualification, ID document and proof of registration with SACPSM shall be included in the tender submission as part of the returnables. This declaration by the Bidder and the OHS Officer is to be made on **Form I** of the returnables Part T2.

Bidders are to note that that failure to declare and to submit the documentation as detailed above shall retender the submission nonresponsive to the requirements of the tender procedures hence the tender offer shall not be considered for evaluation.

5. GENERAL REQUIREMENTS

5.1 Summary of Risks identified during Design

The intention of the summary of findings from the design risk assessment is to highlight the residual risks identified during the design phase. The summary of risks provided is to point the contractor towards some risks he may not be aware of during tendering stage and while developing his formal risk assessments for the project.

The design risks and the management thereof should be included in the Principal Contractors (PC) risk assessments. Where there are other Contractors appointed to do work, the PC is to ensure that Contractors include such information in their risk assessments.

The Contractor is herein advised that no other residual risks remain which the designers judged as significant and unusual other than those risks that a competent Contractor can reasonably be expected to know or deduce from the documents prepared for this project and supplied to them.

5.2 Specified Hazardous Chemical Substances

The following lists of products or substances are those which have been identified as likely to be used on the project. This list is not inclusive and other products may be considered. Where the PC is likely to supply the product as the product has not been specified, material safety data sheets (MSDSs) need to be considered prior to all selections.

PRODUCTS SUBSTANCES	or	POTENTIAL HEALTH OR OTHER RISKS
Cement		• Hand mixing may occur, 50kg bags are an ergonomic risk from handling. • Pumping of concrete may produce extensive vibration, extended hours of work, and potential eye, skin and respiratory irritant from dust exposure, chromates.

PRODUCTS SUBSTANCES	or	POTENTIAL HEALTH OR OTHER RISKS
Cement/Silica dust		Caused by cutting, grinding, sanding of any concrete/granite/tiled surface/masonry resulting in occupational respiratory health illness or disease
Petrol/diesel/lubricants		Potentially a fuel bowser on site. Fire, spillage, fumes
Adhesives		Used as a bonding agent and may result in contact Dermatitis and occupational respiratory illness or disease from prolonged exposure
Plaster/mortar/screeds		Contact with products may result in Dermatitis and occupational respiratory illness or disease from prolonged exposure
Sealants/joint fillers		Contact with products may result in Dermatitis and occupational respiratory illness or disease from prolonged exposure
Welding fumes		Inhalation of fumes may result in occupational respiratory illness or disease from prolonged exposure
Lime		The product is classified an irritant, irritating the respiratory system, skin and risk of serious damage to eyes. In contrast to the powder itself, the product, when diluted with water, can produce severe skin damage in humans, (<i>alkaline burns</i>), especially if prolonged skin contacts takes place.
Paints		Contact with different paints may result in Dermatitis and occupational respiratory illness or disease from prolonged exposure

6. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

6.1 Structure and Organization of H&S Responsibilities

6.1.1 Notification of Commencement of Construction Work

The Client shall notify the Provincial Director of the Department of Labour (DoL) in writing, in the form of the Annexure 1 in the CRs for all projects requiring a work permit in terms of CR 3.

The PC who intends to carry out any construction work other than work noted in CR 3 shall notify the Provincial Director in writing in the form of the Annexure 2. This shall occur after the award of the contract, but before commencement of construction work. Proof of submission and/or receipt must be provided and kept in the H&S file. Work will not commence without the Notification being correctly completed and signed by the Client and proof of receipt by the Department of labour received. The Notification shall only be signed by the Client following the approval in writing by the H&S Agent, or the Client.

Where changes to the conditions given in the submission are required (i.e. Contractors, completion dates, increase in workers), a revised Annexure 1/2 must be submitted to the Department of Labour. The completion date is to include the defect and liability period. A copy of the notification form and any further submissions/correspondence must be kept in the H&S file.

6.1.2 Health and Safety Plan Framework

The H&S aspects related to the project outlined in the previous sections are to be taken into account when drawing up the H&S Plan. The PC is required to demonstrate competence by providing an H&S system that will address the requirements of the project.

The current legislative requirements, SANS codes and any other standards that may guide practice are to be taken into consideration. The following aspects must be addressed in the H&S Plan as they play a role in reducing the overall risk of a particular activity, or section of the project. The H&S Agent may from time to time request additions or systems as they relate to the works or legislative requirements at the time.

The PC is to prepare a site layout drawing to indicate at least the following:

- The positions of site offices of all Contractors, toilets, drinking water and worker rest areas,
- Indicate the positions of emergency personnel and equipment (fire, first aiders, first aid posts),
- Protection of plant and pedestrians, indicate parking, and
- Storage areas (materials and equipment, waste etc.)
- Access and egress to site for deliveries and intended temporary traffic management
- Emergency assembly point

Such layouts are to be updated regularly throughout the project.

6.1.3 Appointment of Competent Site Personnel

The CEO (OHSA S16.1) of the PC will take overall responsibility for the appointment of competent site staff for the duration of the project. Should the CEO not be personally involved in the project, the H&S responsibilities are to be delegated to the Contract Manager (OHSA 16.2). Knowledge and training in H&S is required, and certificates indicating H&S training as well as experience to be included in CVs.

All other legal appointments are to be made with relevance to the type of work required and kept current with the project programme. The construction team is to ensure the appointed H&S Officer is kept up to date with all planned activities, to ensure all H&S requirements are met.

All construction/technical method statements are to be generated by senior site personnel, and the appropriate risk assessments developed therefrom in conjunction with the H&S Officer.

The Occupational Health and Safety Plan shall include the following, but is not limited to the following key appointments:

6.1.4 Construction Supervision

Competent supervisors will be appointed to manage part or all of the works and have training and/or experience in the area of responsibility. All site supervisors must show evidence of appropriate training in H&S, and an understanding or training in areas of responsibility (i.e. risk assessments, method statements etc.).

Curriculum Vitae (CVs) are to be submitted for approval by the Designer, and/or Client. The Supervisor will be held responsible for the safety of working teams and subordinates, housekeeping and stacking and storage of materials.

6.1.5 Construction Health and Safety Officer

The PC will employ at least one competent, full-time or part time H&S Officer for the duration of the contract depending on the nature of the hazards on site and subsequent risks. The H&S Officer's CV is to be submitted for approval by the H&S Agent or the Client, at time of tender. The PC is to ensure adequate resources are provided in order to undertake all responsibilities (i.e. mobile phone, computer and internet access, vehicle etc.) Qualifications shall include at least Grade 12, SAMTRAC/NEBOSH/Diploma in H&S qualifications or similar together with additional appropriate short courses (i.e. Fall Protection Developer, Risk Assessor, Basic Firefighting and First Aider Level 1) with exposure to civil engineering and building that is appropriate given the level of project complexity and registration with SACPCMP. An in-depth knowledge of legislative requirements and the application thereof is required. The site supervisor may not act as the H&S Officer.

The H&S Officer/s will be held responsible for all H&S on the project.

- Senior site staff and supervision, Contractors are to follow systems, instructions etc. given by the H&S Officer at all times,
- No new workers or Contractors may commence work without approval or following the H&S plan as submitted, and

- No inductions of Contractor staff until the H&S documentation is approved by the H&S Officer.
- The H&S Officer/s may not be removed or replaced without the approval of the H&S Agent, nor may the site be left unattended for more than 1 day without adequate, competent cover.

A monthly report of all H&S activities and incidents is required by the end of the first week of each month, or at a date agreed to by the H&S Agent/Client and the H&S Officer. An example of the monthly report is attached as an *Annexure D*.

The H&S Officer will be responsible for collating the H&S documentation at the close out of the project in electronic format. A list of the typical aspects that should be provided is available as *Annexure B* to this document. The PC is to ensure that all Contractors documentation follows the same requirements and closed out H&S documentation must be completed and be available with the close out of the main contract. Failure to do so will be considered a serious offence and penalties applied.

6.1.6 Traffic Safety

The H&S Officer will be responsible for ensuring that daily traffic management is adequately managed and additional care must be taken where workers and public interface.

No worker may be transported in, or on the rear of construction vehicles (bakkies included), or with plant and materials to, on, or from site. The number of passengers in any vehicle is limited to what is stated on the license disc. Vehicles used to transport workers to, from, or on site, shall have secure seats and be covered. No canopies may be used.

Bidders must indicate in their OHS plans what type of transport is envisaged and how this will be managed.

Penalties will be issued for non-compliances noted.

6.1.7 Health and Safety Representatives and H&S meetings

H&S Representatives representing workers and Contractors are to be appointed following the startup of the project, irrespective of the number of workers on site. The appointed H&S Representatives are to be actively involved with H&S and will assist the H&S Officer and site management in meeting legislative duties.

The H&S Officer shall further ensure that H&S is discussed at all internal production or progress meetings. Issues arising from the H&S Agent audits are to be discussed, as well as all H&S related issues.

Minutes are to be kept for all H&S interventions and meetings. Failure to do so will be deemed to be a moderate offence.

6.1.8 Appointment of Competent Contractors

The Principal Contractor is to ensure compliance with the Clients minimum standards and all legislative requirements. The same H&S standards required of the PC are to be applied to all Contractors. An

index of all Contractors and Suppliers is to be on file and kept updated at all times. The PC is to ensure there is sufficient funding for H&S compliance by each Contractor.

The following minimum aspects are applicable to any Contractor appointed:

- The H&S Officer is to ensure a Contractors appointment and approval of H&S documentation at least seven (7) working days prior to commencing work.
- No Contractor may work under the PCs Compensation registration number. If required the PC may assist SMMEs with their registration with the Compensation Commissioner. However, such Contractors will not be able to commence work until proof of registration or Letter of Good Standing has been received.
- No work may commence without Mandatory agreements between parties in place.

The following aspects are applicable to Suppliers or short-term works (surveying, repairs, servicing, deliveries etc.). Cognisance is to be taken of the level of risk involved and the H&S Officer is to ensure the level of H&S documentation is appropriate:

- Mandatory agreements in place
- Letter of Good Standing
- Method statements and risk assessments
- Available information relative to:
 - Load testing and registers for cranes or lifting devices
 - Medical certificates of fitness
 - Material Safety data sheets (MSDSs)

Failure to provide written approval of H&S documentation will be considered a serious offense, and could result in aspects of, or all the activities being stopped and penalties implemented.

7. GENERAL RISK MANAGEMENT

7.1 Health Risks and Medical Surveillance

The appropriate MSDSs are to be obtained for all products and used to develop the H&S documentation as they relate to the works. Many of the processes may be labour intensive and ergonomic risks are to be noted. All workers (including Contractors) are to be included in the medical surveillance programme.

Workers will be exposed to noise, dust, and physical risks from extended periods of work of a repetitive nature, materials specified and the general nature of the works.

All workers (including those of Contractors) are required to be in possession of a medical certificate of fitness prior to commencing work.

Full medical records are not to be placed in the H&S file. Given the potential health risks the following aspects are to be included in each medical surveillance intervention:

- Full medical, surgical and occupational history,
- Full physical examination of all systems, and

- Referral if required for the management of identified health issues that may affect the worker.

Specific testing for existing conditions and limitations relative to exposure could include, but are not limited to:

- Audiometry (hearing tests), and
- Any other tests identified as relevant from chemical or specifically identified risks of exposure

Failure to do so will be considered a serious offence.

7.2 Noise Risks

All plant from plant hire companies (suppliers) or that of the PC is to be compliant with the Noise Induced Hearing Loss Regulations. Plant identified that has not been tested and marked for noise emissions will result in having to be tested at the Contractors or PCs expense. Failure to do so within a reasonable time period will result in such plant being removed from site.

Audiometric testing of all workers is noted as required in the medical surveillance programme for all permanent workers prior to work commencing. Temporary labour working in identified noise areas will require testing if the noise levels are indicated on plant or through processes as greater than 85dB. Audiometry records are to be available in the H&S file.

Suitable SANS approved hearing protective equipment shall be issued and worn where noise levels are identified as equal to or greater than 85 dB.

Failure to do so will be considered a serious offence.

7.3 Emergency Procedures

A simple emergency plan and procedure that is appropriate to the risks is required prior to commencement on site. It is advised that the system should be simple and easy for any worker to follow. The plan may be adapted should new information or risks are identified.

The procedure shall detail the response plan in relation to the works, and include at least (*but are not limited to*) the following key elements:

- Appointment of a competent emergency response co-ordinator
 - Site Camp Fire,
 - Public injury, Motor vehicle accidents,
 - Falls from heights,
 - Serious injury to workers (medical or work-related), and
 - Any other major risks identified during risk assessments

The emergency plan is to ensure the inclusion of local service providers where possible. Such arrangements should be made with these persons prior to the commencement of the project. The general principals of emergency management are to be applied as it applies to the hierarchy of control and management.

7.4 First Aiders and First Aid Equipment

At least 1 first aider will be trained to Level 3. First aiders shall be available and accessible on site at all times, and be able to work as a team when responding to any emergency on the project.

