

O. R. TAMBO DISTRICT MUNICIPALITY



CONTRACT NUMBER: ORTDM SCMU 45-24/25

DESCRIPTION: MTHONJENI / eNGXANGXASINI WATER SUPPLY

CONTRACT 2

WATER SERVICES INFRASTRUCTURE GRANT (WSIG)

JUNE 2025

NAME OF BIDDER:

BID AMOUNT:

CSD SUPPLIER NUMBER:

CLOSING DATE & TIME:

06 AUGUST 2025 @12H00

Prepared for:

The Municipal Manager
O. R. Tambo District Municipality
Private Bag X6043
MTHATHA
5099

Tel. No. (047) 501 6400

Prepared by:

The Infrastructure Water and Sanitation Services
O. R. Tambo District Municipality
Private Bag X6043
MTHATHA
5099

Tel. No. (047) 501 6425

PLEASE CHECK

x / √

That you have read all the pages of the bid document.

That you have completed ALL the forms required to be completed
in NON-ERASEABLE INK.

That your arithmetic calculation in the pricing schedule is correct.

That you have attached ALL necessary documentation relating to the
composition of the bidding entity, i.e.

- Company registration documents naming the shareholders and Directors / members of the company, close corporation etc.
- Joint venture agreement if bidding entity is a joint venture.

That the COMPLETE bid document is submitted.

That the FORM OF OFFER is completed in full and signed.

That ALL returnable documents are completed and signed.

Ensure that your bid is submitted by 12H00PM on the closing date of the bid.

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T1.1: TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited from suitably qualified and experienced contractors who are registered with CIDB for the Construction of the following project under the O. R. Tambo District Municipality.

Project Number	Name and Description	CIDB Grading	Bid Closing Date and Time
Contract No.: ORTDM SCMU 45-24/25	MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2	6CE or higher	06 AUGUST 2025 @12H00pm

A compulsory clarification meeting with representatives of the Employer will take place at **10H00** on **10 JUNE 2025** at the **Mhlontlo Local Municipality – Qumbu, before proceeding to site.**

The municipality will not repeat any matters already covered in the compulsory briefing meeting to the tenderers who arrive more than **10 minutes** late to the meeting, nor will it allow such tenderers to complete the attendance register. Any bid received from a tenderer who did not attend the briefing meeting and sign the attendance register will not be considered.

Bid documents Must be downloaded on the O.R. Tambo District Municipality's website (www.ortambodm.gov.za), alternatively on the e-Tender website (www.etenders.gov.za) at no cost.

Bids must be completed in black ink, enclosed in a sealed envelope, and clearly marked with the “**Project number, project name and description**”, deposited in the Open Tender Box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape, not later than 12H00pm on 06 August 2025.

It must be expressly understood that the Municipality does not accept responsibility for ensuring that bid submissions sent by courier or post, or delivered in any other way, are deposited in the Tender Box. It is therefore preferable for the tenderer to ensure that its bid submission is placed in the Tender Box by its own staff or representative(s).

Tender submissions will be opened in public at **12H00pm on 06 August 2025**. The Municipality reserves the right not to accept the lowest priced tender or any tender at all, or to accept the whole or part of any tender.

In terms of the O.R. Tambo District Municipality SCM Policy Section 72 and 73, the Municipality will apply Fair Distribution of Municipal Resources on Capital Infrastructure Projects, Objective criteria on the evaluation and award of bids.

RETURNABLE DOCUMENTS TO BE SUBMITTED WITH THE BID:

- Copy of business registration documents, as issued by CIPC.
- Certified copy of identity documents of directors/ shareholders/ partners / members, as the case maybe.
- Original Valid Tax Clearance Certificate or a Confirmation of Tax Validity with the pin issued by SARS

INVALID OR NON-SUBMISSION OF THE FOLLOWING RETURNABLE DOCUMENTS WILL DISQUALIFY A BID SUBMISSION:

- Complete fully the bid document or to provide the information requested, or to sign the bid at the appropriate spaces provided or next to errors.
- Fill and properly sign the form of offer
- Attach proof of registration with CSD.
- Attach audited annual financial statements of the bidding entity (for projects in excess of R10 million);
- Attach unaudited annual financial statements for close corporations and companies if the public interest score is below 350 in line with the companies act of 2008;
- Attach proof of latest municipal rates and taxes statement **of the bidder and each company director** and each company indicating that rates and taxes are not in arrears for more than 3 months.
- Attach proof of latest municipal water and sanitation charges statement **of the bidder and each company director** indicating that rates and taxes are not in arrears for more than 3 months.
- Attach a confirmation of address from a ward Councilor where the bidder and company directors operate and reside in a peri-urban area where no rates and taxes and service charges are not billed.
- Attach a copy of a valid lease agreement where the bidder does not own the property they are operating from.
- Attach proof or registration with the Construction Industry Development Board (CIDB).
- Attach joint Venture Agreement or Consortium Agreement signed and initialed on each page (if applicable).
- Attach consolidated company registration documents, bank account, SARS Tax pin, CSD (for JV or Consortium)
- **NOTE:** Joint Ventures and Consortiums will only be considered provided they submit consolidated company registration documents and on award will be required to submit a joint venture or consortium bank account and a joint venture or consortium SARS Tax PIN.

EVALUATION OF BIDS IN TERMS OF THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK REGULATIONS, 2022:

Bids will be evaluated in three stages, namely:

- Stage 1 – Compliance with Bid Rules and other Requirements
- Stage 2 – Functionality Assessment / Minimum Conditions of Tender
- Stage 3 – Price and Preference Points

Tenders will be evaluated in terms of the Supply Chain Management policy of the O. R. Tambo District Municipality. The lowest tender will not necessarily be accepted, and the Municipality reserves right to accept the whole or part of any tender or not to consider any tender not suitably endorsed. An **80/20-point system** shall apply where **80 points** is allocated for price and **20 points allocated for specific goals** of contributor as follows:

The specific goals allocated points in terms of this tender	Maximum Number of Points Allocated on 80/20 System
51% Black-owned enterprises	05
100% Women-owned enterprises	05
100% Youth-owned enterprises	05
Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.	05

CONDITIONS OF THE TENDER WITH REGARDS TO SUB-CONTRACTING

It is a Condition of this Tender that the Successful Tenderer must Subcontract a **Minimum of 5% of the value of the Contract Sum** (Excluding CPA and Contingencies) to the Designated groups as indicated in the Tender Document

Tenders may only be submitted on tender documentation issued. No late, faxed, e-mailed, or other form of tender will be accepted.

Technical enquiries: Mr. N. Noto, telephone number 047 501 6425 or email: nkosiyabon@ortambodm.gov.za.

All Supply Chain Management enquiries may be directed to Mr. S. Hopa, telephone number 047 5016449 or Email: sakhiwoh@ortambodm.org.za during office hours: Monday to Friday 08H00-13H00 and 13H30-16H30.

Tenderers must submit copies of all supporting documents necessary to prove conformance with Specific Goal criteria listed above in order to be eligible for Specific Goal points.

B. Mase
Municipal Manager

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T1.2: TENDER DATA

The Standard Conditions of Tender are those contained in Annexure C of the Construction Industry Development Board (CIDB) *Standard for Uniformity in Engineering and Construction Works Contracts (August 2019)* as published in Board Notice 423 of 2019, in Government Gazette No. 42622, on 08 August 2019.

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

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

Clause	Wording / Data
C.1.1	General
C.1.1.1	The Employer is: O. R. Tambo District Municipality Private Bag X6043 Mthatha, 5099 Telephone: 047 501 6425 Email: nkosiyabon@ortambodm.gov.za
C.1.1.2	Tenderers shall declare any perceived, known and potential conflict of interest under Returnable Documents: Declaration of Intent of Persons in Service of State and Declaration of Tenderers Supply Chain Management Practices.
C.1.2	The Tender documents issued by the Employer comprise: Tender T1.1 Tender Notice and Invitation to Tender. T1.2 Tender Data T1.3 Standard Conditions of Tender T2.1 List of Returnable Documents T2.2 Returnable Documents for Tender Evaluation Purposes T2.3 Returnable Documents to be Incorporated into the Contract Contract Part C1: Agreements and Contract data C1.1 Forms of Offer and Acceptance C1.2 Contract Data C1.3 Tenderer's Direct Participation of Targeted Labour C1.4 Specification for SMME Sub-contractor Employment C1.5 Performance Guarantee (Pro forma) C1.6 Adjudication C1.7 Agreement in Terms of the Occupational Health and Safety Act 1993 (Act 85 of 1993)

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Clause	Wording / Data
	Part C2: Pricing Data C2.1 Pricing Instructions C2.2 Bill of Quantities Part C3: Scope of Works C3.1 Description of the Works C3.2 Engineering C3.3 Procurement C3.4 Construction C3.5 Management C3.6 Health and Safety C3.7 Project Specifications Part C4: Site Information Part C5: Tender Drawings Appendices A – B. Documents not issued to Tenderer's, but available from the S.A. Federation of Civil Engineering Contractors, the S.A. Institution of Civil Engineering, the S.A. Bureau of Standards, the Government printers, the Construction Industry Development Board, and the Employer, as applicable: a) GCC2015 "General Conditions of Contract for Construction Works", Third Edition, second print, 2015 published by the South African Institute of Civil Engineering (SAICE) *Tel 011 805 5947) b) S.A. National Standards SANS 1200 Standardised Specifications for Civil Engineering Construction. c) The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (November 2022). d) The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and Construction Regulations (2014) and COVID-19 requirements for Construction Sites.
C1.3	Interpretation The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.
C.1.4	Communication: Attention is drawn to the fact that verbal information, given by the Employer's Agent during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer. Only information issued formally by the Employer's Agent in writing to tenderers will be regarded as amending the Tender Documents. The Employer's Agent is: Name: ROMH Consulting (Pty) Ltd Address: 6 Leadwood House, Cedar Square, Bonza Bay Road

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Clause	Wording / Data
	Beacon Bay East London, 5241 Contact person: Avuyile Mayekiso Telephone: 043 748 0018 Email: avuyilem@romh.co.za
C.2	Tenderer's obligations
C.2.1.1	Only those tenderers who are registered with the Construction Industry Development Board (CIDB) (as "Active" at the time of tender closing) or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tender for an 6CE or Higher class of construction work, are eligible to submit a tender offer. Joint ventures are eligible to submit a tender offer provided that: a) Every member of the joint venture is registered (as "Active") with the CIDB (at the time of tender closing). b) The Lead partner has a contractor grading designation in the CE class of construction work and not lower than one level below the required grading designation in the class of construction works under considerations and possess the required recognition status. c) The combined contractor grading designation calculated in accordance with the Construction Industry Development Board Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for 6CE 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. d) Tenders submitted by joint ventures of two or more firms must be accompanied by the document of formation of the joint venture, authenticated by a notary public or other official deputed to witness sworn statements, in which it defines precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. e) The Tenderer, if a Joint Venture, must submit a signed JV Agreement with the tender specific to the tendered Contract and clearly showing the percentage contribution of each partner to the Joint Venture. The value of work to be undertaken by each partner must be within their CIDB grading limit. Tenderers are eligible to submit a tender offer, provided they have submitted the following tender requirements listed below: a) Tax Tenderers shall be registered and in good standing with the South African Revenue Services (SARS) and must submit/append documentary evidence/proof in the form of a valid Tax Clearance PIN Number and/or a valid Tax Number issued by SARS. Failure to provide a valid Tax Clearance PIN number and/or Tax Number will result in the tender being rejected. Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance PIN Number and/or Tax Number.