Contractors are expected to ensure compliance and provide/manage their own first aiders and equipment. The number of First aiders will be determined by the complexity and exposed risks of the project, not numbers of workers

Appropriately stocked first aid kits are to be available at all times and to assure continual availability and access on site.

7.5 Fires and Emergency Management

The emergency plan is to include the risk of fire on site and related to any specific activities where gas, welding, cutting etc. occur.

Fire extinguishers will be appropriate for the risk and in sufficient numbers to deal with the type of fires that could occur. All mobile plant is to have fire extinguishers. Hot work permits are required for any such activities.

7.6 Incident Management and Compensation Claims

All incidents and accidents are to be investigated. All serious incidents involving any form of disabling injury or fatality are to be reported to the Designer /Client /H&S Agent immediately. This shall be confirmed in writing following the incident. Full details are to be included in each site meeting or when the Client visits site. A summary of incidents is to be included in the monthly report.

Failure to comply with emergency provisions will be considered a serious offence, and the operation or project may be stopped if deemed inadequate for the work at the time of assessment or site inspection.

7.7 Personal Protective Equipment (PPE) and Clothing

The PC is to provide a procedure as an addendum to indicate how PPE is managed within the Company.

The wearing of the identified SANS approved PPE at all times is non-negotiable. The PC shall ensure that all workers (Including Contractors) are issued with and shall wear:

- Hard hats,
- Protective footwear,
- Overalls that ensure worker visibility,
- Eye protection,
- Hearing protection,
- Reflective jackets (no bibs)
- Respiratory protection (minimum of FF2), and
- Any other necessary PPE identified from MSDSs and/or risk assessments.

Adequate quantities of PPE shall be available. This shall include necessary PPE for visitors. The procedure for managing PPE is to be in a formal procedure submitted with the H&S plan for approval.

Any person (*including Client, Designers etc.*) found on site without the necessary PPE will be removed from site until the PPE is supplied and worn.

Failure to comply will result in penalties being applied.

7.8 Occupational Health and Safety Signage

On-site H&S signage is required. Signage shall be posted up at fixed or temporary working areas, or other potential risk areas/operations. These signs shall be in accordance with the requirements of the General Safety Regulations or SANS requirements as amended. Signage is to be noted on the site drawings indicating where fixed/temporary signage is required.

Temporary signage is to include (*but not be limited to*) the following:

- 'Report to site office' / 'Warning: Construction Site – Keep out' or similar,
- 'Site office' (if relevant),
- 'hard hat area' or other PPE requirements noted,
- First aid box positions (*including vehicles*), and
- Fire extinguishers.

Signs shall be posted at areas of work on site indicating that a construction site is being entered and that persons should take note of H&S requirements.

Failure to comply will result in penalties being applied.

7.9 Induction of Employees and Visitors, General H&S Training

A simple, formal induction programme is to be submitted as an addendum for approval with the H&S plan. Inductions must be carried out for all workers and visitors (*including Client, Designers*) to the site.

Pre-task training is required to ensure workers are familiar with the risks and H&S measures of the work or tasks to be done. Such training is to be done at least daily. A record of inductions and pre-task training is to be kept in the H&S file.

Any person found on site without proof of induction will be removed from site until the proof is supplied and, and a penalty issued per non-compliance.

7.10 Management of Plant and Equipment

Close control of plant and equipment is required, including that of Contractors.

Daily monitoring of all plant and equipment is required prior to commencing work. Full lists of hired and own plant are to be available at the H&S Agent's/Client audit. All daily inspection records are to be kept in the H&S file or Contractors where plant and equipment is brought onto site. Registers are not to be more than 1 week behind.

Only competent, medically fit plant operators are to be used. Medical certificates of fitness are required for all operators. Any plant or slings used to lift plant or material require annual load testing by an AIA, and all certificates must have the testers LMI/E number. Operators are to be adequately trained and

certified to operate mobile cranes or crane trucks. Certificates and registers are to be placed in the H&S file.

Failure to do so will be considered a serious offence.

7.11 Excavations

A procedure for managing excavations is to be provided as an addendum to the H&S plan describing how excavations are to be managed.

Excavation method statements are to be approved by the Designer and associated risk assessments are required. Designs by competent persons are required where ground conditions are deemed to require shoring.

A competent person is to be appointed for managing all excavations. A permit system is to be available and used for all excavations. All equipment and ground conditions are to be checked daily and prior to work commencing.

Excavations should preferably not be open beyond what can be closed daily. Where excavations need to remain open, all excavations are to be properly protected. Adequate stakes with 1m high demarcation and berms/spoil are required to be a safe distance from the edge of the angle of repose. Danger tape may not be used to demarcate excavations. Cognisance is required of the surrounding area and increased levels of protection are required where work is in the vicinity of members of the public.

Work will be stopped and penalties applied to any work in excavations that is not compliant.

7.12 Working at heights

A Fall Protection Plan (FPP) is to be available and supplied as an addendum to the H&S plan. The FPP must be appropriate for the project. Method statements, appropriate risk assessments, safe work procedures and training are to be available prior to work commencing.

Construction drawings shall be required for all temporary structures as they relate to the project. The drawings shall be accompanied by full calculations, design loads and any relevant test results as required by the SANS code, and ensure adequate allowance for the development of appropriate documentation and training. All drawings are to be checked and signed by a competent structural engineer (registered with ECSA).

The focus for working at height shall include fall restraint systems where possible except during assembling or dismantling top components or where it is not deemed safe. The relevant SANS codes are to be applied as they apply to the works and the project, such as:

- SANS 10085
- SANS 50355
- SANS 50361
- SANS 50355

Should part of the works be contracted out, competent Contractors are to be appointed and submit

documentation according to the project requirements. The PC is to note if such work is to be contracted to specialists in the H&S Plan. The plan is to be developed by and work managed by a competent person for the duration of the project. The following aspects must be included:

- The public are to be protected at all times by way of hoarding, barricading or fencing
- Notices to be posted
- Restrictions or stoppage when weather conditions are deemed hazardous
- Permit system for working at heights
- Prevention of falling tools or equipment
- Link to emergency plan regarding rescue
- All workers are to be in possession of valid certificates of fitness that extend for the duration of the works. Note the requirements in the section relating to medical surveillance.
- Registers and all relevant documentation are to be placed in the H&S file.

Work will be stopped and penalties applied to any work at heights that is not compliant.

7.13 Cranes and lifting equipment

Should any form of lifting device or crane (fixed or mobile) be used during the project for deliveries, moving of supplies or equipment, the appropriate documentation must be made available. Method statements, risk assessments, safe work procedures and training are to be available prior to work commencing. A procedure for managing loads and lifting must be made available as an addendum to the H&S Plan.

7.14 Temporary Works (Scaffolding, support work, formwork)

Temporary works must be properly designed and signed off by a competent person who has sufficient experience in the design of the type of temporary work in question to be able to assess the design. The appropriate competent persons are to be appointed to manage and monitor such works to the satisfaction of the Engineer and H&S Agent. Records and registers are to be properly completed and kept in the H&S file. If temporary works are to be erected by a Contractor, this must be notified to the Designer/H&S Agent.

Failure to do so will be considered a serious offence.

7.15 Auditing

Frequency of external auditing by the H&S Agent or Client will be as agreed with the Client and Designer but will at least conform to the requirements of the Construction Regulations. The site will be inspected and the documentation audited relative to the activities and H&S plan. The H&S Officer of the PC must accompany the Client, or the H&S Agent, on all audits and inspections. Not all audits will be, or need be announced.

The PC will ensure that all their Contractors are audited at a frequency determined by the H&S Agent or Client. Audit frequency may be increased if Contractors are not performing adequately. Audit results will be acted upon and non-conformances and penalties issued where deemed appropriate. The Client, Designer or H&S Agent may act or require further outcomes if non-compliances are noted or unsafe acts are noted on site.

Internal audits are to include site conditions as well as ensuring H&S files are appropriate, and compliant. Comprehensive audit reports are to be made available, the format of the audit reports is to be acceptable by the H&S Agent.

The PC will be audited using a template as supplied in the tender document. The audit template will be adjusted from time to time relative to the activities on site. A similar process is to be used by the PC when auditing their Contractors on site. Compliance with legislative requirements and the systems provided by the PC to manage the H&S on site will be measured. Full compliance is required. Time limits for corrective actions will be set and must be adhered to.

Failure to address findings or non-conformances will be considered a serious offence.

7.16 Mechanical installations

All mechanical installations are to be carried out in conformity with the manufacturer's instructions. Method statements and risk analyses must be compiled for each type of installation. A competent person must be designated to supervise the work.

7.17 Communication on Site

All H&S communication during the project between the H&S Agent and the PC will be done through the Engineering Consultant and be in writing, including the issue and responses to non-conformances and H&S audit results.

Failure to address issues timeously will be considered a serious offence.

7.18 Care of Workers on Site (Welfare)

Adequate toilets, clean, safe drinking water and decent shelter will be afforded workers at all times. Toilets will be within reasonable distance of workers, or placed with each working team in safe, with reasonable privacy. Hand washing facilities will be provided. Arrangements made where existing facilities are shared with existing users must be made in writing and placed in the H&S file.

Failure to ensure compliance will be considered a serious offence.

7.19 Discipline, Alcohol and Substance Abuse

All employees (management included) are to follow instructions given in the interest of H&S. A disciplinary procedure is to be developed and disciplinary action is to be imposed on those who do not follow such instructions or company rules or policies.

No person is allowed to work or access site if under the influence of alcohol or other substances that could impact on their own or others safety. The PC is to have a drug and alcohol policy available to manage such instances.

These requirements are applicable to any employee of any organization providing services on site. Penalties may also be applied by the Client, OHS Agent or Engineer.

7.20 Electrical Equipment

In addition to the requirements of the Electrical Machinery Regulations and the General Machinery Regulations any electrical distribution board used for construction work shall be fitted with suitable earth leakage protection. Leads must be properly and firmly connected. Plugs and sockets shall be in good and safe condition.

All electrical apparatus, other than electrical hand tools, shall have a physical "lock out" system which will prevent any operation other than that authorized by a supervisor. A "lock out" sign shall be displayed when the apparatus is not in use. Method statements and safe work procedures will be required for all work involving electrical apparatus.

7.21 HIV and AIDS Programme

The PC shall reduce the risk of transfer of HIV between and amongst construction workers and the local community, raise awareness amongst construction workers of the risk of infection with HIV, promote early diagnosis and assist affected individuals to access care and counselling by:-

- making condoms that comply with the requirements of SANS 4074 available for the duration of the contract to all construction workers at points on the site which are readily accessible and suitably protected from the elements
- either by placing and maintaining HIV/AIDS awareness posters of the size not less than an A1 in areas which are highly trafficked by construction workers or providing construction workers with a pamphlet in languages largely understood by the construction workers which reinforces the outcomes of the HIV/AIDS awareness programme
- encouraging voluntary HIV/STI testing
- providing information concerning counselling, support care of those that are affected

7.22 Safety Conflict

Where any conflict exists between the requirements of this PSHSS, the Site Rules or Statutory Requirements/Regulations the higher standard must apply unless such conflict is brought to the attention of the Client or H&S Agent and a direction provided. The PC is deemed to have allowed for the higher standard.

The PC is legally responsible for ensuring that he conforms to all applicable aspects of the Occupational Health and Safety Act 85/1993 and Regulations (OH&S Act) and other relevant Acts and Regulations. If in dispute with the PSHSS and other legislation the most stringent requirement must apply.

8. HEALTH AND SAFETY FILE

The documentation submitted and approved following the awarding of the contract will be used to form the H&S file. The H&S file is required to be laid out in a logical manner, and documentation filed within the file is to be easily accessible.

The following completed information shall be included (*but not be limited to*) as part of the index:

- The PSHSS,
- The H&S Plan and the approval by Client,
- Appointment by Client,
- Mandatary agreement with Client,
- Notification of construction work,
- A record of all working drawings, calculations and design where applicable,
- Detailed list of Contractors with contact details, appointments, Mandatories etc., H&S specifications issued,
- Record of Competencies (CVs) and appointments,
- Training Records,
- Permits,
- Method statements,
- Risk assessments,
- Safe work procedures,
- Emergency and injury management,
- Material Safety data sheets
- Medical surveillance records,
- Registers, and
- Records of audits, minutes etc.
- Plant lists
- Temporary electrical installations
- Employee records (*who is on site*)

9. NON-CONFORMANCES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance with the Clients or PCs H&S Plan, neither the PC nor any other Contractor shall have a claim for extension of time or any other compensation.

The following non-conformances will attract the following penalties:

Minor: Penalty: R50/count	Medium: Penalty: R500/count and a non-conformance	Severe Penalty: R5000/count, a non-conformance and/or activity stoppage
Non-use of PPE supplied	Toilets not supplied or regularly serviced, lack of drinking water	Contractors working without Health and Safety Plan approval
Non completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate, approved H&S method statements	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Non-compliance with traffic accommodation requirements: layout or physical conditions
	No monthly OHS report at site meeting to report on	Any serious breach of legal requirements
	No certificates of fitness for workers as required	
	Working without approved method statements	

9.1 Failure to Comply with Provisions

Failure or refusal on the part of the PC or their Contractors to take the necessary steps to ensure the safety of workers and the general public in accordance with these specifications or as required by statutory authorities or ordered by the Principal Agent (PA), shall be sufficient cause for the PA to apply penalties as follows:

- (i) A penalty as shown in the Table above shall be deducted for each and every occurrence of non-compliance with any of the requirements of the PSHSS.
- (ii) In addition a time-related penalty of R500,00 per hour over and above the fixed penalty may be deducted for non-compliance to rectify any non-conformance within the allowable time after a site instruction to this effect has been given by the PA. The site instruction shall state the agreed time, which shall be the time in hours for reinstatement of the defects. Should the

Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

10. MEASUREMENT AND PAYMENT

The payment items for Occupational Health & Safety are contained in the Bill of Quantities. The same rules are applicable in respect of the pricing of these items as for every other payment item. Attention is drawn to the Pricing Instructions in this document.

Item and Unit

C.01 Preparation of Contractor's Project Specific Health and Safety Plan. (Lump Sum (L.S))

The rate for this item must cover all expenses incurred in preparing the Contractor's project specific Health and Safety Plan as required by the Client's project specific Health and Safety Specification in this document.

C.02 Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations. (Lump Sum (L.S))

The full amount will be paid in one instalment only when the Client's Agent has verified and approved the following

- (a) The Principal Contractor has notified the Provincial Director of the Department of Labour in writing of the project, Annexure 2 to the Regulations.
- (b) The Principal Contractor has made the required initial Appointments of Employees and Contractors.
- (c) The Client has approved the Principal Contractor's project Health and Safety Plan.
- (d) The Principal Contractor has set up his Health and Safety File.

C.03 Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations. (Month (Mth))

The amount shall represent full compensation for that part of the Principal Contractor's general obligations in terms of the Occupational Health and Safety Act and Regulations which are mainly a function of time. Payment will be made when the Client's Agent has verified the Principle Contractor's compliance as part of the audit. This will include the updating and administration of the Health and Safety file.

**C.04 Provision of Personal Protective Equipment (PPE) as listed in the Bill of Quantities.
(Number (No))**

The rates for these items shall include for the procurement, delivery, storage, distribution and all other actions required for the supply of PPE to the employees of the Principle Contractor, full or part time, requiring them. Sub-Contractors are responsible for their own costs in this regard. Any items of PPE not included on the list will be paid for only after the PA has agreed to their acquisition.

Items listed will include, among others which may be noted, are: hard hats, reflective vests, high visibility overalls, protective foot wear, fall arrestor harness, gloves, ear muffs, earplugs and dust masks of appropriate type. Normal items such as standard overalls, waterproof clothing, gum boots and standard workshop safety equipment such as welding masks and goggles will not be paid for.

Payment will be based on the issues register for PPE as kept by the Construction Health and Safety Officer, backed up by paid invoices if requested.

C.05 Provision of a Full/Part Time Construction Health and Safety Officer (Month)

The Tender sum shall include for the cost of a Construction Health and Safety Officer on a fulltime or part time basis.

C.06 Costs of Medical Surveillance (Unit (No))

This item shall cover all costs involved in the obtaining of baseline medical examinations of temporary labour, including operators for mobile plant as contemplated in CR 23(d) (ii), for temporary workers and workers exposed to noises at or above the limits given in the Noise-induced Hearing Loss regulations, as stipulated.

Workers in the permanent employ of the Contractor will only be paid for if their certificates require updating.

C.06 a) Initial (baseline) medical examinations, including audiometric and lung function testing.

C.07 Induction Training (Unit (No))

This item shall cover all costs incurred for the health and safety inductions as set out in Regulation 7 of the Construction regulations and the proof of induction required. Payment will be made on the figures contained in the induction section of the Health and Safety File.

C.08 Provision of First Aid Boxes. (Unit (No))

The rate for this item shall cover all costs incurred in the provision and maintaining of first aid boxes.

C.09 Establishment of noise levels (Unit (No))

This item shall cover all costs involved in the establishment of noise zones in terms of Regulation 9 of the Noise-induced Hearing Loss Regulations. Where a zone has previously been established for a

particular item of plant within the last two years, the test need not be repeated but must be kept valid for the duration of the Contract.

C.10 Submission of the Health and Safety File. (Lump Sum)

Expenditure under this item shall be made in accordance with the general conditions of contract.

This amount will be paid only once the Principal Contractor has met all his obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and has submitted his Health and Safety File complete as envisaged on this specification to the Client's satisfaction. This must be done prior to the issue of a Certificate of Completion

ANNEXURE A

H&S AGENT AUDIT SHEET

EXAMPLE OCCUPATIONAL HEALTH AND SAFETY AUDIT DOCUMENT

PROJECT NAME:	
CONTRACT NUMBER:	
HEALTH AND SAFETY AUDIT No:	
CONDUCTED BY :	
DATE :	

EXECUTIVE SUMMARY

INTRODUCTION AND OVERVIEW

Scoring:

The audit has a scoring schedule, which will be used to deem compliance to what is available on site, and what the appropriate systems need to be to match them. The contractor should aim for a score of 3 on each aspect included in the audit. A low score could result in part or all of the work being stopped until compliance is reached.

Scoring schedule	
If the answer is "No" the rating will be 0	
If the answer is 'not applicable' it will be noted as n/a	
If the answer is "Yes" the following ratings are applicable	
1	Requirements partially met and no implementation.
2	Requirements partially met and partially implemented
3	Requirements fully met and partially implemented
4	Requirements fully met and fully implemented
5	Requirements and implementation exceeds expectation

Key Abbreviations:

Health and Safety	H&S	Driven Machinery Regulations	DMRs
Occupational Health	OH	Regulations for Hazardous Chemical Substances	RHCSs
Construction Regulations	CRs	Pressure Equipment Regulations	PERs
General Safety Regulations	GSRs	General Administration Regulations	GARs
Explosive Regulations	ERs	South African National Standards	SANS
Noise Induced Hearing Loss Regulations	NIHLs	South African Road Traffic Safety Manual	SARTSM
Facilities Regulations	FRs		
South African Bureau of Standards	SABS		
Occupational Health and Safety Act	OHSA		

Provide a summary of site inspection, significant findings of the site inspection and the audit.

CORE LEGAL RECORDS ON SITE:

This list is not conclusive – to be updated monthly relative to works in progress. However the H&S Officer is to be pro-active and pre-empt requirements with the Construction Supervisor (Site Agent). The content will be linked to the physical conditions, processes and activities noted on site, or programme.

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
1.		Updated project H&S Organogram					
2.	OHSA S. 16 (1) and (2)	CEO and subordinate (if required) • Proof of Competency provided					
3.	CR 8 (1) and (2)	Designation of Construction Manager and Subordinate Person(s) • Proof of Competency provided					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
4.	OHSa S. 17, GAR 7	• H&S Representatives appointed • Monthly inspections completed • Representation from Contractors					
5.	OHSa S. 18, GAR 5	• H&S Committee appointed • Minutes on file • H&S representatives reports discussed • Incidents discussed • Signed by Chair • Evidence of minutes noted					
6.	GAR 4	Copy of OH&S Act (Act 85 of 1993) available on site					
7.	CR 5(j), 7(c)(iv)	Written proof of registration / Letters of good standing available on Site					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
8.	OHSa S.37.2	Copy of the Mandatory (S37.2) agreement between the PC and Client					
9.	OHSa S.37.2	Mandatory agreements between PC and contractors					
10.	CR 3(1), 4(1)	Notification to Provincial Director – Annexure 1/2 Available on site					
11.	CR 5(1)(m) 7(1)(b)	• Copy of Principal Contractor's Health & Safety Plan Available on request. • Letter of approval from Agent. • Health & Safety File opened and kept on site (including all documentation-required in respect of the OHSa & Regulations) • Available at all times					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
12.	CR 7(1(b))	Copy of Principal Contractor's Health & Safety File provided to Contractors • Letters of approval for each contractor on file • List of Contractors on site • Verified monthly by Agent					
13.		Copies of technical method statements approved by Designer • Register available, signed by Designer					
14.	CR 9(1) OHSA	Risk Assessments: • Up to date and available on site for inspection • Review and monitoring programme adhered to					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
	CR 9(3)	Workers trained in risk assessments					
15.	CR9(1)(c)	Safe work procedures Procedure - List of available SWPs - Workers trained in SWPs - Proof of training verified					
16.	OHSA S. 13 CR 7(5)(6)	Induction programme available Proof of induction training available					
17.	CR 6(1)(2)	Structural information from Designer: - Geo-science technical report - Design loading of the structure - Methods & sequence of construction - Design risk assessment - Amended H&S Specification					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
		Temporary Works Design					
18.	CR 12(1)(3)	Temporary Works - Appointment of temporary works designer - Proof of Competency provided - Approved temporary works drawings - Temporary work inspection register - Competencies of erectors of temporary works - Construction method statements					
19.	CR 13(1)(2)	Excavations: - Competent persons appointed - CVs available - Depth of excavations on site - Shoring in use - Registers in line with open excavations noted at site inspection					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
20.	CR 13(f) GSR 13A	Ladders: • Competent person appointed • Registers kept • Registers for ladders noted on site					
21.	CR 16(1)	Scaffolding: SANS 10085 • Competent Erector(s) and Inspector appointed • Proof of Competency provided • Registers in place					
22.	CR 23	Construction Vehicles: • Appointment of competent operators • Plant Management: • Registers on file noting daily inspections • Plant and machine lists available • Inadequacies noted on site • Transportation of workers					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
		Registers for sample of vehicles noted on site					
23.	CR 24	Temporary Electrical Installations and Machinery - Competent Person appointed - Proof of Competency provided - Updated weekly installation inspection registers in place - Updated daily inspection registers in place					
24.	CR 25	Flammable Liquids: - Competent Person appointed for inspections - Proof of Competency provided - Inspection registers in place					
25.	CR 27, ER 6	Housekeeping, Stacking & Storage Supervisor: Appointed per work area					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
	GSR 8	• Proof of Competency provided • Include site conditions • Spoil areas • Register available per area					
26.	GSR 2	PPE: • included in Risk Assessment • PPE used and enforced • Records of Issue kept • Training to use (Induction) • Registers for condition checks					
27.	RHCSs CR 7, 23 GSR 4	Hazardous Chemical Use and Storage • Competent Person/s appointed • Proof of Competency provided • Risk Assessments include use of HCSs • Register of HCS kept/used on Site • Flammable Store					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
		• Bulk diesel storage • Material Safety Data Sheets on file and utilised • Other					
28.	GSR 3	Emergency management: • First aiders available through project • Level 1 • First aid boxes through site • Evacuation procedures • Registers available (noted on site)					
29.	GAR	Incident Management: • Emergency co-ordinator appointed • Proof of Competency provided • Emergency plan appropriate • Emergency level included in Risk Assessments • Workers trained • Incident reports available and complete					

ITEM	Legal /SPEC Ref	RECORDS TO BE KEPT	SCORE	COMMENTS	By whom	Completion Date	Contractor Close out
30.	CR 1 (g), 7(8)	Medical Surveillance Programme • All employee records					
31.	CR 30/ FRs	Welfare Facilities: • Toilets available where crews are working/clean • Clean potable water available • Adequate eating facilities					
32.	SANS 1921-6	HIV AND AIDS PROGRAMME • HIV and AIDS Policy and plan available • Condoms available • Peer review programme available • Ongoing training of workers					
29.		Other					

RESPONSIBILITY	SIGNATURE	DATE
H&S AGENT SIGNATURE:		
PC SIGNATURE:		
DESIGNER SIGNATURE:		
CLIENT SIGNATURE:		

KI

Initials: _ CC

ANNEXURE B

CLOSE OUT REQUIREMENTS

The H&S files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project. The following list is an example of what should be included, but is not exhaustive. The OHS Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are met. Documentation would include all records from the start of the project. Daily or monthly plant inspection records are not required unless they are related to an accident. All records to be in electronic format and submitted to the OHS agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.

Health and Safety close out file requirements include:

- a) Client H&S Specification
- b) Principal Contractor's OHS Plan(s)
- c) Organograms
- d) Legal Appointments
- e) List of all employees employed on a permanent or contractual basis over the duration of the contract
- f) Notification to Department of Labour of commencement of work
- g) Letters of Good Standing for the Project
- h) Full files for all Contractors as well as their close out reports
 - List of Contractors
 - All employees employed on a permanent or contractual basis over the duration of the contract
 - Letters of Approval of Contractors
 - Mandatary Agreements
 - Letters of Good Standing
 - Appointments
- i) Incident Records
- j) Non- Conformance records
- k) Agent's Audits
- l) Method Statements
- m) Risk assessments
- n) Safe work procedures
- o) Medical surveillance certificates of fitness. Medical records are to be kept according to the OH&S Act as amended
- p) All drawings for temporary structures (suspended beams/scaffolds etc.)
- q) All operating manuals for any systems that require ongoing maintenance
- r) Copies of test results, policies and procedures for environmental monitoring (silica, noise, dusts etc.)