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	b) The tenderer is registered on the National Treasury Central Supplier Database (CSD) and provide proof of registration must be in the form of CSD registration number. Also note the following: i. Tenderers who are not registered are not precluded from submitting bids but must be registered prior to Contract Award. ii. In the case of Joint Venture partnerships this requirement will apply individually to each party to the Joint Venture. iii. Tenderers who wish to register as service providers on the CSD can register online at https://secure.csd.gov.za/Account/Register. iv. For further enquiries contact the Supply Chain Management Unit on Tel: 043 707 3700. c) A resolution authorizing a person to sign the bid documents (Full completion and signing of Form 2.2.2 or resolution on company letter head). d) Attendance of Compulsory Site Briefing: Only Tenderers who have attended the compulsory site briefing, signed the attendance register and have Form 2.2.7 Certificate of Attendance at Clarification Meeting signed by the Employer's Agent or his representative, will be eligible to submit a tender offer. e) A valid CIDB registration with a minimum grading of 6CE or Higher. In case of JV, the tenderer has submitted a mandatory JV agreement that includes the agreement and banking details and stipulates the JV lead partner's as well as JV partners CRS numbers are indicated on the form (proof must be attached). f) A signed Form of Offer in the Contract Section C1.1. g) The tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector. h) The Tenderer has not failed to perform on any previous contract and has not been given written notice to this effect. i) Further Compulsory Documents to be submitted by the Tenderer: In addition to all the documents listed from a) to k) above and all other documents requested in Section T2.1 and T2.2 (Returnable Documents), it is further required that copies of the following current and valid company certificates be provided: i. Letter of Good Standing (Form 2.2.5) from Compensation Commissioner or Insurer in terms of Section 80 of the Compensation for Occupational Injuries and Diseases (COID) Act (Act No 130 of 1993). ii. Letter of Good Standing from Department of Labour (UIF). iii. In the case of Joint Ventures, the above shall be provided for each JV Partner. The above documents shall be included in the Supporting Documents file.
C.2.3	<i>Amend the Clause to read:</i> ".....and notify the Employer's Agent of any discrepancy"

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Clause	Wording / Data
C.2.6	Receipt of Addenda's: All tenderers to acknowledge receipt of any Addendums issued and to complete Form 2.3.1: RECORD OF ADDENDA TO TENDER DOCUMENTS in the Returnable Documents. Failure to apply instructions contained in addenda may render a tenderer's offer non-responsive in terms of Condition of Tender clause C.3.8.
C.2.7	For particulars regarding the compulsory clarification meeting (site inspection meeting) refer to the Tender Notice and Invitation to Tender (T1.1) of this document. The onus rests with the tenderer to ensure that the person attending the clarification meeting on his behalf is appropriately qualified to understand all directives and clarifications given at that meeting. Tenderers must sign the attendance register in the name of the tendering entity. Addenda will be issued to, and only tenders will be received from, those entities appearing on the attendance register.
C.2.8	The employer shall respond to clarifications received up to 7 working days before the tender closing time.
C.2.9	The employer does not provide insurance. The contractor is responsible for providing full insurance cover for the contract.
C.2.10	Pricing the Tender Offer Tenderers are requested to state the rates and currencies in Rand. <i>Delete the contents of Clause C.2.10.3 and replace with the following:</i> "This tender is subject to Contract Price Adjustment as set out in the Contract Data. An alternative offer of fixed rates will not be accepted."
C.2.11	Add the following to the Clause: "In the event of a mistake having been made on the price schedule, it shall be crossed out in non-erasable ink and be accompanied by an initial of each signatory to the Tender at each and every price alteration." "If correction fluid has been used on any specific item price, such item will not be considered. Corrections in terms of price may not be made by means of correction fluid such as Tippex or similar product. No correction fluid may be used in a Price Schedule where prices are calculated to arrive at a total amount. If correction fluid has been used, the tender as a whole will be classified non-responsive and not be considered.

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	The Employer and/or Employer's Agent will reject and classify the tender non-responsive if corrections are not made in accordance with the above."
C.2.12	Alternative Tender Offers <i>Delete the contents of Clause C.2.12 and replace with the following:</i> "No alternative offers will be accepted. This includes changes to the 'as-scheduled' allowance for Contingencies."
C.2.13.2	<i>Delete the contents of Clause C.2.13.2 and replace with the following:</i> "Return all returnable documents to the Employer after completing them in their entirety by writing legibly in non-erasable ink. Notwithstanding the format in which the tender documents are issued to Tenderers, no electronic form of tender offers will be accepted. The Original to be submitted shall comprise: • Tender Document, as proof of specifications tendered on and duly completed and signed. • Indexed Lever-Arch file (or files) with all supporting documentation clearly marked with Tenderer's name clearly marked on the spine or cover. • Tender Drawings (Book of Drawings) need NOT be submitted. Failure to comply with these requirements may result in the tender being declared non-responsive. Notwithstanding any statement in any of the Returnable Documents listed in T2 to the effect that supporting documentation must be attached to the associated Returnable Document, the supporting documentation must be placed in the supporting documentation files as stipulated above. The Bill of Quantities must be fully and correctly filled in by hand in black ink. The binding of the original volume of the Tender Document may NOT be dismantled.
C.2.13.3	Number of Duplicate Copies required is none.
C.2.13.4	Add the following to the clause: "Only authorised signatories may sign the original and all copies of the tender offer where required in terms of C.2.13.3 In the case of a ONE-PERSON CONCERN submitting a tender, this shall be clearly stated. In case of a COMPANY submitting a tender, include a copy of a <u>resolution by its board of directors</u> authorising a director or other official of the company to sign the documents on behalf of the company. In the case of a CLOSE CORPORATION submitting a tender, include a copy of a <u>resolution by its members</u> authorising a member or other official of the corporation to sign the documents on each member's behalf.

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Clause	Wording / Data
	In the case of a PARTNERSHIP submitting a tender, <u>all the partners</u> shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case <u>proof of such authorisation</u> shall be included in the Tender. In the case of a JOINT VENTURE/CONSORTIUM submitting a tender, include <u>a resolution</u> of each company of the Joint Venture together with a resolution by its members authorising a member of the Joint Venture to sign the documents on behalf of the Joint Venture. <u>Failure to submit proof of authorisation to sign the tender, shall result in a Tender Offer being regarded as non-responsive.”</u>
C.2.13.5	The employer’s address for delivery of tender offers is given under Clause C.2.15.1 The identification details are: TENDER FOR CONTRACT: MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2
C.2.13.6	A two-envelope system will not be followed.
C.2.13.7	Place and seal the printed and completed tender document in an envelope clearly marked "TENDER" and bearing the Employer’s name, the contract number and description, the tenderer’s authorised representative’s name, the tenderer’s postal address and contact telephone numbers.
C.2.13.9	Electronic, telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
C.2.14	The tenderer is required to provide all the data or information as requested below: • All the documents and schedules as listed under T2.1 & T2.2: Returnable Documents required for tender evaluation purposes. • All the documents and schedules as listed under T2.3: Returnable Documents that will be incorporated in the Contract. Should a Tenderer not provide all the above-mentioned data or information, the Tenderer will be considered non-responsive. <i>Add the following to the clause:</i> “Accept that the Employer shall in the evaluation of tenders take due account of the Tenderer’s past performance in executing similar construction works of comparable magnitude, and the degree to which he possesses the necessary technical, financial, and other resources to enable him to complete the Works successfully within the contract period. Satisfy the Employer as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, by furnishing details in Part T2 – Returnable Documents. Accept that the Employer is restricted in accordance with clause 4. (4) of the Construction Regulations, 2014, to only appoint a contractor who he is satisfied has the necessary competencies and resources to carry out the work safely. Accept that submitting inferior and inadequate

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	information relating to health and safety (as required in clause C2.23) shall be regarded as justifiable and compelling reasons not to award a contract to a Tenderer."
C.2.15.1	The closing date and time for submission of tender offers is on the 06 August 2025 at 12H00pm. The employer's address for the delivery of tender offers and identification details to be shown on each tender offer package are given below. Only tenders submitted to this tender box will be opened and considered. It is the Tenderer's responsibility to make sure it is delivered into the tender box before closing. Location of Tender Box: O. R. Tambo District Municipality Physical Address: O. R. Tambo District Municipality Ground Floor (Next to the Entrance) Myezo Park Nelson Mandela Drive Mthatha, 5099 Identification Details: Place the signed tender offer in a package marked "MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2" Telephonic, telegraphic, telex, facsimile, e-mailed or posted tender offers will not be accepted.
C.2.16.1	Tender Offer Validity <i>Add the following to the end of Clause C.2.16.1:</i> "The tender offer validity period is 90 days. If the tender validity expires on a Saturday, Sunday or public holiday, the tender shall remain valid and open for acceptance until the closure of business on the following working day."
C.2.16.3	Where a tenderer, at any time after the opening of his tender offer but prior to entering a contract based on his tender offer: • withdraws his tender. • gives notice of his inability to execute the contract in terms of his tender; or • fails to comply with a request made in terms of C.2.17, C.2.18 or C.3.9. Withdrawal is accepted and tenderers shall sign a letter to acknowledge withdrawal of bid.
C.2.17	Clarification of Tender Offer after Submission <i>Add the following to the end of Clause C.2.17:</i> "A tender may be rejected as non-responsive if the Tenderer fails to provide any clarification requested by the Employer, or confirmation of registration with CIDB within the time for submission stated in the Employer's written request for such clarification or confirmation. A tender may be rejected if the unit rates or lump sums for some of the items in the bill / Bill of Quantities are, in the opinion of the Employer, unreasonable or out of proportion, and the Tenderer fails, within the time stated in writing by the Employer to justify any specific rates or lump sums (i.e. to

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	provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the total of the prices unchanged.”
C.2.18	The Tenderer shall, when requested by the Employer to do so, submit any additional information requested under this clause within 7 working days of the date of request.
C.2.22	The tenderer is required to return all tender documents with the Tender Offer, prior to the closing time for the submission of Tender Offers.
C.2.23	The tenderer is required to submit the following with his tender: CSD Supplier Number and Tax compliance PIN numbers in case of Bidder only / Consortia / JV: a) Bidders must ensure compliance with their tax obligations. b) Bidders are required to submit their unique personal identification number (PIN) issued by SARS to enable the organ of state to view the taxpayer’s profile and tax status. c) Application for tax compliance status (TCS) or pin may also be made via e-filing. In order to use this provision, taxpayers will need to register with SARS as e-filers through the website www.sars.gov.za. d) Bidders may also submit a printed TCS together with the bid. e) In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate proof of TCS / PIN / CSD number. f) Where no TCS is available, but the bidder is registered on the central supplier database (CSD), a CSD number must be provided. g) Proof of Contractor Registration drawn from the Construction Industry Development Board website should be attached to Returnable Document Form 2.2.18. h) Evidence of registration and proof of good standing with a compensation insurer who is approved by the Department of Labour in terms of Section 80 of the Compensation for Occupational Injuries and Diseases Act (Act No 130 of 1993) (COID). The Tenderer is required to disclose all inspections, investigations and their outcomes conducted by the Department of Labour into the conduct of the Tenderer at a time during the 36 months preceding the date of this Tender (Refer Returnable Document Form 2.2.5). i) Proof of Registration in respect of each partner, where a tenderer satisfied the CIDB contractor grading designation requirements through the formation of a joint venture.
C.3.1.1	<i>Delete the contents of Clause C.3.1.1 and replace with the following:</i> “The Employer will respond to a request for clarification received up to seven working days before the tender closing time stated in the Tender Data.”
C.3.2	The Employer shall issue addenda until three working days before the tender closing time. <i>Add the following to Clause 3.2:</i>

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	Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.
C.3.4.1	The time and location for the opening of tender offers are: Time: 12H00pm on the 06 th August 2025
C.3.4.2	Tenders will be opened immediately after the closing time for tenders at: Location: O. R. Tambo District Municipality Physical Address: O. R. Tambo District Municipality Myezo Park Nelson Mandela Drive Mthatha 5099
C.3.5	A two-envelope procedure <u>will not</u> be followed.
C.3.7	Grounds for rejection and disqualification <i>Add the following to the end of Clause C.3.7:</i> “Tenderers will be disqualified if, a) Any of the directors/shareholders of the Tenderer are listed on the National Treasury Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business in the public sector. b) If, from information given in the completed Compulsory Enterprise Questionnaire, the Employer considers that there is a potential conflict of interest which may potentially compromise the tender process. In the event of disqualification, the Employer may, at his sole discretion, impose a specified period during which tender offers will not be accepted from the offending tenderer and report same to the CIDB and National Treasury.
C.3.8.2	<i>Add the following directly after Clause C.3.8.2 c):</i> “A tender offer that does not meet the requirements as specified below, will be deemed non-responsive: • The Tenderer offer does not meet any one of the eligibility criteria specified in Clause C.2.1 as amended. • The Tenderer has not fully and correctly completed the Offer portion of C1.1 Form of Offer and Acceptance i.e., the price has not been completed in words and numbers, the Tenderers details are not completed fully and correctly, and the Tenderer has failed to sign the Offer portion of C1.1.

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	• If requested by the Employer during the tender evaluation process, the Tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the Employer's written request. • The Tenderer's price is based on fixed rates in lieu of Contract Price Adjustment. • There are any other material deficiencies whereby the price submitted is not for the identical requirements and scope of work as other correctly completed tenders (such as changing any quantity or percentage allowance in the Pricing Schedule or failing to incorporate the requirements of Addenda where these materially affected the pricing e.g. where the Notice to Tenderers required any amendments or replacements of part or all of the Bill of Quantities and the submitted Bill of Quantities does not reflect these changes)."
C.3.9.	Arithmetical errors, omissions, discrepancies and imbalanced unit rates <i>Delete the text of Clause C.3.9 and replace with:</i> Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount appearing in words shall govern. Where there is a discrepancy between the amount in the Form of Offer and the Pricing Data Summary to the BOQ, the amount in the Form of Offer shall govern. Check responsive tender offers for: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: i. line-item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or ii. the summation of the prices. d) imbalanced unit rates. Notify shortlisted tenderers of all errors, omissions or imbalanced rates that are identified in their tender offers. Where the tenderer elects to confirm the errors, omissions or re-balancing of imbalanced rates the tender offer shall be corrected as follows: a) If bills of quantities or pricing schedules apply and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the unit rate shall govern, and the line item total shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted, and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be corrected. c) Where the unit rates are imbalanced adjust such rates by increasing or decreasing them and selected others while retaining the total of the prices derived after any other corrections made under a) and b) above.