Defect and Liability Period

The H&S files are to be kept 'live' for the defect and liability period by the Principal Contractor, including those of their Contractors. Any work required during the defect and liability period will require an assessment of the H&S file by the OH&S Agent prior to any work commencing.

A copy drawing records for the as-builts are to be placed on file by the Designers once complete.

ANNEXURE C

NON CONFORMANCES

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Initials: _ CC

HEALTH AND SAFETY SITE INSPECTION NON CONFORMANCE NO		
AGENT:		PROJECT:
Consultant:		Date and time:
Client		Area:
Contractor:		
ASPECTS NOTED:	COMMENTS:	COMPLETION REQUIRED BY (DATE):
	•	
PHOTOGRAPHIC EVIDENCE (if available):		
OTHER:		
The following penalties are to be applied:		
Signature of Designer		
Signature of H&S Officer/Site Agent		
Signature: of H&S Agent		

ANNEXURE D:

CONTRACTORS MONTHLY HEALTH AND SAFETY REPORT

(To be submitted by the end of the first week of each month and be available with each audit)

CONTRACT NUMBER:		PROJECT NAME:	CONTRACT DETAILS:
1	GENERAL ACTIVITIES FOR THE MONTH (detail each area of work)		
2	NUMBER OF WORKERS (permanent and local, contractors)		
3	TRAINING DONE (supplier, no of people, type)		
4	INCIDENTS / ACCIDENT (list number and details, attach reports)		
6	NON-CONFORMANCES		

	(closed out or active)	
7	CONTRACTORS (list, approval status)	
8	AUDITS COMPLETED (internal and external)	
9	CRITICAL ISSUES	

10	GENERAL	

H&S
Officer

Signature

Date:

Site Agent

Signature

Date:

ANNEXURE E

RISK ASSESSMENT FORMAT

ACTIVITY		RA No.		Rev No.	
CONTRACT		DATE WRITTEN		REVIEW DATE	
	WRITTEN BY	REVIEWED BY			APPROVED BY
NAME					
SIGNATURE					

KI.

Initials: _ CC

Severity Criteria

Weight No	Hazard Description	Environment	Safety/Health
16	Catastrophic	Irreversible ecological damage	Multiple fatalities due to injury or occupational disease
8	Major	Reversible ecological damage with potential long term impact	Fatality or number of disabilities/disabling diseases
4	Moderate	Ecological disturbance, can be rehabilitated	Disabling injury or occupational illness
2	Minor	Short-term ecological impact. Requires intervention	Minor injuries or exposure requiring medical attention
1	Insignificant	Low impact, natural rehabilitation	First Aid treatment required

Frequency Criteria

Weight No	Hazard Description	Frequency
1	Rare	Less than once every 2 years
2	Infrequent	Every 1-5 years
3	Frequent	Multiple times per year
4	Often	Monthly
5	Consistent	Weekly/Daily

Exposure Criteria

Weight No	Hazard Description	Environmental Exposure	Safety/Health Exposure
1	Minimal	Incident site	A few of the workforce minimal time
2	Restricted	Localised	A few of the workforce, some of the time/some of the workforce minimal time
3	Local	Construction Site Wide	Some of the workforce, some of the time
4	Widespread	Immediate neighbours	Most of the workforce, some of the time/some of the workforce most of the time
5	Extensive	Community exposure	Most of the workforce, most of the time

ANNEXURE F:

TYPICAL BILL OF QUANTITIES FOR OCCUPATIONAL HEALTH AND SAFETY

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
C.01	Preparation of the Contractor's site specific Health and Safety Plan	lump sum			
C.02	Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	lump sum			
C.03	Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Month			
C.04	Provision of Personal Protective Equipment (PPE)				
	(a) Reflective vests	No			
	(b) Hard hats	No			

	(c) Protective foot wear	No			
	(d) Earplugs	No			
	(e) Dust masks	No			
	(f) Gloves				
	(h) Ear Defenders SABS approved	No			
C.05	Provision of a full time Construction Health and Safety Officer	Month			
C.06	Cost of medical certificates and medical surveillance				
	(a) Initial (baseline) medical examinations	prime cost (PC) sum			
	(b) Periodic and exit examinations	prime cost (PC) sum			

	(c) Contractor's charges to allow for handling costs and profit in respect of sub items 13/X.06 (a) and (b)	%			
C.07	Induction training	No			
C.08	Provision of First Aid Boxes to GSR requirements	No			
C.09	Noise monitoring				
	(a) Establishment of noise zones (plant)	No			
	(b) Audiograms (personnel)	No			
C.10	Submission of a Health and Safety File	lump sum			

ANNEXURE G

MISA

HEALTH AND SAFETY (H&S) PRE-CONSTRUCTION REPORT

The successful Bidder will be required to submit a pre-construction H&S plan for approval as part of the contractual submissions.

The following requirements were set in the tender documentation and have been utilized to assess the completeness of the documentation presented. These requirements fulfil the requirements of the Client in terms of the Construction Regulations, Regulation 5(1)(h). They are to be read in addition to the Act and Regulations but are not a substitute for them.

The documentation submitted will be used to assess the competence of the successful Bidder, as required in the CRs, therefore the information submitted needs to be complete.

The following scores have been used to determine compliance with the pre-tender requirements:

Scoring as follows:

Not supplied or not adequate	0
Supplied and complete	1

If the Bidder has not completed any projects then Items 4 and 5 need not be supplied. A letter to this effect must be attached.

The successful Bidder will be required to achieve a minimum of 15 out of a total of 17 for their submission to be considered adequate to allow construction works to proceed on site.

Legal or Specification Reference	Pre-Tender Requirement H&S	Bidders Response	Max Score	Actual Score
Construction Regulations (CRs) 7(1)	1. A project specific H&S Plan in line with this project specification which will support the CRs, therefore the information submitted needs to be complete and as close as possible to the final product. See check sheet		1	
CRs 5(1)(g)	2. Adequate pricing for H&S is also required, and the appropriate section in the BoQ is to be completed. Failure to do so could result in the Tender being regarded as non-responsive.		1	
CRs 5(1)(h)	3. A declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2014,		1	
	4. At least one copy of minutes of previous Occupational Health and Safety Committee meetings,		1	
	5. Incident Investigation Reports for other projects of a similar nature undertaken by the Bidder		1	

Legal or Specification Reference	Pre-Tender Requirement H&S	Bidders Response	Max Score	Actual Score
CRs 9(1)(b)	6. Detailed technical method statements for approval by the ER and for approval by the H&S Agent: a. Site establishment, b. Clearing and grubbing, c. Construction of offices and accommodation, and d. Proposed site layouts		1 1 1 1	
CRs 9(1)	7. Appropriate risk assessments: a. Site establishment, b. Clearing and grubbing, c. Construction of offices and accommodation, and d. Proposed site layout		1 1 1 1	
CR 9(1)	8. Appropriate safe work procedures a. Site establishment, b. Clearing and grubbing, c. Construction of offices and accommodation, and d. Proposed site layouts		1 1 1 1	
	FINAL SCORE		17	

ANNEXURE H

TYPICAL ITEMS TO BE COVERED IN THE OHS PLAN

OHS Act/regulation	Specification Section	Description	Check Box	
			Yes	No
8(1)	6.1.4	Construction supervisor		
8(6)	6.1.5	Construction Health and Safety Officer		
	7.1	Health Risks and Medical Surveillance		
NIHLR	7.2	Noise Risks		
	7.3	Emergency Procedures		
GSR 3	7.4	First Aiders and First Aid Equipment		
CR 27	7.5	Fires and Emergency Management		
GAR 8	7.6	Incident Management and Compensation Claims		
GSR 2	7.7	Personal Protective Equipment (PPE) and clothing		
GSR 2B	7.8	Occupational Health and Safety Signage		
CR 7 (5)(6)	7.9	Induction of Employees and Visitors, General H&S Training		
CR 23	7.10	Management of plant and equipment		
CR13	7.11	Excavations		
CR 10	7.12	Working at Heights		
CR 8	7.12	Fall protection plan		
CR 22	7.13	Cranes and lifting equipment		
CR 12	7.15	Temporary works		

CR5(1)(0)	7.18	Auditing		
DMR/GMR	7.19	Mechanical installations		
OHS 8(2)(j)	7.20	Communication on Site		
CR 30	7.21	Care of Workers on Site (Welfare)		
	Additional requirements			
	6.1.3	Declaration of competency		
Cr 9 (1)		Method statements (SWPs)		
		a) Site Establishment		
CR5(1)(g)		Pricing for OHS		
		TOTAL SCORE		
		TOTAL PERCENTAGE		

Failure to adequately cover the above and other critical project specific items in the OHS Plan will result in the non-approval of the plan.

ANNEXURE I

AGREEMENT IN TERMS SECTION 37.2 OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993 (ACT NO. 85 OF 1993)

THIS AGREEMENT is made at _____ on this the _____ day of _____ in the year _____ between MISA (*hereinafter called "the Client"*) of the one part, herein represented by _____ in his capacity as _____ and delegate of the Client in terms of the Client's standard powers of delegation.

and

(*hereinafter called "the Mandatary"*) of the other part, herein represented by

_____ in his capacity as _____

and being duly authorised by virtue of a resolution appended hereto as Annexure A.

WHEREAS the Client is desirous that certain works be constructed, viz **CONTRACT NO.** _____, and has accepted a tender by the Mandatary for the construction, completion & maintenance of such works and whereas the Client and the Mandatary have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatary with the provisions of the Occupational Health and Safety Act 1993 (Act 85 of 1993 as updated),

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1 The Mandatary shall execute the work in accordance with the contract documents pertaining to this contract,
- 2 This Agreement shall hold good from its commencement date, which shall be the date determined in terms of the Form of Offer and Acceptance, or other date decided upon, in the Contract Data, to either,
 - a) The date of the final certificate issued or as contained in this Volume _____ of the contract documents pertaining to this Contract, or

b) The date of termination of the Contract,

3 The Mandatary declares himself to be conversant with the following:

a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993 as updated), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act.

- i. Section 8: General duties of clients to their employees,
- ii. Section 9: General duties of clients and self-employed persons to persons other than employees,
- iii. Section 10: General duties of manufacturers and others regarding articles and substances for use at work,
- iv. Section 37: Acts or omissions by employees or Mandatories, and
- v. Sub-section 37(2) relating to the purpose and meaning of this Agreement.

b) The Contractor shall ensure that he familiarises himself with the requirements of the Clients health and safety specification developed for the project, and that he, his employees and any other Contractors employed during the project comply with them. The Contractor shall ensure that all health and safety documentation required as part of the health and safety plan is maintained for the duration of the project.

4 In addition to the requirements of conditions of contract (as amended by the Contract Data of the contract documents pertaining to this Contract), the Mandatary agrees to execute all the works forming part of this Contract and to operate and utilize all machinery, plant and equipment in accordance with The Act.

5 The Mandatary is responsible for the compliance with the Act by all his Contractors, whether or not selected and/or approved by the Client.

6. The Mandatary warrants that all his own and his Contractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act 1993 as amended, which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Client upon signature of the agreement.

7. The Mandatary undertakes to ensure that he and/or subcontractors and/or their respective clients will at all times comply with the following conditions:

- a) The Mandatary shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatary shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Client. If the Mandatary obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Client.

- b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatary to the Department of Labour as well as to the Client. The Client must further be provided with copies of all written documentation relating to any incident.
- c) The Client hereby obtains an interest in the issue of any formal enquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatary and/or his employees and/or his Contractors.
- d) The Mandatary shall conduct such risk assessments, method statements and safe work practices as may be necessary during the course of the contract and shall ensure that all staff are informed of these. Proof of this shall be placed in the project Health and Safety file.
- e) Adherence to the Contractor's Health and Safety plan must be enforced including the application of penalties for non-conformance as set out in the Client's Health and Safety Specification.

In witness thereof the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

SIGNED FOR AND ON BEHALF OF THE CLIENT:- _____

WITNESS SIGNED:- 1. _____ 2. _____

NAME (IN CAPITALS) 1. _____ **2.** _____

SIGNED FOR AND ON BEHALF OF THE MANDATARY:- _____

WITNESS SIGNED:- 1. _____ 2. _____

NAME (IN CAPITALS) 1. _____ **2.** _____

C3.7 ENVIRONMENTAL SPECIFICATION (PZ)

EMPLOYER'S ENVIRONMENTAL MANAGEMENT SPECIFICATION FOR ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION PROJECTS

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**PZ EMPLOYER'S ENVIRONMENTAL MANAGEMENT SPECIFICATION FOR
ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION PROJECTS**

PZ1

INTRODUCTION

PZ1.1 SCOPE

This specification is additional to the South African Bureau of Standards Standardised Specification for Civil Engineering Contracts and must be read in conjunction with the said specification.

This specification covers the principles, responsibilities and requirements generally applicable to implement effective environmental management during the execution of any construction contract. The aim of this specification is to ensure that construction activities are conducted in an environmentally and socially responsible manner.

PZ1.2 INTERPRETATIONS

This specification contains clauses that are generally applicable to the implementation of effective environmental management on construction contracts. Interpretations of, and variations to, this specification are set out in the project specification.

PZ1.2.1 Supporting specifications:

Reference is made to the SABS 1200 standards which are to be read in conjunction with this specification. All aspects of these SABS requirements which are relevant to environmental management during construction contracts will apply.

PZ1.2.2 Principles

The following principles should be considered at all times during construction phase activities:

- The Environment is considered to be composed of both biophysical and social components.
- Construction is a disruptive activity and all due consideration must be given to the environment, particularly the social environment, during the execution of a project to minimise the impact on affected parties.
- Minimisation of areas disturbed by construction activities will minimise many of the construction related environmental impacts of the project and reduce rehabilitation requirements and costs.
- As minimum requirements, all relevant standards relating to international, national, provincial and local legislation, as applicable, shall be adhered to. This includes requirements relating to waste emissions (e.g. hazardous, airborne, liquid and solid),

waste disposal practices, noise regulations, road traffic ordinance etc.

- All effort should be made to minimise, reclaim or recycle 'waste' material.

PZ1.3 DEFINITIONS

For the purpose of this specification, the definitions given in SABS 1200 shall apply.

Additional definitions which shall apply to this specification are as follows:

Environmental Control Officer: Either an Employer's staff member or an Environmental Consultant assigned to the project on a part or full-time basis. The Environmental Control Officer will be part of the Project staff and will advise the Engineer on all environmental matters relating to the works, in terms of this specification and the project specification, if applicable.

Environmental Officer: Either an Employer's employee (e.g. Quality Assurance Inspector) or Consultant designated to monitor the implementation and compliance with the environmental specifications and environmental management plan on a daily basis.

Cleared surface: "surface vegetation" as referred to in SABS 1200 C 2.3 will be deemed to be any woody or herbaceous vegetation but exclude grasses, sedges, rushes and reeds. Clearing and grubbing shall for the purpose of this specification mean the removal of all woody and herbaceous vegetation including stumps, but excluding grass and groundcover vegetation.

Engineer: Is to read Engineer or Supervisor (in the case of the NEC contract), whichever is applicable to the Contract.

Interested and Affected Parties (IAP): All persons who may be affected by the project either directly or indirectly, or who have an interest or stake in the area to be affected by the project. IAPs include landowners, tribal or local authorities, public interest groups etc.

Liquid Waste Stream: Any reagent solutions, fuels, oils, greases, contaminated run-off, sewerage and wash water, etc.

Open Trench: Open trench will, for the purpose of this specification, be deemed to include: clearing and grubbing, stripping of topsoil, trenching, placing of bedding, pipe-laying, placing of selected fill, backfilling to ground level, removing excess material, construction of cross berms to channel water (if required), and replacement of topsoil to final finished level (refer to Figure 1: Appendix A).

Progressive Reinstatement: Reinstatement of disturbed areas to topsoil profile on an ongoing basis, immediately after selected construction activities (e.g. backfilling of a trench) are completed. This allows for passive rehabilitation (i.e. natural recolonisation by vegetation) to commence. See also 'Open Trench' and 'Rehabilitation'.

Project Manager: The person responsible for co-ordinating and integrating activities across multiple, functional lines.

Rehabilitation: Rehabilitation is defined as the return of a disturbed area to a state which approximates the state (where possible) which it was before disruption. Rehabilitation for the purposes of this specification is aimed at post-reinstatement revegetation of a disturbed area and the ensurance of a stable land surface. Revegetation should aim to accelerate the natural succession processes so that the plant community develops in the desired way, i.e. promote rapid vegetation establishment.

Riparian vegetation: Vegetation occurring on the banks of a river or stream (i.e. vegetation fringing a water body). In this specification, riparian vegetation in terms of removal, storage and replacement (see PZ3 17.1 and PZ3 17.2), is only applied to sedge, grass, ground-cover, reed, bulrush, or herbaceous component of riparian vegetation and excludes the woody component.

Sedges: Grass-like plants growing in wetland/ marshy areas or adjacent to water.

Subsoil: Subsoil is the soil horizons between the topsoil horizon and the underlying parent rock. Subsoil often has more clay-like material than the topsoil. Subsoil is of less value to plants, in terms of nutrient (food) and oxygen supply, than topsoil. When subsoil is exposed it tends to erode fairly easily.

Timeous: At least 5 working days prior to an activity.

Topsoil: This is defined as the A horizon of the soil profile. Topsoil is the upper layer of soil from which plants obtain their nutrients for growth. It is often darker in colour, due to the organic (humic) fraction. Topsoil is deemed for the purposes of this specification as the layer of soil from the surface to the specified depth required for excavation (see PZ3 5.3, relevant SABS 1200 clause and project specification). Where topsoil is referred to, it is deemed to be both the soil and grass / ground cover fraction. (see 'Cleared Surface')

Veld: This is defined for the purpose of this specification as unimproved natural vegetation areas (e.g. grasslands).

Water body: Any open body of water including streams, dams, rivers, lakes, and the sea.

Wetland: A seasonally, temporally, or permanently wet area which also may exhibit a specific vegetation community. It is often marshy in character.

Wetland Vegetation: Vegetation which is indicative of a wetland environment - for example, sedges, rushes, reeds, hydrophilic grasses and ground-covers, but for the purposes of this specification excludes woody species.

Xeriscaping: Landscaping with vegetation which has a low water usage. The objective is to conserve as much water as possible, whilst still beautifying an area (i.e. conservation and aesthetics). Concept embraces utilising indigenous as opposed to exotic plants.

PZ1.4 ABBREVIATIONS

DWS : Department of Water and Sanitation

ECO : Environmental Control Officer

EMP : Environmental Management Plan

EMPR : Environmental Management Programme Report

EO : Environmental Officer

IAPs : Interested and Affected Parties

IEM : Integrated Environmental Management

MSDS : Material Safety Data Sheet

NEC : New Engineer Contract or The Engineering and Construction Contract

O : Indicates the project specification must be referred to, to clarify the clause.

PZ1.5 DRAWINGS

Drawings referred to in this specification are included in C3.2.4 Drawings and Section C4 Site Information.

PZ1.6 FORMS

Forms referred to in this specification are included in Part T2 or attached to this environmental specification.

PZ1.7 CONDITIONS OF CONTRACT

PZ1.7.1 Duties and Powers of the Project Manager

The Project Manager is ultimately responsible for ensuring compliance with the environmental specification and upholding the Employer's Environmental Policy on a project.

The Project Manager:

- arranges information meetings for or consults with IAPs about the impending construction activities,
- may on the recommendation of the Engineer and /or Environmental Officer order the Contractor to suspend any or all works on site if the Contractor or his Subcontractor/supplier fails to comply with the said specifications,
- maintains a register of complaints and queries by members of the public at the site office as per attached pro-forma. This register is forwarded to the Environmental Control Officer on a monthly basis.

PZ1.7.2 Duties and Powers of the Engineer / Supervisor (NEC)

The Engineer or Supervisor is responsible for:

- enforcing the environmental specification on site,
- monitoring compliance with the requirements of the specification,
- assessing the Contractor's environmental performance in consultation with the Environmental Officer from which a brief monthly statement of environmental performance is drawn up for record purposes,

- documenting, in conjunction with the Contractor, the state of the site prior to construction activities commencing. This documentation will be in the form of photographs or video record.

PZ1.7.3 Duties and Powers of the Environmental Control Officer

The Environmental Control Officer:

- briefs the Contractor about the requirements of the Environmental Specification and/ or Environmental Management Plan, as applicable,
- advises the Project Manager and Engineer/ Supervisor about the interpretation, implementation and enforcement of the Environmental Specification and other related environmental matters,
- attends site meetings, as necessary,
- monitors the Constructor's compliance with this specification and the project environmental specification as applicable,
- undertakes periodic audits of the effectiveness of the environmental specifications on the site,
- communicates environmental policy issues to the Project Manager,
- provides technical advice relating to environmental issues to the Engineer/ Supervisor and Project Manager,
- reports on the performance of the project, in terms of environmental compliance.

PZ1.7.4 Duties and Powers of the Environmental Officer

The Environmental Officer:

- attends site meetings,
- monitors the site for compliance with the Environmental Specification and EMP,
- reports on the performance of the project in terms of environmental compliance to the ECO and Project Manager as per the pro-forma attached,
- liaises with the ECO on matters of policy and those requiring clarity and advice.

PZ1.7.5 Extent of the Contractor's Obligations

The Contractor is required to:

- provide information on previous environmental management experience and company environmental policy,
- supply method statements for all activities requiring special attention as specified and/or requested by the Project Manager, Environmental (Control) Officer and/or Engineer during the duration of the Contract,
- be conversant with the requirements of this environmental specification and the project specification as applicable,

- brief his staff about the requirements of the environmental specification,
- comply with requirements of the Environmental (Control) Officer in terms of this specification and the project specification, as applicable, within the time period specified,
- ensure any sub-Contractors/ suppliers who are utilised within the context of the contract comply with the environmental requirements of the Employer, in terms of the specifications. The Contractor will be held responsible for non-compliance on their behalf,
- bear the cost of any delays, with no extension of time granted, should he or his Sub-Contractors/ Suppliers contravene the said specifications such that the Engineer orders a suspension of work. The suspension will be enforced until such time as the offending party(ies), procedure, or equipment is corrected,
- bear the costs of any damages/ compensation resulting from non-adherence to the said specifications or written site instructions,
- comply with all applicable legislation in terms of 7.6 below,
- ensure that he informs the engineer timeously of any foreseeable activities which will require input from the Environmental (Control) Officer.

The Contractor will conduct all activities in a manner that minimises disturbance to directly affected residents and the public in general, and foreseeable impacts on the environment.

PZ1.7.6 Compliance with Applicable Laws

The supreme law of the land is “The Constitution of the Republic of South Africa”, which states:

“Every person shall have the right to an environment which is not detrimental to his or her health or wellbeing”

Laws applicable to protection of the environment in terms of Environmental Management (and relating to construction activities) include but are not restricted to:

Animals Protection Act, Act No 71 of 1962

Atmospheric Pollution Prevention Act, No 45 of 1965

Conservation of Agricultural Resources Act, No 43 of 1983

Environmental Conservation Act, No 73 of 1989

Environmental Planning Act, Act No 88 of 1967

Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, No 36 of 1947

Forest Act, No 122 of 1984

Forest and Veld Conservation Act, Act No 13 of 1941

Hazardous Substances Act, No 15 of 1973

Lake Areas Development Act No 34 of 1975

Land Survey Act, No 9 of 1921

Minerals Act, No 50 of 1991

Mountain Catchment Act, No 63 of 1970

National Monuments Act, No 28 of 1969

National Parks Act, No 57 of 1976

National Resources Development Act, Act no 51 of 1947

Occupational Health and Safety Act, No 85 of 1993

Provincial and Local Government Ordinances and Bylaws

Soil Conservation Act, Act No 76 of 1969

Water Act, No 54 of 1956

Water Services Act No 108 of 1997

and all regulations framed thereunder and amendments there to.

PZ1.7.7 Compliance with the Environmental Specification

The Contractor is deemed not to have complied with the Environmental Specification if:

- within the boundaries of the site, site extensions and haul/ access roads there is evidence of contravention of clauses,
- if environmental damage ensues due to negligence,
- the Contractor fails to comply with corrective or other instructions issued by the Project Manager or Engineer within a specified time,
- the Contractor fails to respond adequately to complaints from the public.

Application of a penalty clause will apply for incidents of non-compliance. The penalty imposed will be per incident. Unless stated otherwise in the project specification, the penalties imposed per incident or violation will be:

Failure to demarcate working servitudes	R1000
Working outside of the demarcated servitude	R2000
Failure to strip topsoil with intact vegetation	R1000
Failure to stockpile topsoil correctly	R500
Failure to stockpile materials in designated areas	R500
Pollution of water bodies (including increased suspended solid loads)	R1000
Failure to control stormwater runoff	R1000
Failure to provide adequate sanitation	R500

Unauthorised removal of woody vegetation	R2000
Failure to erect temporary fences	R500
Failure to provide adequate waste disposal facilities and services	R500
Failure to reinstate disturbed areas within the specified time-frame	R3000
Failure to rehabilitate disturbed areas within the specified time-frame	R3000
Any other contravention of the project specific specification	R400
Any other contravention of the particular (general) environmental specification	R300

PZ2 **SITE ESTABLISHMENT AND HOUSEKEEPING**

PZ2.1 LAYOUT

The Contractor will take into account any of the limitations identified in the project specification with regard to establishment of site, in particular the location of access routes, and establishment layout.