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	Where there is an omission of a line item, no correction is possible, and the offer may be declared non-responsive. Declare as non-responsive and reject any offer from a tenderer who elects not to accept the corrections proposed and subject the tenderer to the sanction under C.2.16.3. The tenderer is required to submit balanced unit rates for rate only items in the pricing schedule. The rates submitted for these items will be taken into account in the evaluation of tenders.
C.3.11	Tenders will be evaluated in terms of the O. R. Tambo District Municipality's procurement policy. The Employer reserves the right to contact references and make enquiries to determine the tenderer's competence, reliability, experience, reputation, and capability to perform the contract.
C.3.11.1	<i>Add the following new paragraph directly under Clause C.3.11.1.</i> The Evaluation of tender offers will be undertaken as follows: <i>Replace the contents of the entire sub-clause with the following:</i> The procedure for evaluation of responsive tender offers will be method 2 of table F.1 of SANS 294: 2004. Financial offer & Preferences. The bid will be awarded to the bidder who has scored the highest points for price and preferences combined BUT the prerequisite will be to obtain at least 70 points for quality (functionality), which will be explained in Stage 2 below. Nevertheless, O. R. Tambo District Municipality retains the right to accept any bid. Stage 1: Compliance with Bid Rules and other Requirements The bids will be checked to ensure that they comply with the bid rules and all other requirements of the project document. Tender offers will be screened to identify schedules and requested documents that are incomplete or have not been submitted. In particular, the following documentation must be completed and/or included within the bid. • The form of Offer and Acceptance • Audited financial statements for any tender price over R10million • Certified company registration documents and ID of members • Form C: Compulsory Enterprise Questionnaire • Form D: Certificate of Authority for Signature • Form E: Amendments, Qualifications and Alternatives • Form H: Certificate of Good Standing • Form I: Relevant company experience • Form J: Details of key staff and CVs • Form M: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2022 • All information supporting the above forms

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	• Addenda issued during the bid period, if any. • The pricing schedule Tender offers will be tested for compliance with all the requirements of the as-amended Standard Conditions of Tender including the following: a) Eligibility (C.2.1) b) Pricing the tender offer (C.2.10.3) c) Alterations to documents (C.2.11) d) Alternative tenders offer (C.2.12) e) Submitting a tender offer (C.2.13) f) MBD4 – Bidders’ Disclosure. Tender offers will be declared non-responsive should they fail to comply with any one of the requirements of 1) above. Failure to supply the required and requested information will render the Bid Non-responsive, and the Bid will be disqualified. Stage 2: Minimum Conditions of Tender / Functionality The next state in the evaluation process will consist of evaluating Functionality scores, as follows: FUNCTIONALITY EVALUATION <table><tr><th>ITEM</th><th>WEIGHT</th></tr><tr><td>Minimum Conditions of Tender / Functionality (see detailed criteria below)</td><td>100</td></tr><tr><td> • Experience with respect to similar projects </td><td>60</td></tr><tr><td> • Qualifications and Experience of key staff assigned to the contract </td><td>40</td></tr></table> Only bidders who score 70 points or more on stage 2 will be evaluated further and therefore eligible for award. The maximum score for functionality shall be 100, distributed as follows: <table><tr><th colspan="3">MINIMUM CONDITIONS OF TENDER</th></tr><tr><td></td><td>Minimum conditions of tender / Functionality</td><td>Maximum tender evaluation points provided</td></tr><tr><td>B1.1</td><td>Experience on similar projects</td><td>60</td></tr><tr><td></td><td>Experience on similar projects: Proven experience in the construction of Water Supply pipelines (Bulk and Reticulation), or Steel / Reinforced Concrete Reservoirs contracts. Appointment Letter from the Client and Practical Completion not older than 06 months or Completion Certificate signed by the Client for each Contract shall be included in the supporting documentation submitted with the bid document as evidence with the Contract No., Contract Name, Employer and Employer’s Agent and Date of Completion clearly shown. Copies of the Certificate of Completion MUST be submitted with the bid. No points will be awarded where Certificates of Completion have not been submitted with the Bid. Reference letters will not be accepted.</td><td></td></tr></table>	ITEM	WEIGHT	Minimum Conditions of Tender / Functionality (see detailed criteria below)	100	• Experience with respect to similar projects	60	• Qualifications and Experience of key staff assigned to the contract	40	MINIMUM CONDITIONS OF TENDER				Minimum conditions of tender / Functionality	Maximum tender evaluation points provided	B1.1	Experience on similar projects	60		Experience on similar projects: Proven experience in the construction of Water Supply pipelines (Bulk and Reticulation), or Steel / Reinforced Concrete Reservoirs contracts. Appointment Letter from the Client and Practical Completion not older than 06 months or Completion Certificate signed by the Client for each Contract shall be included in the supporting documentation submitted with the bid document as evidence with the Contract No., Contract Name, Employer and Employer’s Agent and Date of Completion clearly shown. Copies of the Certificate of Completion MUST be submitted with the bid. No points will be awarded where Certificates of Completion have not been submitted with the Bid. Reference letters will not be accepted.	
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	At least three (3) construction contracts of a similar nature whose total sum value of at least R10 million, successfully completed within the last 10 years.	60
	At least two construction contracts of a similar nature whose total sum value of at least R8 million, successfully completed within the last 10 years.	30
	The Contractor has less than two Completed Projects of less than R8 Million or the Contractor failed to provide evidence of experience.	0
B1.2	Qualifications and Experience of key personnel (N.B. No Key Personnel Member may be assigned more than one duty on the Contract, i.e. different Personnel must be assigned for each of the following key positions): Contracts Manager to have a minimum NQF 6 in the Built Environment i.e. National Diploma: in Civil Engineering. Construction Manager (Site Agent) to have a minimum NQF 6 in the Built Environment i.e. National Diploma: Civil Engineering or Building Diploma, with Professional Registration with the Engineering Council of South Africa (ECSA) as Professional Technician and, or SACPCMP as a Pr CPM or Pr CM. Construction Supervisor (Main Foreman) to have a minimum NQF 4 in the Built Environment i.e. Appropriate Summative Assessment administered by a CETA accredited training provider. Occupational Health and Safety Officer to have Professional Registration as a Construction Health and Safety Officer with the South African Council for the Project and Construction Management Professions (SACPCMP). Bidders must submit CV's / Resumes with contactable references.	40
	Contracts Manager, Construction Manager (Site Agent), Construction Supervisor (Main Foreman) and Occupational Health and Safety Officer	
	Favourable previous experience in the Civil Engineering field for the Contracts Manager with a minimum of 10 years: 10 years = 15 points 6 – 9 years = 10 points 1 – 5 years = 8 points.	15
	Favourable previous experience in the Civil Engineering or Building field for the Construction Manager (Site Agent) with a minimum of 5 years: 5 years = 10 points 3 – 4 years = 6 points 1 – 2 years = 4 points.	10
	Favourable previous experience in the Civil Engineering field for the Construction Supervisor (Main Foreman) with a minimum of 5 years: 5 years = 8 points 3 – 4 years = 4 points 1 – 2 years = 2 points.	8
	Favourable previous experience in the Built Environment field for the Occupational Health and Safety Officer with a minimum of 5 years: 5 years = 7 points 3 – 4 years = 3 points 1 – 2 years = 1 points.	7
	Contractor failed to provide evidence of qualification and experience.	0

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	STAGE 3: EVALUATION FOR PRICE AND SPECIFIC GOALS (80/20) The procedure for Stage 3 of evaluation is as follows: a) PRICE..... 80 b) SPECIFIC GOALS:..... 20 a) Points Awarded for Price (Ps) 80/20 preference point system for acquisition of goods or services with a Rand value of up to R50 000 000 (all applicable taxes included). Scoring of Price: 1. Review financial offer and correct discrepancies between totals and calculations / summations in accordance with the Tender Data (C.3.9). 2. Reduce all tender offers to a common base i.e. comparative offer. 3. Confirm the tenderers are eligible for the specific goals claimed. 4. Score Tender Offer for Specific Goals. 5. Score Tender Offer for Price. A maximum of 70 points is allocated for price on the following basis, Total Points and rank Tender Offers. b) Points awarded for specific goals 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 a table below as may be supported by proof/ documentation included with: Scoring of Specific Goals: In accordance with the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2022, the points allocation for Specific Goals are as follows: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #d4c08d;">The specific goals allocated points in terms of this tender</th><th style="background-color: #ff0000; color: white;">Number of points Allocated on 80/20 system</th></tr> </thead> <tbody> <tr> <td>51% Black-owned enterprises</td><td style="text-align: center;">05</td></tr> <tr> <td>100% Women-owned enterprises</td><td style="text-align: center;">05</td></tr> <tr> <td>100% Youth-owned enterprises</td><td style="text-align: center;">05</td></tr> <tr> <td>Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.</td><td style="text-align: center;">05</td></tr> </tbody> </table>	The specific goals allocated points in terms of this tender	Number of points Allocated on 80/20 system	51% Black-owned enterprises	05	100% Women-owned enterprises	05	100% Youth-owned enterprises	05	Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.	05
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100% Women-owned enterprises	05										
100% Youth-owned enterprises	05										
Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.	05										

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Clause	Wording / Data
	Points will be awarded to tenderers who are eligible for preference Specific Goals. The terms and conditions of the Preference Schedule shall apply in all respects to the tender evaluation process and any subsequent contract. Tenderers must submit certified copies of all supporting documents necessary to prove conformance with Specific Goal criteria listed above in order to be eligible for Specific Goal points. Note that the objective Criteria as per the SCM Policy Paragraph 72 and 73 will be applied: 72. Fair Distribution of Municipal Resources on Capital Infrastructure Projects on Awards • Tenders will be evaluated and adjudicated as per legislation requirements, treasury guidelines and municipal policy. Fair distribution will be achieved as follows: • A bidder will not be awarded the same commodity of work more than once in within a period of three months. • If the highest scoring bidder has been previously awarded for the same commodity tender within that three months, then the next highest scoring bidder will be considered for recommendation and award. • If the highest scoring bidder has been previously recommended for award in the same sitting for a tender of the same commodity, the next highest scoring bidder will be considered for recommendation and award. 73. Objective criteria on the evaluation and award of bids • The objective criteria on the evaluation and awards of bids by the municipality will be based on the following criteria and reasoning: • Where the bidders price offer is below the engineer's estimate, that bid will be rejected as it will pose a risk to the municipality of non-completion of the project to be implemented thus leading to underspending on grants and delays in completion of projects within projected time period. Further in line with CIDB Practice Note 5, paragraph 3.4 (3), the municipality will judge the reasonableness of financial offers and reject all tender offers with unrealistic financial offers. Having made the final selection: 1. An intention to Award will be issued and published on the O. R. Tambo District Municipality's website, which is www.ortambodm.gov.za. 2. If no objection is received within fourteen days of the intention to award being issued, the successful Tenderer will be notified of O.R. Tambo District Municipality's acceptance of his/her bid.
C.3.11.3	Risk Analysis <i>Add the following new sub-clause:</i> Notwithstanding compliance with regards to CIDB registration or any other requirements of the tender, the employer will perform a risk analysis in respect of the following: a) reasonableness of the financial offer; b) reasonableness of unit rates and prices. No tenderer will be recommended for award unless the tenderer has demonstrated that he/she has the resources and skills required to complete the project successfully.
Clause	Wording / Data

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C.3.12	<i>Replace the contents of Clause 3.12 with the following:</i> Full insurances to be provided by the Contractor. The Contractor must provide the Employer with the insurance policy information and certificates of insurance prior to the commencement of the contract.
C3.13	<i>In addition to the requirements of Clause C3.13, a tender will only be accepted if:</i> a) The Tenderer's tax matters are in order with the South African Revenue Services. b) The Tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation (CRS Number or print out to be provided). c) 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. d) The Tenderer is registered in the Department of National Treasury - Central Supplier Database (CSD Number to be provided). e) The Tenderer has not: i) abused the Employer's Supply Chain Management System or ii) failed to perform on any previous contract and has been given a written notice to this effect. f) 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 not permitted to submit tenders or participate in the contract; In the case of Joint Ventures all members of the JV are to complete the Compulsory Enterprise Questionnaire. g) The tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer. h) Attended a compulsory briefing session and site inspection. Signing the briefing and site inspection attendance register is mandatory. i) The Form of Offer and Acceptance is correctly completed and signed.
C.3.16	An Employer must, within Fourteen (14) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the Employer, register and publish the award on the CIDB Register of Projects.
C.3.17	The number of paper copies of the signed contract to be provided by the employer is one.
C.3.18	All requests shall be in writing.
C.3.19	<i>Add the following new clause below Clause C.3.18:</i> "Jurisdiction" unless stated otherwise in the tender data, each Tenderer and the Employer undertake to accept the jurisdiction of the law courts of the Republic of South Africa.
Clause	Wording / Data

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C.3.20	<i>Add the following new clause below Clause C.3.18:</i> The successful tenderer will be encouraged to include as much of the Direct Participation required minimum 5% spend by subcontracting to local EMEs or QSEs from the immediate area of the Site. The details of any EMEs / QSEs need not to be submitted with the tender but will be required of the preferred bidder prior to the signing of the Contract.

T1.3: STANDARD CONDITIONS OF TENDER

Annex C
(normative)

Standard Conditions of Tender

As published in Annexure C of the Construction Industry Development Board (CIDB) Standard for Uniformity for construction Procurement, Board Notice 423 Government Gazette No 42622 of 08 August 2019.

C.1 General

C.1.1 Actions

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

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

Note:

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

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

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

C.1.2 Tender Documents

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

C.1.3 Interpretation

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

C.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for

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tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

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

- a) **conflict of interest means any situation in which:**
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially; s
 - ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) incompatibility or contradictory interests exist between an employee and the organization which employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilized to have been taken into consideration;
- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;
- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

C.1.4 Communication and employer's agent

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

C.1.5 Cancellation and Re-Invitation of Tenders

C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-

- (a) due to changed circumstances, there is no longer a need for the 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.
- (d) there is a material irregularity in the tender process.

C1.5.2 The decision to cancel a tender must be published in the CIDB website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

C1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

C.1.6 Procurement procedures

C.1.6.1 General

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

C.1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

C.1.6.2.2 All responsive tenderers, or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data, shall be invited to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

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

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

C.2.1 Eligibility

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

C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

C.2.2 Cost of tendering

C.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer comply with requirements.

C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

C.2.3 Check documents

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

C.2.4 Confidentiality and copyright of documents

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

C.2.5 Reference documents

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

C.2.6 Acknowledge addenda

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary, apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

C.2.7 Clarification meeting

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

C.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

C.2.9 Insurance

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

C.2.10 Pricing the tender offer

C.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.

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C.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

C.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

C.2.11 Alterations to documents

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

C.2.12 Alternative tender offers

C.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

C.2.12.2 Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

C.2.12.3 An alternative tender offer may only be considered if the main tender offer is the winning tender.

C.2.13 Submitting a tender offer

C.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

C.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable

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documents listed in the tender data in an envelope marked “financial proposal” and place the remaining returnable documents in an envelope marked “technical proposal”. Each envelope shall state on the outside the employer’s address and identification details stated in the tender data, as well as the tenderer’s name and contact address.

C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer’s address and identification details as stated in the tender data.

C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

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

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

C.2.15 Closing time

C.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

C.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

C.2.16 Tender offer validity

C.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

C.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer’s agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).

C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as “SUBSTITUTE”.

C.2.17 Clarification of tender offer after submission

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

Note: *Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a*

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preferred tenderer following a competitive selection process, should the Employer elect to do so.

C.2.18 Provide other material

C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including not arise joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

C.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

C.2.19 Inspections, tests and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

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

C.2.23 Certificates

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

C.2 The employer's undertakings

C.2.1 Respond to requests from the tenderer

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

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

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as

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individual firms or as another joint venture; or

- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.2.2 Issue Addenda

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

C.2.3 Return late tender offers

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

C.2.4 Opening of tender submissions

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

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBEE status level and time for completion for the main tender offer only.

C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.

C.2.5 Two-envelope system

C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

C.2.6 Non-disclosure

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

C.2.7 Grounds for rejection and disqualification

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

practices.

C.2.8 Test for responsiveness

C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

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

C.2.9 Arithmetical errors, omissions and discrepancies

C.3.9.1. Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
 - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - ii) the summation of the prices.

C.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and, the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

C.2.10 Clarification of a tender offer

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

C.2.11 Evaluation of a tender offer

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

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

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

The activities associated with evaluating tender offers are as follows:

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

C.3.11.1 General

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

C.2.12 Insurance provided by the employer

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

C.2.13 Acceptance of tender offer

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

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
- c) has the legal capacity to enter into the contract;
- d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities, or is subject to legal proceedings in respect of any of the foregoing;
- e) complies with the legal requirements, if any, stated in the tender data; and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.2.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.

C.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

C.2.15 Complete adjudicator's contract

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

C.2.16 Registration of the award

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

C.2.17 Provide copies of the contracts

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

C.2.18 Provide written reasons for actions taken

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

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T2.1 RETURNABLE DOCUMENTS

Each tenderer is required to complete and return the tender documents issued.

The following documents are also to be completed and returned, as they constitute part of the tender.

Whilst many of the returnable are required for the purpose of evaluating the tenders, some will form part of the subsequent contract, as they form the basis of the tender offer.

For this reason, it is very important that tenderers complete, sign submit and return all information, documents and schedules, as requested and relevant.

T2.1 List of Returnable Documents required for Tender evaluation purposes		
	Form 2.2.1	General Information of the Tenderer
	Form 2.2.2	Authority for Signatory
	Form 2.2.3	Schedule of Previous Experience
	Form 2.2.4	Schedule of Current Projects
	Form 2.2.5	Declaration of Good Standing Regarding Tax
	Form 2.2.6	Registration at the Central Supplier Database
	Form 2.2.7	Certificate of Attendance at Site Meeting
	Form 2.2.8	Proposed Organisation and staffing
	Form 2.2.9	Proposed Key Personnel
	Form 2.2.10	Schedule of Proposed Sub-Contractors
	Form 2.2.11	Financial References
	Form 2.2.12	Municipal Bidding Documents (MBD forms): MBD 1 – Invitation to bid MBD 4 – Declaration of Interest MBD 5 – Declaration for Procurement above R10 million MBD 6.1 – Preference Points Claim Form in Terms of PPPFA MBD 8 – Declaration of Bidder's Past Supply Chain Management Practices MBD 9 – Certificate of Independent Bid Determination
	Form 2.2.13	Schedule of proposed plant and equipment
	Form 2.2.14	Health and safety plan
	Form 2.2.15	Preliminary programme
	Form 2.2.16	Estimated monthly expenditure
	Form 2.2.17	Declaration regarding fulfilment of the Construction Regulations, 2014
	Form 2.2.18	CIDB Registration
	Form 2.2.19	Letter of Good Standing
T2.3 Returnable Documents that will be incorporated into the contract		
	Form 2.3.1	Record of Addenda to Tender Documents
	Form 2.3.2	Procurement Form
	Form 2.3.3	Original Tax Clearance Certificate
	Form 2.3.4	National Treasury: Central Supplier Database

T2.2 RETURNABLE DOCUMENTS FOR TENDER EVALUATION PURPOSES

RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

- Form 2.2.1 General Information of Tenderer
- Form 2.2.2 Authority of Signatory
- Form 2.2.3 Schedule of Previous Experience
- Form 2.2.4 Schedule of Current Projects
- Form 2.2.5 Declaration of Good Standing Regarding Tax
- Form 2.2.6 Registration on the Central Supplier Database
- Form 2.2.7 Certificate of Attendance at Site Meeting
- Form 2.2.8 Proposed Organisation and Staffing
- Form 2.2.9 Proposed Key Personnel
- Form 2.2.10 Schedule of Proposed Sub-consultants
- Form 2.2.11 Financial References
- Form 2.2.12 Municipal Bidding Documents (MBDs)
 - MBD 1 – Invitation to bid
 - MBD 4 – Declaration of Interest
 - MBD 5 – Declaration for Procurement above R10 million
 - MBD 6.1 – Preference Points Claim Form in Terms of PPPFA
 - MBD 8 – Declaration of Bidder's Past Supply Chain Management Practices
 - MBD 9 – Certificate of Independent Bid Determination
- Form 2.2.13 Schedule of Proposed Plant and Equipment
- Form 2.1.14 Health and Safety Plan
- Form 2.1.15 Preliminary Programme
- Form 2.1.16 Estimated Monthly Expenditure
- Form 2.1.17 Declaration Concerning Fulfilment of The Construction Regulations, 2014
- Form 2.1.18 CIDB Registration
- Form 2.1.19 COID Letter of Good Standing

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FORM 2.2.1 GENERAL INFORMATION OF TENDERER

1. Name of Tenderer:

2. Contact details

Address :

Tel no :

Fax no :

Cell no :

E-mail address:

3. Legal entity: Mark with an X.

Sole proprietor	
Partnership	
Close corporation	
Company (Pty) Ltd	
Joint venture	

In the case of a Joint venture, provide details on joint venture members:

Joint venture member	Type of entity (as defined above)

4. Income tax reference number:

(in case of a joint venture, provide for all joint venture members)

5. Municipal services area where the enterprise is registered:

(in case of a joint venture, provide for all joint venture members)

6. Company / close corporation Registration Number:

(in case of a joint venture, provide for all joint venture members)

7. VAT Registration number:

(in case of a joint venture, provide for all joint venture members)

8. CIDB registration number:

(in case of a joint venture, provide for all joint venture members)

ATTACH THE FOLLOWING DOCUMENTS HERETO

1. For Closed Corporations

Certified copies of CK1 or CK2 as applicable (Founding Statement)

2. For Companies

Certified copies of Shareholders register

3. ID copies

Certified ID Copies for members

4. CIDB registration

Proof of registration with CIDB

5. CSD registration

Proof of registration with Central Supplier Database

6. For Joint Venture Agreements

Copy of the Joint Venture Agreement between all the parties, as well as the certified documents in (1), and or (2) and (4) and (4) of each Joint Venture member.

7. Copy of the latest municipal service account where enterprise is registered

8. Director's / Shareholder's Municipal Rates

9. Specific Goal Points Contribution

10. Central Supplier Database Summary Report

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FORM 2.2.2 AUTHORITY OF SIGNATORY

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for the relevant category.

A Company	B Partnership	C Joint Venture	D Sole Proprietor	E Close Corporation

A. Certificate for Company

I,....., chairperson of the board of directors of
....., hereby confirm that by resolution of the board (copy attached) taken
on.....202...., Mr/Mrs.....acting in the capacity of... ,was authorised to
sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

As witness

1.....
Chairman

2.....
Date

B. Certificate of Partnership

We, the undersigned, being the key partners in the business trading as

hereby authorise Mr/Mrs....., acting in the capacity
of.....to sign all documents in connection with the tender for
Contract..... and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

NOTE: This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.

C. Certificate for Joint Venture

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We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Mrs....., authorised signatory of the company ,

acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract....., and any other contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorised signatories of all the partners to the Joint Venture.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner CIDB registration no		Signature : Name : Designation :
 CIDB registration no		Signature : Name : Designation :
 CIDB registration no		Signature : Name : Designation :
 CIDB registration no		Signature : Name : Designation :

A copy of the Joint Venture Agreement showing clearly the percentage contribution of each partner to the Joint Venture shall be appended to this Schedule.

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D. Certificate for Sole Proprietor

I, ..., hereby confirm that I am the sole owner of the business trading
as.....

As Witness:

1.....

Signature: Sole owner

2.....

Date

E. Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as.....

hereby authorise Mr/Mrs

Acting in the capacity of....., to sign all documents in connection with the tender
for Contract.....and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

NOTE: This certificate is to be complete and signed by all the key members upon whom rests the direction of the affairs of the Close Corporation as a whole

**ATTACH HERETO THE DULY SIGNED AND DATED ORIGINAL OR CERTIFIED COPY OF AUTHORITY
OF SIGNATORY ON COMPANY LETTERHEAD**

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT
FORM 2.2.3 SCHEDULE OF PREVIOUS EXPERIENCE

Provide the following information on relevant previous experience (indicate specifically projects of similar or larger size and/or which is similar with regard to type of work, as defined in Tender Clause C3.11.1).

Practical Completion not older than 12 months or Completion certificates must be submitted for project to be considered for evaluation of Compliance as per Tender Clause C3.11.1.

Description	Value (R) VAT excluded	Year(s) work executed	Reference		
			Name	Organisation	Tel no

Name of Tenderer: Date:

Signature:

Full name of signatory:

O. R. TAMBO DISTRICT MUNICIPALITY
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FORM 2.2.4 SCHEDULE OF CURRENT PROJECTS

Provide the following information on current relevant projects. **This information is material to the award of the Contract.**

Description	Value (R) VAT excluded	Date Appointed	Reference		
			Name	Organisation	Tel no

Name of Tenderer: Date:

Signature:

Full name of signatory:

In terms of Clause 43 of the Municipal Supply Chain Management Policy, tenderers must ensure that they are up-to-date with their payments of taxes. It is a condition of bid that the taxes of the successful tenderer must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the tenderer's tax obligations.

The tenderer must attach to this page an **Original(s)** of a **Valid Tax Clearance Certificate(s)**.

1. In order to meet this requirement tenderers are required to complete in full the form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign tenderers / individuals who wish to submit bids.
2. SARS will then furnish the tenderer with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.

Alternatively, the tenderer must submit a Tax Compliance Status PIN to allow Supply Chain Management to verify the real-time compliance status.

Tax Compliance Status PIN	

4. In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.
6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za

No contract shall be awarded to a Tenderer who does not have a valid Tax Clearance Certificate.

Attach proof of registration with the National Treasury Central Supplier Database. **This information is material to the award of the Contract.**

ATTACH CERTIFIED PROOF OF REGISTRATION ON THE NATIONAL CENTRAL SUPPLIER DATABASE

O. R. TAMBO DISTRICT MUNICIPALITY

CONTRACT NO.: ORTDM SCMU 45-24/25

MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

FORM 2.2.7 CERTIFICATE OF ATTENDANCE AT SITE MEETING

This is to certify that

..... (Tenderer)

of (address)

.....

was represented by the person(s) named below at the compulsory meeting held for all tenderers at

..... (location) on (Date)

starting at

We acknowledge that the purpose of the meeting was to acquaint ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name

Signature

Capacity

Name

Signature

Capacity

Attendance of the above persons at the meeting is confirmed by the Employer's representative, namely:

Name

Signature

Capacity

Date & Time

FORM 2.2.8 PROPOSED ORGANISATION AND STAFFING

The tender offer shall include an organogram clearly showing the team of key personnel the Tenderer proposes to assign to the Contract and how responsibilities for the various disciplines or work and components of the Works will be assigned. The name, roles and responsibilities of each person and the name of their employer must be clearly set out, and corresponding job descriptions must be provided as an addendum to the organogram.

In the case of a Joint Venture or where major sub-contractors are made use of, the organogram must show how respective responsibilities are to be allocated.

As a minimum, the organogram must show how respective responsibilities are to be allocated. As a minimum, the organogram must include for the personnel detailed in Returnable Document FORM 2.1.12: Experience of Key Personnel.