Notwithstanding the provision of a project specification, the Contractor will provide the Project Manager and Environmental Control Officer with a layout design of the site indicating the position of all of the following, as applicable: offices, ablution facilities, storage areas, workshops, laboratories, batching plant, particulate matter stockpile area (i.e. soil/ granular chemicals/ cement fines etc.), waste disposal facilities, hazardous substances storage area, access routes, etc. This layout plan is to be submitted prior to site establishment for acceptance. Any changes to this plan require review by the Project Manager in conjunction with the ECO.

The Contractor will take into account prevailing wind directions when designing the site layout to minimise impacts due to dust, unpleasant odours etc.

The Contractor will take into account the positions of residences when designing the site layout in order to minimise noise impacts on the residents.

Site security lighting is to be positioned such that the direct beam is focused away from residential properties and does not pose a nuisance or danger to road users.

No site establishment will be allowed within 100 m of a water body or drainage channel or on a flood plain unless approved by the Environmental (Control) Officer or specified in the project specification.

PZ2.2 SITE CLEARANCE

No trees or shrubs may be removed without the prior permission of the Environmental Officer, unless in keeping with the final site reinstatement and rehabilitation plan.

Topsoil is to be stripped from all areas where permanent or temporary structures and access roads are to be constructed. Topsoil conservation is to be in terms of clause PZ3 5.3 of this document.

PZ2.3 SERVICES

PZ2.3.1 Sanitation

Potable chemical toilets are to be utilised at site unless a connection to sewer is possible or a proper septic tank system is installed. In the case of the septic tank, the installation will require the relevant approvals from the local authority and will require removal upon completion of the contract, unless otherwise directed.

Sanitation facilities will be located within 100 m from any point of work, but not closer than 50 m to a water body.

PZ2.3.2 Solid Waste Facilities

Facilities for solid waste collection are to be provided. These are to be at least a 200 l drum and clearly identified as the point for waste disposal.

Waste is to be separated into paper, glass and metal with separate collection points for each. The Contractor will ensure that the appropriate recycling Contractors receive this waste.

The Contractor is to institute a daily litter collection programme. The collected waste is to be disposed of regularly and proportionately to its generation at a site designated for waste disposal.

No burning will be permitted on any site unless by approved incineration methods and in a low risk fire area. In the case of incineration, ash is to be co-disposed with spoil in a designated spoil dump.

No burying of waste will be allowed on any site.

PZ2.3.3 Cooking and Heating Facilities

No open fires will be allowed anywhere on site.

Contained fires (i.e. in a fire drum) will be allowed for heating and cooking only in designated areas, in other cases cooking is restricted to gas or electrical equipment.

PZ2.4 FUELS, HAZARDOUS SUBSTANCES AND OTHER LIQUID POLLUTANTS

PZ2.4.1 Storage and handling

All potentially hazardous raw and waste materials are to be handled by trained staff and stored on site in accordance with manufacturer's instructions and relevant legal requirements. The product MSDS is to be lodged with the Engineer.

Storage and handling areas for fuels, lubricants, chemicals and other hazardous substances are to be paved with concrete to prevent accidental contamination of the soil. Alternatively, an impermeable liner may be placed beneath above-ground storage tanks. The integrity of the liner is to remain intact for the duration of the contract, until removal.

Open storage vessels, for example shutter lubricant drums, are to be stored under cover to prevent 'splash' contamination.

All storage areas are to be bunded (with at least sandbags) and have a peripheral collection drain, with oil interceptors (if required).

The bunded area is to be sufficiently large to contain a spillage equivalent to the volume of one container of the substances stored.

All products to be dispensed from 200 litre drums will be done so with appropriate equipment, and not dispensed by tipping of the drum.

Daily checks are to be conducted on the dispensing mechanism of above-ground storage tanks to ensure the timeous identification of faults.

Collection containers (e.g. drip trays) are to be placed under all dispensing mechanisms of hydrocarbon or hazardous liquid substances to ensure contamination from leaks and dispensing is contained.

The dispensing mechanism of diesel and petrol storage tanks is to be stored in a container when not in use.

P22.4.2 Control of pollutants

A drainage diversion system is to be installed to divert runoff from areas of potential pollution, e.g. batching area, vehicle maintenance area, workshops, chemical and fuel stores, etc. if applicable.

Contaminated runoff and waste water is to be directed into a collection system (e.g. sump, attenuation dam, PVC porta-ponds etc.) for treatment or collection and disposal. The final collection point (e.g. sump) is to be PVC lined.

Collected contaminated runoff/ wastewater is to be pumped out of the final collection point and disposed of at an appropriate landfill site. Sump liners are to be treated in the same manner.

The treated waste water, effluent and contaminated runoff may require analysis prior to discharge as detailed in the project specification or instructed by the Environmental Officer.

Details regarding proposed methods for treatment of pollutants are to be submitted to the Environmental (Control) Officer for acceptance upon award of the Contract.

Any spillages, irrespective of their size, are to be contained and cleaned up immediately. The Pollution Control section may provide technical assistance for clean-up, if required. No spills may be hosed down into a stormwater drain or sewer.

Use of specialised clean-up techniques and/ or products may be required depending on the spill. This will be instructed by the Environmental Control Officer. These will be to the Contractor's cost.

PZ2.5 GENERAL

Site staff are not permitted to use any open water body or other natural water source (e.g. springs) for purposes of bathing, or the washing of clothes, machinery or vehicles. Nor draw water from a spring without the permission of the community utilising that spring.

PZ2.6 MEASUREMENT AND PAYMENT

Measurement and payment for compliance with clauses PZ2.1 to 5 of the specification are deemed to be fully included in the Contractor's rates for fixed and time related Preliminary and General Items scheduled under SABS 1200 A or AA.

PZ3

CONSTRUCTION

PZ3.1 CONSTRUCTION METHODS AND PROGRAMME

PZ3.1.1 Construction Method

The Contractor will provide method statements for construction activities (14 working days prior to the activity commencing) relating to the following environments and those listed in the project environmental specification, unless methods have been prescribed in this or the project environmental specification:

- rivers, streams, or any other open water body,
- wetlands,
- access roads (see PZ3.13 below),
- steep slopes (i.e. steeper than 1:4) or less if friable material is present,
- indigenous bush/ forest,

- close proximity (i.e. 50 m or less) to a residential dwelling,
- drilling and/or blasting of rock.

If a construction method employed by the Contractor is not environmentally acceptable to the Employer, the Contractor may be instructed to cease the utilisation of that method in favour of a more environmentally acceptable one, proposed either by himself or the Employer.

PZ3.1.2 Construction Programme

The Contractor will programme construction so as to minimise the impact on the environment and provide this programme to the Environmental Control Officer for perusal and acceptance at the onset of the contract period. The Environmental Control Officer is to be made aware of any amendments to the construction programme or alterations to the scope of work in order that their impacts on the environment can be assessed.

The Contractor (through the Project Manager) will ensure that all affected landowners/ authorities are advised of the proposed programme at the beginning of the contract period.

PZ3.2 AREAS OCCUPIED / DEMARCATION OF SITE

Routes for temporary access and haul roads are to be located within the approved demarcated areas and vehicle movement is to be confined to these roads. Movement of vehicles outside the designated working areas is not permitted without authorisation from the Engineer.

All construction activities are restricted to working areas designated on the drawings and/or demarcated and approved by the Engineer. Materials including spoil are stockpiled at designated areas.

Any areas disturbed outside of the demarcated areas or without permission of the Environmental (Control) Officer or Engineer will be subject to reinstatement and rehabilitation (as per PZ4 below) to the Contractor's cost.

In terms of pipeline projects, a general maximum working servitude width of 15 m will apply for machine excavation unless otherwise indicated in the project specification. A maximum width of 6 m will apply for manual excavation. These maximum working servitude widths may vary depending on the sensitivity of the environment, as detailed in the project specification.

In sensitive biophysical environments, for example wetlands, indigenous forest / bush, pristine natural grasslands, and sensitive social environments, as defined in the project specification or by the Environmental Control Officer, the working servitude is reduced as indicated in the project specification.

The working servitude shall contain all construction related activities, including, stockpiling of materials, placing of toilets, vehicle movement areas, etc.

Demarcation of linear projects (executed with machine excavation) and features (e.g. pipelines, access roads, etc.) will be by means of wooden stakes. These stakes will be at least 1 m high, painted white and placed at least every 15 m, on either side of the linear feature, in all areas where works are occurring. Progressive movement of stakes is required as linear projects progress.

In the case of a fenced site, the boundary fences will be denoted as the outermost limit of the site, but internal areas may be demarcated with stakes as above. The site boundaries of non-fenced, but 'contained' projects are to be delineated using stakes or temporary fencing, depending on the hazard which that site poses.

PZ3.3 SUPPLY OF WORKS FACILITIES

No water may be abstracted from water bodies for the purposes of construction, without approval of the Engineer in consultation with the Environmental Control Officer.

PZ3.4 CLEANLINESS

SABS 1200 AD, clause 5.2.4, second sentence, is to read: "No rubbish or debris shall be deposited below the full supply level (FSL)."

PZ3.5 SITE CLEARANCE

PZ3.5.1 Clearance

Spoil sites will require clearing and grubbing in addition to those areas in terms of SABS 1200 C 5.1.

The site shall only be cleared immediately prior to construction activities commencing i.e. at the last practicable stage.

No trees or indigenous shrubs may be removed without the prior permission of the Environmental (Control) Officer, unless in keeping with the final site reinstatement and rehabilitation plan.

PZ3.5.2 Disposal of materials

Material obtained from clearing and grubbing operations shall be disposed of at appropriate municipal disposal facilities. They are not to be disposed of as per Paragraph 1 of Sub-clause 3.1 of SABS 1200 C.

Wood obtained from clearing and grubbing operation remains the property of the landowner/ community and must be stacked at sites designated by relevant person. The Contractor will be required to remove and dispose of any wood from site at a designated site for vegetation disposal, should the landowner/ community not require it.

All tree trunks and branches of diameter greater than 50mm are to be cut into lengths not exceeding 2400mm.

Brush wood (i.e. < 50mm diameter) is to be disposed of, or utilised as specified in the project specification or upon instruction of the Engineer.

PZ3.5.3 Conservation of topsoil

The Contractor is required to strip topsoil (as defined in this specification) together with grass, groundcover and sedges from all areas where permanent or temporary structures are located, construction related activities occur, and access roads are to be constructed, etc. The depth to which topsoil will be stripped shall be 200mm unless stated otherwise in the project specification.

Topsoil is to be handled twice only - once to strip and stockpile, and secondly to replace, level, shape and scarify.

Topsoil is to be replaced along the contour.

Topsoil is to be replaced by direct return (i.e. replaced immediately on the area where construction is complete), rather than stockpiling it for extended periods. This is feasible for progressive construction (e.g. pipelines), but not necessarily so for reservoirs, site establishments, dams, etc.

Topsoil stockpiles are not to exceed 2 m in height.

Topsoil stockpiles are to be maintained in a weed free condition (i.e. no 'broad-leafed' plants regarded as weeds in terms of the Conservation of Agricultural Resources Act No 43 of 1989, or those plants regarded as a 'general nuisance in the area' are to be growing on the stockpiles). The Environmental Control Officer will provide guidance as to which plants are weeds and require removal.

The stockpiles are not to be contaminated with sub-soil, or any other waste material.

Topsoil may not be compacted in any way, nor may any object be placed or stockpiled on it.

Topsoil may not be compacted in any way, nor may any object be placed or stockpiled on it.

Topsoil which is to be stockpiled for periods exceeding 4 months is to be vegetated. In summer a mixture of *Eragrostis tef* (Teff) and *Eragrostis curvula* (Weeping Lovegrass) (ratio 1:2) is to be applied at an application rate of 6 kg/ha, unless otherwise instructed in the project specification.

In winter, a mixture of *Lolium multiflorum* (Annual/Italian Rye grass) and *Eragrostis curvula* (Weeping Lovegrass) (ratio 1:1) is to be applied at an application rate of 6kg/ha (see PZ4 5.3 for sowing times), unless otherwise instructed in the project specification. Fertiliser is to be applied as per PZ4 5.2.

PZ3.5.4 Cutting of trees

Any tree branches which require removal are to be properly pruned and sealant applied to the cut surface, if required.

The Contractor's attention is drawn to Sub-clause 5.2.3.3 of SABS 1200 C with respect to work in indigenous forests.

Any indigenous trees or bush which require removal in terms of the project, and which have not been identified in the project specification or EMP, are to be timeously indicated to the Environmental Officer prior to work affecting them.

PZ3.5.5 Landscape Preservation and Conservation of Flora

Notwithstanding Clause 5.7 of SABS 1200 C, the Contractor will be required to transplant designated plants to alternative locations as specified in the project specification or identified by the Environmental Control Officer, upon the instruction of the Engineer.

Transplanting shall be undertaken by employing the following method:

Removal

- Mark the orientation of the tree/shrub (for example, the north-facing side of the trunk indicated by a small arrow made with indelible ink) trunk. Do not scratch a mark on the surface of the trunk,
- Delineate a circle from the trunk with a radius equivalent to the drip-line of the tree, or as indicated by the Environmental Control Officer on site,
- Excavate the tree with an intact rootball.