The Tenderer shall include the requisite organogram and addendums in the Supporting Documentation file, to be submitted in accordance with Clause C2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

FORM 2.2.9 PROPOSED KEY PERSONNEL

Curriculum Vitae (CV), up to a maximum of five (5) pages must be submitted, for each of the key personnel (at least **Contract Manager, Construction Manager, SMME Construction Manager and Construction Health & Safety Officer** proposed in Returnable Document: **FORM 2.1.8: Proposed Organisation and Staffing**. The CVs must specifically include the qualifications, professional accreditation, experience of **10 years (Contract Manager)** and **5 years (Construction Manager, SMME Construction Manager and Construction Health & Safety Officer)** roles and responsibilities in construction projects of a similar nature. Contact details of at least three (3) contactable referees must also be provided. A template for CV's is provided overleaf.

Each CV must be clearly cross-referenced to and labelled to correspond with the organogram submitted in terms of Returnable Document: FORM 2.1.8: Proposed Organisation and Staffing, so as to indicate which role the person in question is proposed to fulfil in the Contract.

The Tenderer shall include the requisite CVs in the Supporting Documentation file, to be submitted in accordance with Clause C2.13.3 of T1.2 Variations to the Standard Conditions of Tenders.

The proposed key personnel will be evaluated for Compliance based on Clause C3.11.1.

Name and Surname	Position	Qualifications and Years of Experience (Post qualification)
	Contracts Manager	
	Construction Manager (Site Agent)	
	Construction Supervisor (Main Foreman)	
	Occupational Health & Safety Officer (SACPCMP: CHSO.....) Attach CV and proof of registration and qualification	
	Other	

Note: In respect of positions of Contracts Manager and Construction Manager **two** separate individuals are required for the above positions (and this is to be stated in the tender document).

INSERT KEY PERSONNEL CVs HERE ACCORDING TO THE TEMPLATE BELOW

Name:

Professional:

Date of Birth:

Parent Firm:

Position in Firm: Indicate if Director, Contractor's Representative, Design Engineer (with component of responsibility), Installation/construction Foreman (with component of responsibility) etc.

Years with Firm:

Nationality:

Tertiary Education (and year obtained):

Professional Accreditation (and year obtained):

Years of Relevant Experience:

Languages: Indicate first language. If the first language is not English, please indicate proficiency in English. In other languages, including South African indigenous languages, please show speaking, reading and writing ability.

Language	Speaking	Reading	Writing
English			

Countries of Work Experience

Proposed Position of Team

Key Qualifications

Under this heading, give outline of staff members experience and training most pertinent to the assigned work on the team.

Relevant Experience

Describe degree of responsibility held by staff member on relevant previous assignments, and give dates, project values and locations. For experience in the last ten years, also give types of activities performed and Client references where appropriate.

Summary of Other Experience

Under this heading, list all positions held by staff member since graduation, giving dates, names of employing organisation, title of position held and location, type and value of construction projects.

References

Declaration

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, at the time of signature, I am available and will serve in the position indicated for me in the proposal for **TENDER NUMBER: ORTDM SCMU 45-24/25: MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2.**

Signed Date

Name Position

CV – CONTRACTS MANAGER

CV – CONSTRUCTION MANAGER (SITE AGENT)

CV – CONSTRUCTION SUPERVISOR (MAIN FOREMAN)

CV – OCCUPATIONAL HEALTH AND SAFETY OFFICER

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FORM 2.2.10 SCHEDULE OF PROPOSED SUB-CONTRACTORS

NAME OF SUB-CONTRACTOR	FULL DESCRIPTION OF WORK TO BE PERFORMED BY SUB- CONTRACTORS

NB: It is a Condition of Contract that a minimum of 30% of the construction work shall be subcontracted to QSEs and EMEs as contemplated in the ‘The Broad-Based Black Economic Empowerment Act (No. 53 of 2003) as amended by B-BBEE Act 46 of 2013 (The Act)’. The Contractor shall take all reasonable and practical measures to support, mentor, train, upskill and supervise such subcontractors as envisaged in the Strategic Objectives of the Amended Construction Sector Code.

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Employer’s Agent.

Name of Tenderer: Date:

Signature:

Full name of signatory:

O. R. TAMBO DISTRICT MUNICIPALITY
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MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
FORM 2.2.11 FINANCIAL REFERENCES

FINANCIAL STATEMENTS

I/We agree to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Employer.

DETAILS OF TENDERERS BANKING INFORMATION

I/We hereby authorise the Employer/Employer's Agent to approach all or any of the following banks for the purposes of obtaining a financial reference:

BANK NAME:											
ACCOUNT NAME: (e.g. ABC Civil Construction cc)											
ACCOUNT TYPE: (e.g. Savings, Cheque etc)											
ACCOUNT NO:											
ADDRESS OF BANK:											
CONTACT PERSON:											
TEL. NO. OF BANK / CONTACT:											
How long has this account been in existence:	(Tick which is appropriate)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">0-6 months</td> <td style="width: 30px; height: 20px;"></td> </tr> <tr> <td style="padding: 2px;">7-12 months</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 2px;">13-24 months</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 2px;">More than 24 months</td> <td style="height: 20px;"></td> </tr> </table>	0-6 months		7-12 months		13-24 months		More than 24 months		
0-6 months											
7-12 months											
13-24 months											
More than 24 months											

Name of Tenderer: OBJ..... Date:

Signature:

Full name of signatory:

ATTACH AUDITED FINANCIAL STATEMENTS

O. R. TAMBO DISTRICT MUNICIPALITY
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MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
FORM 2.2.12 MUNICIPAL BIDDING DOCUMENTS (MBD)

MBD 1 - PART A INVITATION TO BID

BID NUMBER:	CONTRACT NO.: ORTDM SCMU 45-24/25	CLOSING DATE:	06 August 2025	CLOSING TIME:	12H00
DESCRIPTION:	MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT:					
TENDER BOX, GROUND FLOOR, O. R. TAMBO DISTRICT MUNICIPALITY BUILDING					
NELSON MANDELA DRIVE					
MYEZO PARK					
MTHATHA					
EASTERN CAPE					
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					
TAX COMPLIANCE STATUS	TCS PIN:		CSD No:		
STATEMENT OF RATES AND TAXES OF THE BIDDER	Yes	No	STATEMENT OF RATES AND TAXES OF THE COMPANY	Yes	No
[STATEMENT OF RATES AND TAXES OF THE BIDDER AND OF THE COMPANY/ LEASE AGREEMENT FOR LEASED PROPERTY MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS]					
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, ANSWER PART B:3]	
TOTAL NUMBER OF ITEMS OFFERED			TOTAL BID PRICE	R	
SIGNATURE OF BIDDER			DATE		
CAPACITY UNDER WHICH THIS BID IS SIGNED					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:		
DEPARTMENT	SCM DEPARTMENT		CONTACT PERSON	Mr. N. Noto	
CONTACT PERSON	Mr. Sakhiwo Hopa		TELEPHONE NUMBER	047 501 6425	
TELEPHONE NUMBER	047 501 6449		FACSIMILE NUMBER	N/A	
FACSIMILE NUMBER	N/A		E-MAIL ADDRESS	nkosiyabon@ortambodm.gov.za	
E-MAIL ADDRESS	sakhiwoh@ortambodm.gov.za				

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PART B TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:			
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.			
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED—(NOT TO BE RE-TYPED).			
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.			
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 VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.			
2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E- FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA .			
2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.			
2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.			
2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.			
2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.			
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS			
3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	YES	NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA?	YES	NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	YES	NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	YES	NO
3.5.	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 ABOVE.			

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID. NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

DATE:

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MBD 4 - DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name of bidder or his or her representative:.....

3.2 Identity Number:

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

.....

3.4 Company Registration Number:

3.5 Tax Reference Number:.....

3.6 VAT Registration Number:

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? YES / NO

3.8.1 If yes, furnish particulars.....

.....¹ MSCM
Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

² Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9 Have you been in the service of the state for the past twelve months? YES / NO

3.9.1 If yes, furnish particulars.....

.....

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?
YES / NO

3.10.1 If yes, furnish particulars

.....

.....

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? YES / NO

3.11.1 If yes, furnish particulars.....

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? YES / NO

3.12.1 If yes, furnish particulars

.....

.....

3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? YES / NO

3.13.1 If yes, furnish particulars.....

.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract? YES / NO

3.14.1 If yes, furnish particulars

.....

.....

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4. Full details of directors / trustees / members / shareholders.

Full name	Identity number	State employee number

.....

Signature

.....

Date

.....

Capacity

.....

Name of Bidder

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MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

MBD 5-DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire:

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
1.	Are you by law required to prepare annual financial statements?		
1.1	If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the last 3 years.		
NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
2.	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than 3 months or any other service provider in respect of which payment is overdue for more than 30 days?		
2.1	If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than 3 months or other service provider in respect of which payment is overdue for more than 30 days.		
2.2	If yes, provide details:		
NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
3.	Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?		
3.1	If yes, provide details:		

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NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
4.	Will any portion of the goods of services be sourced from outside the Republic, and if so, what portion, and whether any portion of payment from the municipality is expected to be transferred outside of the Republic?		
4.1	If yes, provide details:		

CERTIFICATION

I, THE UNDERSIGNED (NAME)

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

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS THIS DECLARATIONPROVE 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
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 To be completed by the organ of state

(delete whichever is not applicable for this tender).

- a) The applicable preference point system for this tender is the **90/10** preference point system.
- b) The applicable preference point system for this tender is the **80/20** preference point system.
- c) Either the **90/10 or 80/20 preference point system** will be applicable in this tender. The lowest/highest acceptable tender will be used to determine the accurate system once tenders are received.

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

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

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS	POINTS
PRICE	90	80
SPECIFIC GOALS	10	20
Total points for Price and SPECIFIC GOALS	100	100

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

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or

at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) & \mathbf{or} & P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) \end{array}$$

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

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:

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

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)
51% Black-owned enterprises	05	
100% Women-owned enterprises	05	
100% Youth-owned enterprises	05	
Where the Enterprise head office or Primary Place of business is located within O. R. Tambo District.	05	

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:

.....

.....

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
MBD 8 - DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	☐	☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	☐	☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	☐	☐
4.3.1	If so, furnish particulars:		

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) _____
 CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

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

.....

Signature

Date

.....

Position

Name of Bidder

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

PROJECT NO.: ORTDM SCMU 45-24/25

MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2

in response to the invitation for the bid made by:

O. R. TAMBO DISTRICT MUNICIPALITY

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

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

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorised by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorised by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word “competitor” shall include any individual or organisation, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)

- (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid;or
 - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill, and knowledge in an activity for the execution of a contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....

Signature

Date

.....

Position

Name of Bidder

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
FORM 2.2.13 SCHEDULE OF PROPOSED EQUIPMENT

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

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

Quantity	Description, Size, Capacity, etc

Attach additional pages if more space is required.

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

Quantity	Description, Size, Capacity, etc

Attach additional pages if more space is required.

SIGNED BY/ON BEHALF OF TENDERER:

Signed

Date

Name

Position

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
FORM 2.2.14 HEALTH AND SAFETY PLAN

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2014 issued in terms of Section 43 of the Act as well as COVID-19 requirements. The Tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard, the Tenderer shall prepare and attach a Health and Safety Plan in relation to the Client Health and Safety Specification in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations. The Tenderer's Health and Safety Plan shall cover inter-alia the following details:

- 1) Management Structure, Site Supervision and Responsible Persons including a succession plan.
- 2) Contractor's induction training programme for employees, sub-contractors and visitors to the Site.
- 3) Risk management systems and monitoring
- 4) Health and safety precautions and Procedures to be adhered to in order to ensure compliance with the Act, Regulations and Safety Specifications.
- 5) Regular monitoring Procedures to be performed.
- 6) Regular liaison, consultation and review meetings with all parties.
- 7) Site security, welfare facilities and first aid.
- 8) Site rules and fire and emergency Procedures.

Tenderers are to note that the Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract also comply with the above requirements.

The Tenderer shall also take into account the additional requirements stated in the Scope of Work when drawing up the Health and Safety Plan for the contract.

Details of the Health and Safety Plan shall be appended to this Schedule.

Number of sheets appended by the Tenderer to this Schedule (If nil, enter NIL)

SIGNED BY/ON BEHALF OF TENDERER:

Signed

Date

Name

Position

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
FORM 2.2.15 PRELIMINARY PROGRAMME

The Tenderer shall provide a preliminary programme in Gantt Chart format showing how the requirements of C1.2: Contract Data and Part C3: Scope of Work will be met; and outlining the key activities and milestones and Critical Path for the Works and the sequencing thereof. In addition, a preliminary cash flow forecast, matching the progress of the programme must be submitted.

The programme must be based on the tendered Time for Completion.

The preliminary programme must be included in the Supporting Documentation file to be submitted in accordance with Clause C.2.13.3 of T1.2: Variations to the Standard Conditions of Tender.

**FORM 2.2.17 DECLARATION CONCERNING FULFILMENT OF THE CONSTRUCTION
REGULATIONS, 2014**

In terms of Regulation 4(3) of the Construction Regulations, (hereinafter referred to as the Regulations), promulgated on 18 July 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a Contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

Tenderers shall answer the questions below:

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations.

(Tick)

YES	
NO	

2. Indicate which approach shall be employed to achieve compliance with the Regulations.

(Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) - Specify:	

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CVs to be attached):

.....

.....

.....

.....

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25

MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

4. Provide details of proposed training (if any) that will be undergone:

.....

.....

.....

.....

.....

.....

5. List potential key risks identified and measures for addressing risks:

.....

.....

.....

.....

.....

.....

6. I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Bill of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period

(Tick)

YES	
NO	

SIGNATURE OF PERSON(S) AUTHORISED TO SIGN THIS TENDER:

1. ID NO:.....

(Name in Print):

2. ID NO:.....

(Name in Print):

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
FORM 2.2.18 CIDB REGISTRATION

Proof of Contractor's (active) registration on the Construction Industry Development Board (CIDB)

FORM 2.2.19 COID LETTER OF GOOD STANDING

Provide a Certified copy of letter proof of good standing with a compensation insurer who is approved by the Department of Labour in terms of Section 80 of the Compensation for Occupational Injuries and Diseases Act (Act No 130 of 1993) (COID).

T2.3	RETURNABLE DOCUMENTS INCORPORATED INTO THE CONTRACT

RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

- Form 2.3.1 Record of Addenda to Tender Documents
- Form 2.3.2 Procurement Form
- Form 2.3.3 Original Tax Clearance Certificate
- Form 2.3.4 National Treasury: Central Data Supplier Base

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
FORM 2.3.1 RECORD OF ADDENDA TO TENDER DOCUMENTS

(Addenda received from Employer's Agent for amendments on Tender Documentation)

	Date	Title or Details
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Name of Tenderer: Date:

Signature:

Full name of signatory:

Acceptable Tenders will be evaluated using a system that awards points on the basis of Tender price and the meeting of specific goals.

DEFINITIONS

“Acceptable Tender” means any Tender which, in all respects, complies with the conditions of Tender and specifications as set out in the Tender document, including conditions as specified in the Preferential Procurement Policy Framework Act (Act 5 of 2000) and the Supply Chain Management of Council.

“Council” refers to the O. R. TAMBO DISTRICT Municipality.

“Equity ownership” refers to the percentage ownership and control, exercised by individuals within an enterprise and they are involved in the day to day running of the Company.

“HDI equity ownership” refers to the percentage of an enterprise, which is owned by individuals, or in the case of a company, the percentage shares that are owned by individuals meeting the requirements of the definition of a HDI.

“Historically disadvantaged individuals (HDIs)” means all South African citizens –

- (i) Who had no franchise in national elections prior to the introduction of the 1983 and 1993 constitutions (Referred to as Previously Disadvantaged Individuals (PDIs) in this document)
- (ii) Women
- (iii) Disabled persons.

“SMME’s” (small, medium and micro enterprises) refers to separate and distinct business entities, including co- operative enterprises and NGOs, managed by one owner or more, as defined in the National Small Business (Act 102 of 1996). Refer to the attached addendum for a definition of SMME’s for different economic sectors.

Tenders are adjudicated in terms of ORTDM Procurement Policy, and the following framework is provided as a guideline in this regard.

1 Technical adjudication and General Criteria

- Tenders will be adjudicated in terms of inter alia:
- Compliance with Tender conditions
- Technical specifications

If the Tender does not comply with the Tender conditions, the Tender will be rejected. If technical specifications are not met, the Tender may also be rejected.

With regard to the above, certain actions or errors are unacceptable, and warrants **REJECTION OF THE TENDER**, for example:

- A Tax Verification Pin. (**Only valid tax verification pin** must be attached to the Tender document).
- Pages to be completed, removed from the Tender document, and have therefore not been submitted.
- Failure to complete the Bill of Quantities as required.
- Scratching out without initialling next to the amended rates or information.
- Writing over / painting out rates / the use of tippex or any erasable ink, e.g. Pencil.
- Failure to attend compulsory site inspections.
- The Tender has not been properly signed by a party having the authority to do so, according to the Form 2.2.2 – “Authority for Signatory”.
- Form of Offer not completed.
- Particulars required in respect of the Tender have not been provided – non-compliance of Tender requirements and/or specifications.
- The Tenderer’s attempts to influence or has in fact influenced the evaluation and/or awarding of the contract.
- The Tender has been submitted after the relevant closing date and time.
- Each page of the Contract portion of this Tender document (Part C1 – C4) must be initialled by the authorised person in order for the document to constitute a proper Contract between the Employer (ORTDM) and the undersigned.
- If any municipal rates and taxes or municipal service charges owed by that Tenderer or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three months.
- If any Tenderer who during the last five years has failed to perform satisfactorily on a previous contract with the municipality or any other organ of state after written notice was given to that Tenderer that performance was unsatisfactory.

2 Size of enterprise and current workload

Evaluation of the Tenderer’s position in terms of:

- Previous and expected current annual turnover.
- Current contractual obligations.
- Capacity to execute the contract.

3 Staffing profile

Evaluation of the Tenderer’s position in terms of:

- Staff available for this contract being Tendered for
- Qualifications and experience of key staff to be utilised on this contract.

4 Financial ability to execute the contract:

Evaluation of the Tenderer's financial ability to execute the contract. Emphasis will be placed on the following:

- Contact the Tender's bank manager to assess the Tenderer's financial ability to execute the contract and the Tenderer hereby grants his consent for this purpose.

5 Good standing with RSA Revenue Services

- Determine whether an original tax pin or an original valid tax clearance certificate has been submitted.
- The Tenderer must affix a Tax Verification Pin to page T2.2.5 of the Tender document.

6 Penalties

7 The O. R. Tambo District Municipality will if upon investigation it is found that a preference in terms of the Contract has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, on discretion of the Municipal Manager, one or more of the following penalties will be imposed:

- Cancel the contract and recover all losses or damages incurred or sustained from the Tenderer.
- Impose a financial penalty of twice the theoretical financial preference associated with the claim, which was made in the Tender.
- Restrict the suppliers, its shareholders, and directors on obtaining any business from the O. R. Tambo District Municipality for a period of 5 years.

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
DECLARATION

I/We the undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm, certifies that the items mentioned in part of the foregoing procurement form and returnable documents qualifies/qualify for the preference(s) shown and acknowledge(s) that:

The information furnished is true and correct.

The contractor may be required to furnish documentary proof to the satisfaction of the O. R. Tambo District Municipality that the claims are correct.

If the claims are found to be inflated, the O. R. Tambo District Municipality may, in addition to any other remedy it may have, recover from the contractor all cost, losses or damages incurred or sustained by the O. R. Tambo District Municipality as a result of the award of the Contract and/or cancel the contract and claim any damages which the O. R. Tambo District Municipality may suffer by having to make less favourable arrangements after such cancellation.

Signature of Tenderer

Signed at _____ on _____ day of _____ 202__

For the tenderer

WITNESSES:

1. _____

2. _____

O. R. TAMBO DISTRICT MUNICIPALITY

CONTRACT NO.: ORTDM SCMU 45-24/25

MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

FORM 2.3.3 ORIGINAL TAX CLEARANCE CERTIFICATE

FORM 2.3.4 NATIONAL TREASURY: CENTRAL SUPPLIER DATABASE

Proof of registration on the National Treasury Central Supplier Database to be attached here (alternatively the tenderer to provide MAAA number).

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2
CONTRACT

C1 AGREEMENT AND CONTRACT DATA

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data (Part 1 & Part 2)
- C1.3 Tenderer's Direct Participation of Targeted Labour
- C1.4 Specification for SMME Sub-contractor Employment
- C1.5 Performance Guarantee (Pro forma)
- C1.6 Adjudication
- C1.7 Agreement in terms of the Occupational Health and Safety Act 1993 (Act 85 of 1993)

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

C1.1 FORM OF OFFER AND ACCEPTANCE

1. OFFER

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

CONTRACT NO.: ORTDM SCMU 45-24/25 : MTHONJENI / eNGXANGXASINI WATER SUPPLY

– CONTRACT 2

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

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

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

_____ Rand (in words); R_____ (in figures).

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

Signature(s) _____ Date _____

Name(s) _____

Capacity _____

For the **Tenderer** (Name and address of organisation):

Name & Signature of Witness

Signature

Name

Date

2. ACCEPTANCE

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

The terms of the contract are contained in:

Part C1: Agreements and Contract Data (which includes this Agreement)

Part C2: Pricing Data

Part C3: Scope of Work

Part C4: Site Information

Part C5: Book of 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, as listed in the Returnable Documents as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of Offer and Acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this schedule, which must be duly signed by the authorised representative(s) of both parties.

The tenderer shall, within two (2) weeks after receiving a completed copy of this agreement including the schedule of deviation (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 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 the 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 (5) working days of the date of such receipt, notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding Contract between the parties.

Signature(s) _____

Name(s) _____

Date _____

Capacity _____

For the **Employer** (Name and address of organisation):

Name & Signature

Of Witness _____

Name and Signature

Date

3. SCHEDULE OF DEVIATIONS

Notes:

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

1.	Subject	_____
	Details	_____
2.	Subject	_____
	Details	_____
3.	Subject	_____
	Details	_____
4.	Subject	_____
	Details	_____
5.	Subject	_____
	Details	_____
6.	Subject	_____
	Details	_____

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By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents, 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 documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the Contract between the Parties arising from this Agreement.

FOR THE TENDERER:

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

Name & Signature

Of Witness _____ Date _____

FOR THE EMPLOYER:

Signatures (s) _____

Name(s) _____

Capacity _____

(Name and address of Organisation)

Name & Signature

Of Witness _____ Date _____

4. **CONFIRMATION OF RECEIPT**

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

the (day)

of (month)

20(year)

at(place)

For the Contractor:

.....

Signature

.....

Name

.....

Capacity

Signature and name of witness:

.....

Signature

.....

Name

C1.2 CONTRACT DATA (PART 1)

The General Conditions of Contract for Construction Works, third edition, second print, 2015, published by the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House, 1685, is applicable to this contract and is obtainable from www.saice.org.za.

Copies of the General Conditions of Contract may be obtained from the South African Institution of Civil Engineering Tel: 011 – 805 5947

PART 1: DATA PROVIDED BY THE EMPLOYER

The General Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Contract Specific Data below. Each item of data given below is cross-referenced to the clause in the General Conditions of Contract to which it mainly applies.

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

CONTRACT SPECIFIC DATA

The following contract specific data, amendments, additions or omissions, referring to the General Conditions of Contract for Construction Works, Third Edition, second print, 2015, are applicable to this Contract:

The following amendments and additions to the Clauses are the contract specific data applicable to this Contract:

Clause	Description / Wording
1.1.1.13	The Defects Liability Period is 12 (twelve) months , measured from the date of Certificate of Completion.
1.1.1.14	Refer Clause 5.5.1
1.1.1.15	The Employer is: O.R. Tambo District Municipality, represented by the DIRECTOR: INFRASTRUCTURE WATER AND SANITATION SERVICES and/or such other person or persons duly authorised thereto by the Employer in writing.
1.1.1.16	The Employer's Agent is ROMH Consulting (Pty) Ltd, also referred to in the contract as "ROMH" or "Employer's Agent". Any reference to the "Engineer" will have the same meaning and reference as the "Employer's Agent"
1.1.1.26	The Pricing Strategy is: A re-measurement contract
1.1.1.28	<i>Delete the contents of Sub-Clause 1.1.1.28 and replace with the following:</i> "Scope of Work means the document(s) containing the Standard Specifications, the Project Particular Specifications and the Drawings, that specify and describe the Works which are to be provided, and any other requirements and constraints relating to the manner in which the work is to be carried out."
1.1.1.35 (new)	<i>Add the following sub-clause:</i> "Drawings" means all drawings, calculations and technical information forming part of the Contract Documents (other than information contained in the Specifications) and any modifications thereof

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Clause	Description / Wording
	or additions thereto from time to time approved in writing by the Employer's Agent or delivered to the Contractor by the Employer's Agent.
1.1.1.36 (new)	Add the following sub-clause: "Parties" means the Contractor and the Employer.
1.1.1.37 (new)	Add the following sub-clause: "Letter of Notification" means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers. The notification of the decision does not form part of the Employer's Acceptance of the successful Tenderer's Offer and no rights shall accrue.
1.1.1.38 (new)	Add the following sub-clause: "Approved Programme" means the latest programme submitted by the Contractor and approved by the Employer's Agent. The latest programme agreed and approved by the Employer's Agent supersedes previous approved programmes.
1.2.1.2	The Employer's Agent's address for receipt of communications is: Telephone: 043 748 0018 Email: avuyilem@romh.co.za Address (Postal): PostNet Suite #179 Private Bag X1007 Lytelton 0140 Address (Physical): 6 Leadwood House, Cedar Square, Bonza Bay Road Beacon Bay East London 5241
1.2.1.3 (new)	Add the following sub-clauses:
1.2.1.4 (new)	Sent by facsimile, electronic or any like communication irrespective of it being during office hours or otherwise.
1.2.1.5 (new)	Posted to the Contractor's address and delivered by the postal authorities. Delivered by a courier service and signed for by the recipient or his representative.
1.2.1.6 (new)	Add the following sub-clause: Any notice or claim required in accordance with this Contract shall be communicated separately from other communications, on a separate cover with specific reference to the clause in terms of which the communication was made. Provided that the Employer, Employer's Agent and Contractor shall be entitled, by written notice to each other, to change their said addresses.
1.3.5	Add the following to the end of Sub-Clause 1.3.5: "No part of any document or drawings issued with this enquiry may be copied, photographed or repeated in any manner or by any process without the written consent of the Employer's Agent. Copyright is reserved on all designs, specifications, patents and patentable designs, systems and processes contained in the documents and drawings.