Replanting

- A hole 500mm larger in diameter than the anticipated rootball must be prepared in advance of the tree removal in order that the tree can be replanted immediately,
- The tree must be positioned as per its original orientation,
- A planting method known as 'puddling' must be employed. This method involves the addition of soil and water simultaneously to expels air from the planting hole. Place the tree in its new hole, making sure the top surface of the rootball is level with the ground level. Place a hose pipe in the hole and leave it running whilst extra soil is added around the rootball,
- 'Compact' the tree in the hole and attach tree stays for stabilisation.

Compensatory planting of species may be required should transplantation not be feasible, as indicated in the project specification or upon instruction of the Engineer.

PZ3.6 EARTHWORKS

PSZ3.6.1 Backfill material

With reference to SABS 1200 DB sub-clause 3.5, no material stripped or excavated which is classed, in terms of this specification, as topsoil, may be used as backfill in any excavation.

PZ3.6.2 Excavation and backfilling

During excavation 'conservation of topsoil', as specified in PZ3 5.3 above will apply.

Excavated material is to be stockpiled along a pipeline trench within the working servitude, unless otherwise authorised.

Surplus excavated soft, intermediate and hard rock material shall not be disposed of along the pipeline trench as indicated in SABS 1200 DB sub-clause 5.6.3 and 5.6.4, but shall be removed to a spoil site (see PZ3.15 below) designated during the project if applicable, or agreed by the Engineer in conjunction with the Environmental Control Officer and Project Manager.

In certain cases, for example to help stabilise the disturbed area or to reinstate the natural aesthetics of an area, excess excavated intermediate and hard material may be disposed of in a designated manner along a pipeline trench, as indicated by the Environmental Control Officer and Project Manager, or in the project specification. In this case, rock material shall not exceed 250mm in maximum dimension (see PZ4 2.1).

In terms of SABS 1200 DB 5.6.5 and SABS 1200 LB 3.4.2, deficiency of backfill material shall not be made up by excavation within the free haul distance of 0.5km of site, without the prior approval of the Engineer of the source of the material. Where backfill material is deficient, it should ideally be made up by importation from an approved borrow pit (i.e. one which operates within the ambient of an EMPR.) (See also PZ3 14 below).

The Contractor will backfill in accordance with the requirements of progressive reinstatement.

The maximum length of open trench shall be specified in the project specification.

PZ3.7 SAFETY

All works which may pose a hazard to humans and animals are to be adequately protected and appropriate warning signs erected. The Contractor's attention is drawn to SABS 1200 D section 5.1 in this regard.

With reference to SABS 1200 D 5.1.1.3, where blasting is required in terms of the project, the Contractor will ensure that all structures in the vicinity that could be affected by the activity will be inspected and their condition photographically recorded (as necessary), prior to blasting.

Notice of intent to blast is to be provided to landowners timeously.

Speed limits, appropriate to the vehicle driven, are to be observed at all times on access roads. Operators and drivers are to ensure that they limit their potential to endanger humans and animals at all times, by observing strict safety precautions.

PZ3.8 PLANT

PZ3.8.1 Silencing of plant

With reference to SABS 1200 A amend: "built up areas": to read as "all areas within audible distance of residents (albeit urban, peri-urban or rural areas)."

Appropriate directional and intensity settings are to be maintained on all hooters and sirens.

Silencer units on equipment and vehicles are to be maintained in good working order.

Construction activities are to be confined to normal working hours (07h30 - 17h00) Mondays to Saturdays, except for the activities designated to be carried out at night.

PZ3.8.2 Appropriate use of plant

The Contractor will at all times use plant which is appropriate to the task in order to minimise the extent of damage to the environment.

PZ3.9 DEALING WITH WATER ON WORKS

PZ3.9.1 Disinfection of Potable Water Infrastructure

Disinfection water is to be neutralised before release of this water to the environment.

PZ3.9.2 Discharge of water from site

Any water which is discharged from site is to comply with the relevant Water Quality Guidelines implemented by DWS.

Water discharged to the stormwater / sewer system may only be done so with the permission of the relevant local authority.

PZ3.10 CONTROL OF EROSION

Surface erosion protection measures will be required to prevent erosion where slopes are steeper than 1:8 on all soil types.

Erosion protection measures required may include all or some of the below, as specified in the project specification or upon instruction of the Engineer in conjunction with the Environmental (Control) Officer:

- use of groundcover or grass
- construction of cut off berms (earth and/or rockpack) - these are to be angled across the contour and normally would approximate an angle of 30° from the bisector of the contour.
- placing of brush wood on bare surface,
- pegging of wattle trunks or branches along the contour,
- hard landscaping, e.g. use of Loffelstein walls, ground anchors, gabions etc.

Scour chambers are to be fitted with energy dissipaters, or the jet of water directed onto a protected (i.e. grouted stone pitching/ rock pack/ reno mattress) area to dissipate water velocity and to control and prevent erosion.

Storm water drainage measures might be required on site to control runoff and prevent erosion.

PZ3.11 CONTROL OF POLLUTION

No waste in a solid, liquid or gaseous state shall be emitted from or spilled on the site without the approval of the Engineer.

No mixed concrete shall be deposited directly onto the ground prior to placing. A board or other suitable platform is to be provided onto which the mixed concrete can be deposited whilst it awaits placing.

Excess concrete from mixing shall be deposited in a designated area awaiting removal to an approved landfill site.

The Contractor will contain wash water from cement mixing operations, by directing the water into a sump for collection. The material contained in the sump will be removed to an appropriate landfill site.

No concrete rubble shall be present at the site.

Liquid wastes will not be disposed of into storm water drains. They may be disposed of into sewer only if permitted by (local council) legislation.

In the event of pollution of a water body (including sediment loading), the Contractor will provide alternative water supply to users of that water body until the quality of the water body is restored to its previous unpolluted state. For the sake of this clause, pollution is deemed to be a state which is substandard to the normal quality of the water body, but is not necessarily in contravention of the South African Water Quality guideline standards for a prescribed activity.

Any ancillary damages resulting from pollution of a water body will be repaired / remediated at the Contractor's cost.

Where, due to construction requirements, pollution of a water body may potentially occur, the Contractor is to ensure adequate measures (e.g. attenuation/ settlement dams / oil absorbent products) are in place to prevent pollution. A method statement is to be provided to this effect (see PZ3 1).

PZ3.12 CONTROL OF FIRE

The Contractor will ensure he has the necessary firefighting equipment on site in terms of SABS 1200. This will include at least rubber beaters when working in 'veld' areas, and at least one fire extinguisher of the appropriate type when welding activities are undertaken, irrespective of the site.

PZ3.13 USE AND MAINTENANCE OF ACCESS FACILITIES

PZ3.13.1 Responsibility

The Project Manager [not the Contractor (SABS 1200 AD 5.3.1)] will be responsible for obtaining permission for temporary and permanent rights of way over all private property affected by project activities.

The Project Manager will ensure that the Contractor has kept a photographic record of all access facilities and that these are reinstated to a state not worse than upon commencement of the project and to the satisfaction of the landowner (notwithstanding that the project's objective is not to upgrade landowners' access roads).

PZ3.13.2 Fencing

Temporary fencing is to consist of 1.2 m bonnox fencing, or similar, suitably tensioned and supported on 1.8 m fencing standards at 3 m intervals, with all necessary straining posts and stays.

All temporary fencing as indicated by the Engineer is removed on completion of the contract.

PZ3.13.3 New Access Roads

Any construction roads created for execution of the project are to be designed to incorporate adequate drainage and water attenuation structures.

Any access roads which incorporate 'cut and fill' aspects and/or which are to be surfaced during construction are to be authorised by the Environmental Control Officer and Project Manager. Prior to construction of the road, the Contractor will be required to provide a sketch plan of the road layout (referenced to local topographic, natural and man-made structures). Slope steepness, road width, drainage structures and their frequency will need to be documented and accompany the sketch layout.

Construction access roads may not be wider than that necessary (maximum width 4 m) for movement of vehicles in one direction only. Should two-way traffic be required, points people are to control vehicle

movement on the 'single lane' road or passing bays are to be used where specified in the project specification or as identified by the Engineer in conjunction with the Environmental Control Officer, unless otherwise stated in the project specification.

The cut and fill slopes of permanent roads will require grassing, as specified in the project specification or by the Environmental Control Officer, to increase stability and reduce aesthetic impacts. Hard landscaping may be required as per the project specification.

Temporary construction roads will require rehabilitation on completion of construction activities for which they were required. These roads will require rehabilitation as per PZ4 4 or as specified in the project specification. In the case of access 'tracks', only ripping to loosen compaction will be required unless otherwise stated by the Environmental Control Officer or project specification.

Access roads created by the project may only remain unrehabilitated on written request of the landowner, with his acceptance of the state of the road and a clause that the landowner accepts all responsibility for the road and its state.

PZ3.13.4 Maintenance of Existing Access Roads

The Contractor will record, photographically, the state of existing roads which are to be used for access, prior to plant utilising these roads.

During the contract period, the Contractor will ensure that all existing water attenuation and drainage structures are maintained in a state in which they can optimally perform their function.

Upon completion of the construction period, the Contractor will ensure that the access roads are returned to a state not worse than prior to construction commencing.

PZ3.14 BORROW PITS

Where the Contractor is required to import material this shall be from commercial sources or borrow areas specified in the project specification.

The Contractor may source material from alternative borrow pits provided: the site location, method of winning material and reinstatement and rehabilitation are environmentally acceptable and approved by the Environmental Control Officer.

In this regard, the Contractor shall give the Environmental Control Officer in writing, 30 days prior to opening up alternative borrow pits the following information for acceptance:

- quantities of borrow material required,
- method statement for excavation of material including depth and extent of excavation,
- anticipated 'active life' of the borrow area,
- proposal for reinstatement and rehabilitation of borrow area, including final profile,

- written approval from the landowner/ relevant authority that material may be removed from their land subject to their stated conditions, requirements, and royalties, and if the proposal is acceptable to the Environmental Control Officer.

Development and rehabilitation of borrow pit areas are likely to include the following activities (but these must not be regarded as exhaustive):

- Stripping and stockpiling of topsoil as per PZ3 5.3 of this specification,
- Removal (to nominal depth of 500mm) and stockpiling of sub-soil,
- Infill of borrow pit with spoil material,
- Contouring of borrow pit to approximate natural topography and/ or reduce erosion impacts on the site,
- Placement of excavated subsoil over spoil material,
- Placement of stripped topsoil on subsoil,
- Grassing of topsoil in terms of clause PZ4 4 of this specification.

The Contractor is to familiarise himself with the requirements of the Minerals Act No 50 of 1991 in terms of borrow pit development, and the requirements of the EMPR, as applicable.

PZ3.15 SPOIL SITES

Where the Contractor is required to spoil material, spoil sites must be identified which are environmentally acceptable and approved by the ECO, unless spoil site areas have been identified in the project specification, in which case these will be the designated spoil sites.

If no spoil sites have been previously identified together with reinstatement and rehabilitation criteria, the Contractor is to provide the following information to the ECO at least 30 days prior to requiring sites to spoil material:

- the location, description of and access to alternative sites identified in order that they may be assessed,
- the quantity of material to be spoiled,
- the type of material to be spoiled (i.e. blast rock/ excavated rock/ soft shale/ subsoil etc.),
- the proposed method of spoiling,
- the proposed reinstatement and rehabilitation plan including final profile,
- written approval from the landowner/ relevant authority that material may be spoilt on land subject to their stated conditions and requirements and if the proposal is acceptable to the ECO.

Development and rehabilitation of spoil areas are likely to include the following activities (but these must not be regarded as exhaustive):

- Stripping and stockpiling of topsoil as per PZ3 5.3 of this specification,
- Removal (to nominal depth of 500mm) and stockpiling of sub-soil,

- Placement of spoil material,
 - Contouring of spoil site to approximate natural topography and/ or reduce erosion impacts on the site,
 - Placement of excavated subsoil over spoil material,
 - Placement of stripped topsoil on subsoil,
- Grassing of topsoil in terms of clause PZ4 4 of this specification.

PZ3.16 NUISANCE

PZ3.16.1 Dust

At all times the Contractor shall control dust on the site, access roads, borrow pits and spoil dumps with water, chemical soil stabilisers or temporary surfacing as specified in the project specification or upon instruction of the Engineer.

Dust control shall be sufficient so as not to have significant impacts in terms of the biophysical and social environments. These impacts include visual pollution, decreased safety due to reduced visibility, health aspects, and ecological impacts due to dust particle accumulation.

On gravel or earth roads, vehicle speeds may not exceed 30km per hour.

PZ3.16.2 Noise

The operational layout of the construction site is to be designed to control and reduce noise from source (see clause PZ2 1).

Machinery and vehicle silencer units are to be maintained in good working order. Offending machinery and /or vehicles will be banned from use on site until they have been repaired.

Construction activities generating output levels of 85 dB(A) or more (excessively noisy), in residential areas, are to be confined to working hours (08h00 - 17h00) Mondays to Fridays only.