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Clause	Description / Wording
	The person, firm, or body to whom these documents are issued or made available shall be held jointly and severally responsible in their personal and corporate capacities for any contravention of the requirements of Sub-Clause 1.3.5. The recipients of these documents shall treat the documents as well as the details contained herein as private and confidential."
3.2.3	The Employer's Agent shall obtain specific approval from the Employer before executing any of his functions or duties according to the following Clauses of the General Condition of Contract: a) Clause 3.3.1 Nomination of Employer's Agent's Representative b) Clause 3.3.4 Employer's Agent's authority to delegate c) Clause 5.7.3 Acceleration d) Clause 5.11.2 Suspension of the Works by the Employer's Agent e) Clause 5.12.4 Acceleration instead of extension of time f) Clause 6.3.1 Approval of Variation Orders
3.3.6	<i>Add the following to the clause:</i> The limit of referring the matter to the Employer's Agent by the Contactor shall be twenty-one (21) days after the decision in question was given by the Employer's Agent's Representative.
4.3.1	<i>Add the following to the clause:</i> For conventional construction works the Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) shall apply and the minimum employment conditions which will apply shall be guided by the latest Sectorial Determination: Civil Engineering Sector published from time to time. Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) as per Government Notice R39 of 22 January 2020, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers. Compliance with the National Environmental Management Act (NEMA), Act 107 of 1998. The Contractor shall comply with the Occupational Health and Safety Specification prepared by the Employer in terms of the Construction Regulations, 2014 promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993) and COVID-19 requirements. Without limiting the Contractor's obligations in terms of the Contract, the Contractor shall before commencement of the Works or any part thereof, be in the possession of an approved Health and Safety Plan."
4.3.3	<i>Add the following at the end of Clause 4.3:</i> "With regard to the Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993), the Contractor shall, within such time as is stated for the production of insurance policies in terms of Clause 8.6.6, deliver to the Employer a letter, either a) from his Insurance Company certifying that the Contractor has affected insurance with the Company for the full extent of his potential liability in respect of all workmen employed by him on the Contract and undertaking to notify the Employer of the expiry date of the policy at least one calendar month before such date, or b) from the Compensation Commissioner certifying that the Contractor has complied with the requirements of the above-mentioned Act and is at present in good standing with the Compensation Fund."
4.3.4	<i>Add the following at the end of Clause 4.3:</i> The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as

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Clause	Description / Wording
	'the Act', that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act: (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act. (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with. The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations. (iii) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor. The Contractor shall be obliged to report forthwith to the Employer and Employer's Agent any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Employer's Agent, of such investigation, complaint or criminal charge.
4.3.5	Add the following at the end of Clause 4.3: The Contractor shall furthermore, in compliance with Constructional Regulations 2014 to the Act: (i) Acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 4(1)(a) of the Construction Regulation 2014 and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 5(1) of the Construction Regulation 2003 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted to the Employer for approval within fourteen (14) days after the Commencement Date for each assignment and shall be implemented and maintained from the Commencement of the Works. (ii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to ensure that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Employer's Agent, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified." The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to ensure that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Employer's Agent, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified."
4.5.4	<i>Delete the contents of Sub-Clause 4.5.4 and replace with the following:</i> "For this contract the fees, taxes, levies and other charges to be paid by the Contractor in terms of Sub-Clause 4.5.1.1 will not be refunded by the Employer. The cost thereof shall be deemed to be included in the prices tendered for relevant items in the Bill of Quantities."

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4.12.2	<i>Add the following to the end of Sub-Clause 4.12.2:</i> "The Employer's minimum requirements for approval of the Construction Manager: a) Must be in the employment of the Contractor; b) Must be registered with the minimum ND Civil Engineering/ NQF level 6; and Must have a minimum of 5 years' experience in water supply and concrete reservoir structures."
5.3.1	"The documents required from the Contractor before commencement of the works are: a) Health and Safety Plan (refer to Clause 4.3) b) Initial Programme (refer to Clause 5.6) c) Security (refer to Clause 6.2) d) Insurance (refer to Clause 8.6) e) Cashflow Projection f) Overall Construction Methodology with Quality Management Plan g) Occupational Health and Safety Agreement Form C1.4 h) Method Statement in terms of EMP i) Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer)" "The documentation required from the Provincial Director (DoL) before commencement with works execution are: a) Construction Work Permit (CWP) and site-specific number for each construction site in terms of Regulation 3(3) of Construction Regulation, 2014. b) In terms of Regulation 3(1) of Construction Regulations, 2014, the Employer must apply to the Provincial Director (DoL) in writing for a Construction Work Permit at least (thirty) 30 days before Commencement of the Works, said application must be in terms of Regulation 3(2) of the Construction Regulations, 2014 and including documentation in terms of the Regulations 3(2) of Construction Regulations, 2014. Commencement of the Works is estimated to be Fifty (50) days after the commencement of the Contract."
5.3.2	The Contractor shall submit the documentation required under subclause 5.3.1 including that required for the application for the Construction Work Permit and Commencement with Works, within fourteen (14) days from the commencement of the Contract.
5.3.3	<i>Add the following to the end of Sub-Clause 5.3.3:</i> "However, deemed commencement of the Works shall not be construed as approval of the documentation submitted. The Contractor shall not commence working until the Department of Labour has issued the Construction Work Permit in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2014"
5.4.1	Between the wording "... Site," and "the Location" In the third line, add the following: "subject to the Contractor having an approved project specific Health and Safety Plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2014 and complied with the initial requirements thereof,"
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but as set out in the Scope of Works.
5.4.4 (New)	<i>Add the following new Sub-Clause 5.4.4:</i>

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Clause	Description / Wording
	"The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his/her own cost any additional facilities outside the Site required by him/her for the purposes of the Works."
5.5.1	The stipulated maximum time limit for Practical Completion is 274 days measured from the commencement date. The period to achieving Practical Completion starts from Commencement Date of the Contract (5.2.1) and is inclusive of: 14 days to comply with Clause 5.3.1 32 days to allow Employer to obtain Notification of Construction Work in terms of Construction Regulation 2014, provided the Health and Safety Plan of the Contractor was in order and approved by the Employer Agent (namely Construction Health and Safety Agent) 274 days of construction period, thus 9 Months.
5.8.1	Delete the words "between sunset and sunrise" in the first line and replace with "outside normal working hours". "Non-working" days shall be Sundays. The Contractor will be allowed to work on Saturdays if he so chooses, but Saturdays will not be taken into account when calculating working days or any extension of time granted. The "special" non-working days are: - Any statutory public holiday in terms of the Public Holidays Act, and, where such statutory public holiday falls on a Sunday, and the next Monday subsequently becomes a statutory public holiday in terms of the Public Holidays Act, then both the relevant Sunday and the relevant Monday shall be special non-working days under the contract; - any proclaimed statutory day of mourning; - any proclaimed statutory election day which is proclaimed as a statutory public holiday; and d) all annual year-end shutdown periods as recommended by the South African Bargaining Council for the Civil Engineering Industry.
5.9.3	Delete the contents of Sub-Clause 5.9.3 and replace with the following: "The Contractor shall give adequate written notice to the Employer's Agent of any instructions or drawings, which the Contractor may require for the execution of the Works and the Employer's Agent shall deliver such instructions and/or drawings to the Contractor. The notice shall include details of the necessary drawing or instruction, details of by when it should be issued, and details of the nature and amount of the delay likely to be suffered if it is late.
5.12.1	Add the following to Clause 5.12.1: An Extension of Time awarded only becomes effective at the original Due Completion Date if, by that date, Practical Completion has not been achieved. To adjust the Due Completion Date, the circumstance must in fact delay Practical Completion. Float belongs to the Project.
5.12.2.2	Add the following to Clause 5.12.2.2: "Extension of time resulting from abnormal weather will be calculated as per the provisions in C3.4.2.6 of the Project Document.
5.12.4	Delete the contents of Clause 5.12.4 and replace with the following:

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Clause	Description / Wording
	“instead of granting extension of time, if feasible, the Employer's Agent may request the Contractor to accelerate the rate of progress to achieve Practical Completion without extension of time and agree the cost for payment of such acceleration in accordance with Clause 5.7.3.”
5.12.5 (new)	<i>Add the following to Clause 5.12</i> Critical Path Provision A delay in so far as extension of time is concerned, will be regarded as a delay only if, on a claim by the Contractor in accordance with the General Conditions of Contract, the Employer's Agent rules that all progress on an item or items of work on the critical path of the approved programme for the execution of the Works by the Contractor, has been brought to a halt. Delays on normal working days only, based on a working week, of five normal working days, will be taken in account for the extension of time.
5.13.1	<i>Delete the contents of Sub-Clause 5.13 and replace with the following:</i> If the Contractor fails by the Due Completion Date to complete the Works, or any specific portion thereof that is identified in the Scope of Works to the extent which entitles him in terms of Clause 5.14.2 to receive a Certificate of Practical Completion for the Works, then the Contractor shall be liable to the Employer for the sum(s) stated below as (a) penalty/ies for every day which shall elapse between the Due Completion Date for the Works or the specific portion of the Works and the actual Date of Practical Completion of the Works or of the specific portion. The penalty for delay shall be R 21 000 or 0.02% of the Contract Value (excluding VAT) per day; whichever is the higher value. To cover the Employer's Agent Cost for additional Supervision and Additional Services.
5.14.1	The requirements for achieving Practical Completion are: - Refurbishment of Spring Box NO-SP3; - Connect Bulk Gravity Main to Mthonjeni Distribution Reservoir; - Installation of the 1 360 m Bulk Gravity Main, complete with Couplings, Specials, and Fittings; - Installation of 55 kL Distribution Reservoir, complete with Base Platform and Inlet- and Outlet Pipework; - Installation of 9 485 m Reticulation Mains, complete with Couplings, Specials, and Fittings; and - Installation of 60 Communal Standpipes. When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Employer's Agent shall, within 14 days after receiving such request, either where the Works: - Has reached Practical Completion issue a Certificate of Practical Completion to the Contractor and to the Employer; or - Has not reached Practical Completion, issue a written list to the Contractor defining the incomplete work and defects to be rectified to achieve Practical Completion. Should the Employer's Agent not issue a Certificate of Practical Completion or such a list within the 14 days, Practical Completion shall be considered to have been achieved on the expiry of the 14 days of the written request in terms of Clause 5.14.1.
5.14.2	<i>Delete the contents of Sub-Clause 5.14.2 and replace with the following:</i> “As soon as the work referred to in the list issued in terms of Clause 5.14.1 has been duly completed and defects that manifested after the list was issued rectified, the Employer's Agent shall deliver to the Contractor and to the Employer a Certificate of Practical Completion together with a further written list setting out the work to be completed to justify the issuing of a Certificate of Completion.”

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Clause	Description / Wording
5.16.3	The latent defect period is ten (10) years , commencing on the day after the date of certification of Practical Completion.
6.2.1	Add the following to the end of Sub-Clause 6.2.1: "The security to be provided by the Contractor shall be: • A performance guarantee of ten per cent (10%) of the Contract Sum (worded exactly as per the pro forma included in C1.5). • The performance guarantee shall be from an approved South African Insurance Company or Bank to be jointly and severally bound with the Contractor, in accordance with the provisions of the Form of Guarantee."
6.2.3	Add the following to the end of Sub-Clause 6.2.3: The Contractor shall submit proof of renewal to the Employer's Agent.
6.3.1	Add the following to the end of the Clause: Variations that have a financial implication will be approved by ORTDM in line with their approved Supply Chain Management Delegation of Authority prior to work commencement. Contingencies are under the sole control of the of ORTDM and may be used upon approval by the delegated authority of ORTDM.
6.5.1.2.1	Add the following to the end of Sub-Clause 6.5.1.2.1: "Gross remuneration" referred to in Sub-Clause 6.5.1.2.1 shall be the nominal hourly or monthly remuneration actually paid to workmen and foremen before any additions for the Contractor's contribution to pension, medical aid, housing, tools, unemployment insurance, site allowance etc., and also before any deductions for tax, pension, medical aid, unemployment insurance, etc."
6.5.1.2.2	Add the following to the end of Sub-Clause 6.5.1.2.2: "Net cost of materials" referred to in Sub-Clause 6.5.1.2.2 shall be the net invoiced cost of materials after the deductions of all discounts, direct or indirect."
6.5.1.2.3	The percentage allowance to cover overhead charges is 15% .
6.6.1	The provisional sums stated in the Bill of Quantities are net amounts covering the actual expenditure which the Employer may incur.
6.7.6 (new)	Add the following sub-clause below 6.7.5: The Works are measured in accordance with the current SANS 1200 standard specifications and the standard system of measurement of Civil Engineering quantities for South Africa, published by the South African Institution of Civil Engineers. No claims arising from the method of measurement will be entertained.
6.8.2	Add the following to the end of Sub-Clause 6.8.2: "The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following coefficients// indices / references: The value of "x" is 0.10 The values of the coefficients are: a = 0,20 [Labour] b = 0,30 [Contractor's equipment] c = 0,40 [Material]