'Normal' or 'noisy' working hours may only be extended with the prior written approval of the Project Manager, who has been notified, at least 7 days in advance, of the impending work requiring extension.

The Project Manager will ensure that the neighbours are timeously forewarned of imminent noisy activities.

Should community complaints be received with regard to noise generation, the Contractor will, at the discretion of the Project Manager and Environmental Control Officer, provide an independent and registered noise monitor to undertake a survey of noise output levels from site, and implement measures to reduce noise to legislated levels.

PZ3.16.3 Visual

All site establishment components, as well as equipment, will be positioned to limit visual intrusion to neighbours (see clause PZ2 1 above).

The type and colour of roofing and cladding materials are to be selected to reduce reflection.

Security lighting (both temporary and permanent) and lighting required for specific works activities must be placed such that it is not a nuisance to residents and the general public.

PZ3.16.4 Interference with neighbours and public

No construction staff may approach site neighbours, for whatever reason, without the knowledge and permission of the Project Manager.

Complaints from neighbours and public with regard to interference from contract staff will be regarded in a serious light, and the offender(s) may be subject to disciplinary action.

PZ3.16.5 Disruption of Services

Disruption of services, e.g. road access, water and electricity, must be kept to a minimum at all times.

Where service disruption is unavoidable, the Contractor is to advise the Project Manager (at least 7 days in advance), who in turn will timeously warn the affected parties.

PUBLIC COMPLAINTS REGISTER

DATE	COMPLAINANTS NAME	DESIGNATION/ AFFILIATION	REASON FOR COMPLAINT	ACTION TAKEN	ACTION BY	ACTION BY DATE	ACHIEVED BY DATE	DATE REFERRED TO NC environmental control officer

MONITORING OF COMPLIANCE WITH ENVIRONMENTAL SPECIFICATIONS

PROJECT NAME:

CONTRACT NUMBER:

PROJECT MANAGER:

ENGINEER'S REPRESENTATIVE / SUPERVISOR:

CONTRACTOR:

CONTRACT PERIOD:

(including start and completion dates):

PERIOD COVERED:

REPORT PREPARED BY:

Signature

ENVIRONMENTAL CONTROL OFFICER REPORT

PROJECT NAME:

CONTRACT N°

DATE OF SITE INSPECTIONS DURING REPORTING PERIOD:

Specification Breach	Spec. No.	Remedial Action Recommended	Due Date	Authority Responsible	Action Taken

PUBLIC COMPLAINTS

Complainant	Designation/ Affiliation	Date of complaint	Reason for Complaint	Action taken and date

GOOD PERFORMANCE REPORT

List any aspects of the Contract in which the Contractor is performing well and beyond that which is required in terms of the specification.

Photographs

Include photographs which illustrate aspects of non-compliance and good performance.

Photograph 1 Caption	Photograph 2 Caption
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PART C4 : SITE INFORMATION

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C4.1	LOCALITY PLAN	82
C4.2	CONDITIONS ON SITE	82

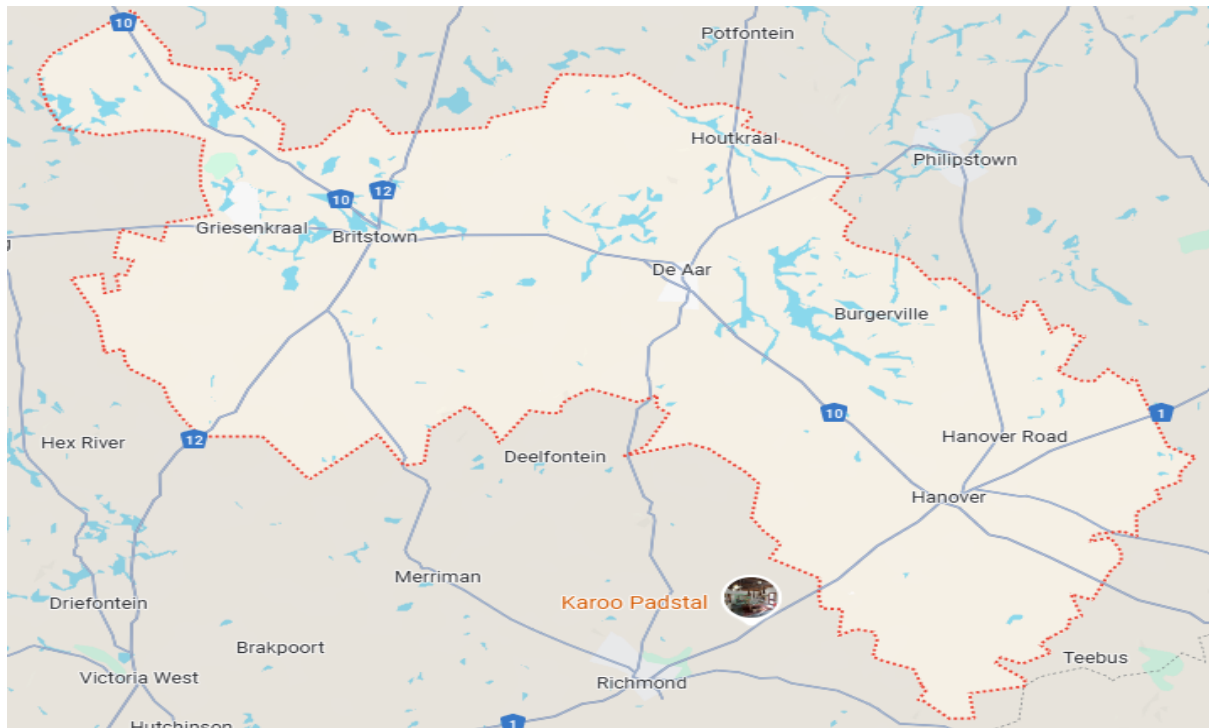
PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN

Hanover is situated in the Northern Cape Province within the Emthanjeni Local Municipality, approximately 60 km from De Aar. The town is accessible from the National Route N1.

The Works will be undertaken at the existing Hanover Wastewater Treatment Works (WWTW), specifically at the oxidation ponds identified for lining. The locality of Hanover and the surrounding area is shown in Figure 1 below.

Figure 1: Locality Plan – Hanover, Northern Cape



C4.2 CONDITIONS ON SITE

The Works will be undertaken within the existing Hanover Wastewater Treatment Works (WWTW), which is an established wastewater treatment facility containing existing wastewater treatment infrastructure, oxidation/maturation ponds, access roads, fencing and associated structures.

The existing pond areas comprise earth embankments and form pond surfaces with existing vegetation, weeds and areas of surface deterioration/erosion. The existing pond banks are not uniformly protected against erosion and may require localised preparation and/or remedial works prior to commencement of the Works.

Existing concrete edge and perimeter elements occur around the pond areas. These elements shall be inspected by the Contractor prior to commencement of the Works and shall be protected from damage. Where such existing elements are required to interface with the proposed Works, the Contractor shall verify their condition, dimensions and levels and execute the required interface in accordance with the drawings and specifications.

The site is accessed via an existing access road serving the WWTW. The Contractor shall make provision for construction access, delivery of materials and movement of construction plant while maintaining the existing access arrangements and avoiding unnecessary disturbance to surrounding areas.

Existing perimeter fencing and security infrastructure are present; however, portions of the fencing have previously been vandalised. The Contractor shall secure the construction area and prevent unauthorised access to the Works.

The Contractor shall take cognisance of the existing wastewater treatment infrastructure and shall ensure that construction activities do not damage existing infrastructure or interfere unnecessarily with municipal operations.

The Contractor shall inspect the site and satisfy himself as to the existing conditions, including the condition and geometry of the pond surfaces and embankments, access conditions, existing concrete elements, vegetation, ground conditions and all other circumstances that may influence the execution of the Works.

The Contractor shall verify all dimensions, levels and quantities relevant to the Works on site prior to construction. Any discrepancies identified between the existing site conditions and the Contract documentation shall be brought to the attention of the Engineer before the affected work is commenced.

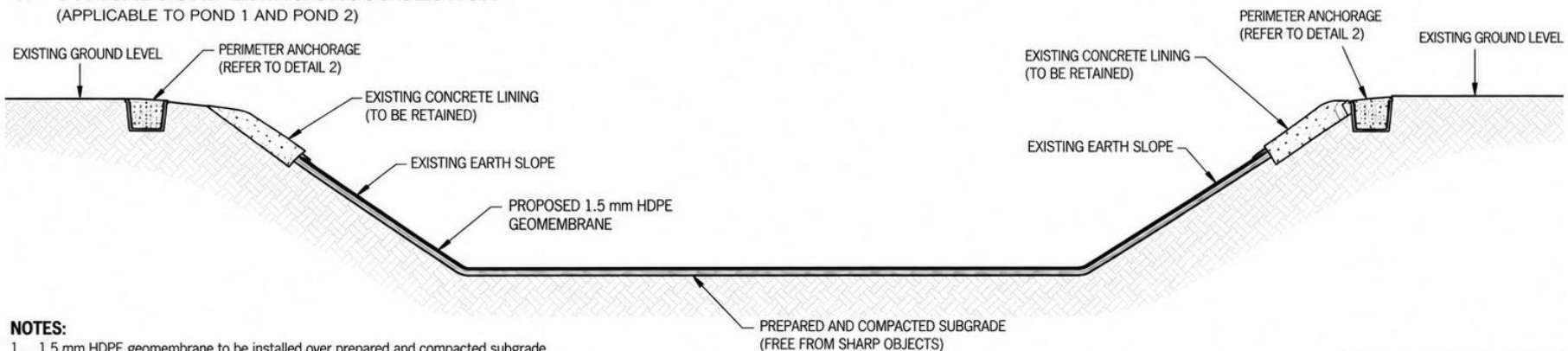
No additional allowance shall be made for conditions that could reasonably have been identified during a proper site inspection, except where otherwise provided for in the Contract.

APPENDIX 1: DRAWINGS



1. TYPICAL POND LINING CROSS-SECTION

(APPLICABLE TO POND 1 AND POND 2)



NOTES:

1. 1.5 mm HDPE geomembrane to be installed over prepared and compacted subgrade.
2. Existing concrete lining to be retained. Concrete strip only along the upper sloping section as shown.
3. Perimeter anchorage to be constructed on the flatter portion of the pond perimeter. Refer to Detail 2.
4. Existing side slopes are approximate. Contractor to verify and adjust to suit site conditions and the Engineer's instructions.

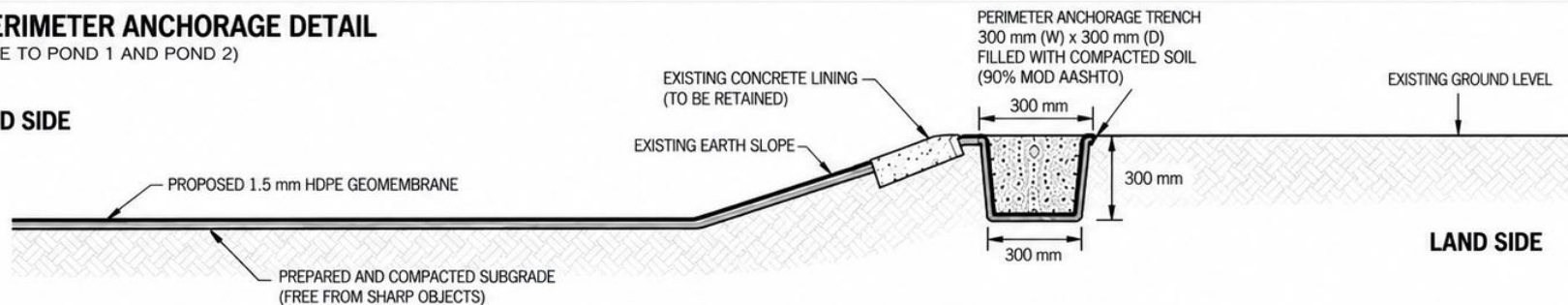
NOTE:

THIS DRAWING IS NOT TO SCALE.

2. HDPE PERIMETER ANCHORAGE DETAIL

(APPLICABLE TO POND 1 AND POND 2)

POND SIDE



NOTES:

1. Perimeter anchorage to start immediately after the existing concrete lining ends on the sloping section and to be constructed on the flatter portion of the pond perimeter.
2. Excavation: 300 mm deep x 300 mm wide around the full perimeter, filled with compacted soil (90% Mod AASHTO).
3. 1.5 mm HDPE geomembrane to be thermally fusion welded to form a continuous seal and anchored as shown.
4. Subgrade to be prepared, levelled and compacted. Free from sharp objects.
5. Detail is indicative. Dimensions may be adjusted to suit site conditions and the Engineer's instructions.

NOTE:

THIS DRAWING IS NOT TO SCALE.



**APPOINTMENT OF A CONTRACTOR FOR THE LINING OF TWO PONDS
IN HANOVER IN THE NORTHERN CAPE – COMPLETION PHASE**

DRAWING 002

TYPICAL POND LINING CROSS-SECTION
AND PERIMETER ANCHORAGE DETAIL