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Clause	Description / Wording
	d = 0,10 [Fuel] The relevant geographical area is “Eastern Cape (Province)”. The base month will be the month prior to the month in which tenders close. <u>The definitions of “L,” “P,” “M” and “F” referred to in Clause 1 of the Contract Price Adjustment Schedule are as follows:</u> • “L” is the “Labour Index” and shall be the “Consumer Price Index” for the urban area nearest to the Site as stated in the Contract Data and as published in the Statistical News Release P0141, Table A of Statistics South Africa. • “P” is the “Plant Index” and shall be the “Producer Price Index” for “Plant and Equipment” as published in the Statistical News Release P0151, Table 4 of Statistics South Africa. • “M” is the “Materials Index” and shall be the “Producer Price Index” for “Civil Engineering Material”, for the industry as stated in the Contract Data, and as published in the Statistical News Release P0151, Table 6 of Statistics South Africa. • “F” is the “Fuel Index” and shall be the “Producer Price Index” for “Diesel”, for the area as stated in the Contract Data, as published in the Statistical News Release P0142, Table 1 of Statistics South Africa.
6.8.3	Price adjustments for variations in the costs of special materials: Not allowed
6.9.1	<i>Add to Clause 6.9.1:</i> "The Contractor shall where practicable before delivery, and in any event not later than 24 hours after delivery to the Site, inform the Employer's Agent of any materials which are not his sole property."
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80% on submission of a payment guarantee.
6.10.3	The Retention Money shall be 10% (ten percent) of the value of the Works. The “Limit of the retention money” is 5% (five percent) of the Contract Price.
6.10.4	Replace the wordings “within 7 days” and “within 28 days” in Clause 6.10.4 with the wording “within 5 working days: and “within 30 days”.
6.11	Replace “ 15 per cent ” in the heading, the marginal heading and in the third line after 6.11.1.3 with “ 20 per cent ”.
7.2.1	<i>Add at the end of Clause 7.2.1:</i> "Unless otherwise directed in writing by the Employer's Agent, materials for the Permanent Works shall be new and unused.
7.4.4.1	<i>Replace the comma after the word "them" in the last line of Sub-Clause 7.4.4.1 with a full stop, and replace the word "and" with the following:</i> “The cost of all tests and testing required as part of the Contractor's own quality control programme, whether particularised or not, shall be deemed to have been allowed for in his tender; and”
7.8	The Defects Liability Period shall be 12 (twelve) months , measured from the date of Certificate of Completion.
7.8.1	<i>In subclause 7.8.1 delete the following:</i> "(fair wear and tear excepted)"

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Clause	Description / Wording
7.8.2.2	<i>In subclause 7.8.2.2 add the following:</i> ", subject to such work being done on a written instruction by the Employer's Agent."
8.3.1	Excepted risks In Clause 8.3.1.9 insert at the beginning, "Except where the Contract specifically so provides,".
8.6.1	<i>Add the following to the end of Sub-Clause 8.6.1:</i> "Insurances shall be maintained in force for the duration of the Contract, and in respect of Sub-Contractors, the Contractor shall be deemed to have complied with the provisions of the requirements relating to insurance by ensuring that the Sub-Contractors have effected such insurances."
8.6.1.1.2	The value of the materials supplied by the Employer to be included in the insurance sum is NIL .
8.6.1.1.3	The amount to cover professional fees for repairing damages and loss to be included in the insurance sum is 01% (One Percent) of the Contract Price.
8.6.1.2	<i>Add the following to the end of Sub-Clause 8.6.1.2:</i> "SASRIA (Riot) Certificate to be issued in joint names of Employer and Contractor for the full value of the works (including VAT)."
8.6.1.3	The limit of indemnity liability insurance shall be Ten Million (R10 000 000.00). Add to Clause 8.6.1.3: "The minimum amount of insurance required in terms of this Clause shall be per event, the number of events being unlimited.
8.6.1.5	<i>Add the following to the end of Sub-Clause 8.6.1.5:</i> The Contractor and/or his subcontractors shall provide, and maintain in force for the duration of the contract, the following additional cover: a) Complying with the provisions of the Compensation for Occupational Injuries and Diseases Act 1993, as amended; b) Insure all persons employed on the contract who do not fall within the provisions of the Compensation for Occupational Injuries and Diseases Act, against the contractor's Common Law Liability to such employees for the sum of not less than R1 000 000 (one million rand) for any one accident; c) Motor Vehicle Liability insurance comprising: - Insurance in accordance with the Road Accident Fund; "Balance of Third Party" Motor Risks including Passenger Liability; d) "All Risks" insurance on all constructional plant and machinery and allied equipment including all temporary accommodation brought onto site. "Furthermore, the insurance cover effected by the Contractor shall meet the following requirements: a) The insurance policy held by the Contractor shall cover "wet risks" where a portion of the works is subject to possible, occasional or regular inundation." b) Where one or more hired vehicles or Contractor's own vehicles are required for the Employer's Agent's site monitoring staff, such vehicles are to be fully comprehensively insured.

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Clause	Description / Wording
	Insurance of all materials stored off Site, and intended for incorporation in the Permanent Works, including their delivery to the Site and off-loading on Site, to the value of such materials for which payment is made in terms of Clause 6.10.1.1 hereof.
8.6.5	<i>In the second line of Sub-Clause 8.6.5, after the word "effected" add the words "in the joint names of the Employer and the Contractor"</i> <i>Add the following to the end of Sub-Clause 8.6.5:</i> "The insurance policy shall contain a specific provision whereby cancellation of the policy prior to the end of the period referred to in Cause 8.2.1 cannot take place without the prior written approval of the Employer." "The Employer shall approve (or disapprove) the terms of the insurances within fourteen (14) days from the date of receipt of the policies provided in terms of Clause 8.6.5."
8.6.6	<i>Add the following to Clause 8.6.6:</i> (a) "The policies and the proof of payment of premiums and continuity of the policies shall be produced within fourteen (14) days."
8.6.8 (new)	<i>Add the following Clause:</i> "In the event of any claim arising under the policies held in terms of this Clause, the Contractor shall forthwith take all necessary steps to lodge his claim on the joint behalf of himself and the Employer, and to secure settlement of such claim, and he shall submit to the Employer's Agent copies of all claims and associated documents. The claim submitted by the Contractor shall cover the cost of repairing and making good as required by Clauses 8.2.2.1 and 8.2.2.3."
9.1.4	<i>Replace the contents of Clause 9.1.4 with the following:</i> "Up to the time of termination of the Contract by either party in terms of this Clause, or until the Contractor gives notice in terms of this Clause to terminate the Contract and the Contractor is precluded from exercising his right to terminate the Contract because the Employer agrees to bear any resultant additional costs provided for in Clause 9.1.2.2 hereof, the Contractor: a) will be entitled to an extension of calendar time for working days lost as may be approved by the Employer's Agent, and b) will be reimbursed the cost of delays per working day, where the number of working days will be determined pro rata the effect the delays have on the progress of the work as agreed with the Employer's Agent. Payment in full and final settlement will be made at the rates tendered for the payment items specially provided in the Bill of Quantities. Where the circumstances described in Clauses 9.1.1 and 9.1.2 are applicable only to a certain portion of the contract, the Employer's Agent will decide after consulting the Contractor, to what extent the Contract as a whole is affected and whether or not a claim in terms of this Clause can be submitted. No payment will be made in terms of this Clause after the expiry of the Due Completion Date.
9.2.1.3.2	<i>Add the following to the end of Sub-Clause 9.2.1.3.2:</i> "or to maintain and extend the validity of the performance guarantee until the Certificate of Completion; or"

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Clause	Description / Wording
9.2.1.3.6	Delete the contents of Sub-Clause 9.2.1.3.6 and replace with the following: "Is not executing the Works in accordance with the Contract, or is neglecting or failing to carry out his obligations under the Contract, inter alia to comply with any instruction under Clause 4.2"
9.2.1.3.9 (new)	Add the following Clause: "The Contractor committed a corrupt or fraudulent act during the procurement process or the execution of the contract.
9.2.1.3.10 (new)	Add the following Clause: An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited the Contractor."
10.1.1.1	Delete the contents of Sub-Clause 10.1.1.1 and replace with the following: "The Contractor shall within 28 days after the commencement of each circumstance, event, act or omission giving rise to such a claim, deliver to the Employer's Agent a written claim, referring to this Clause and setting out:"
10.1.1.1.3	Delete the contents of Sub-Clause 10.1.1.1.3 and replace with the following: "The length of the extension of time, if any, claimed and the basis of the calculation by incorporating the effects of each circumstance, event, act or omission on the critical path of an approved programme, indicating the delay to Practical Completion, and"
10.1.1.2	Delete the contents of Sub-Clause 10.1.1.2 and replace with the following: "If, by reason of the nature and circumstances of the claim, the Contractor cannot reasonably comply with all or any of the provisions of Clause 10.1.1.1.11 to 10.1.1.1.4 to deliver a claim within the said period of 28 days, he shall:
10.1.1.2.1	Within the said period of 28 days issue a further notice referring to the relevant notice in terms of Clause 10.1.2 and confirming his intention to make the claim and comply with such of the requirements of Clause 10.1.1.1.1 to 10.1.1.1.4 as he reasonably can, and
10.1.1.2.2	As soon as practicable, comply with such of the requirements of Clause 10.1.1.1.1 to 10.1.1.1.4 as have not yet been complied with."
10.1.1.3	Delete the contents of Sub-Clause 10.1.1.3 and replace with the following: "If the circumstance, event, act or omission relating to the claim are of an ongoing nature:
10.1.1.3.1	the Contractor shall, within 14 days after the commencement of each circumstance, event, act or omission giving rise to such a claim, deliver to the Employer's Agent a written notice of his intention to submit a claim, referring to this Clause and setting out the particulars of the circumstance, event, act or omission. Provided that the additional payment or compensation or delay that occurred before 14 days prior the date on which the notice in terms of this clause was delivered, shall be deemed to be covered by the rates and/or prices set out in the Pricing Data and the time stated in the Contract Data relating to Clause 5.5.1.
10.1.1.3.2	The Contractor shall, in addition to delivering the said further notice within 28 days in terms of Clause 10.1.1.2.1, each month deliver to the Employer's Agent, in writing, updated particulars required in terms of Clause 10.1.1.1.1 to 10.1.1.1.4 and, within 28 days after the end of the circumstance, event, act or omission deliver his final claim."
10.1.1.4	Add the following new Sub-Clause 10.1.1.4:

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Clause	Description / Wording
	Discussions of claims during site meetings and minutes of such discussions shall not be regarded as a claim or notice by the Contractor of his intention to make a claim unless it is supported by a written submission in terms of Clause 10.1.1.1"
10.1.2	The Contractor shall issue an early warning notifying to the Employer's Agent as soon as he becomes aware of any circumstance, event, act or omission which could: a) increase the Contract Prices, b) Delay Practical Completion, or c) Impact on quality, or impair the performance of the Works in use
10.1.4	If, in respect of any claim to which this Clause refers, the Contractor fails to deliver his claim within the 28 day claim period in terms of Clause 10.1.1.1 or does not deliver a further notice within the period of 28 days in terms of Clause 10.1.1.2.1 or does not deliver his final claim within 28 days after the circumstance, event, act or omission ceased in terms of Clause 10.1 .1 .3.2, the Due Completion Date shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged all liability in connection with the claim. Provided that failure by the Contractor to give an early warning notice in terms of Clause 10.1.2 which an experienced Contractor could have given, the claim shall be assessed by the Employer's Agent and the ruling in terms of Clause 10.1.5 shall be taken into account the lack of mitigation measures employed due the lack of such early warning notice."
10.3.2	<i>Add the following:</i> Amicable settlement in terms of Sub-Clause 10.4 shall be utilised for all disputes prior to referring any dispute to adjudication
10.5.1	Dispute resolution shall be by ad-hoc adjudication
10.5.3	The number of Adjudication Board Members to be appointed is One .
10.7.1	The determination of disputes which are unresolved in terms of Clause 10.5.3 shall be referred to arbitration for final settlement.
10.10.1	<i>Delete the contents of Sub-Clause 10.10.1 and replace with the following:</i> Nothing herein contained shall deprive the Contractor or the Employer of either party's right to institute immediate court proceedings in respect of failure by the Employer or the Contractor, as the case may be, to pay the amount of a payment certificate on its due date, or to pay any amount of retention money on its due date for payment.
10.10.3	<i>Delete the contents of Sub-Clause 10.10.3 and replace with the following:</i> The Adjudication Board, arbitrator and the court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Employer's Agent. The Arbitrator and the court shall have full power to and to reconsider any decision by the Adjudication Board relevant to the matter in dispute, and neither party shall be limited in such proceedings before such arbitrator or court to the evidence or arguments put before the Employer's Agent for the purpose of obtaining his ruling, or the Adjudication Board for the purpose of obtaining a decision.
Refer to C.1.3 and C.1.4 (new)	The following additional clause shall apply: The Contract Participation Goal (CPG) of 20% applies to this bid: 10% of the Contract Value for Direct Participation by local Labour and 10% for Direct Participation by local enterprises.

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Clause	Description / Wording
	The Targeted SMME Participation Goal is a minimum of 5% of value of work excluding manufacture of pipes, contingencies, and provisional sums. The information provided in Section C.1.3 and C.1.4 of this document shall be contractually binding, and penalties will be imposed as per the Clauses included in the Sections should the tendered participation goals not be achieved.
11 (new)	Penalty for failure to meet proposed direct participation of targeted enterprise (new clause) In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty (P) calculated in the following manner: $P = 0.50 \times (L_M - L_A) \times V_A$ Where: L_M = SMME Subcontractors or Local Resources Goal % stated in the Contract Document L_A = SMME Subcontractors or Local Resources component % which the Employer's Agent certifies as being achieved upon completion of the Contract. V_A = Award Value (Contract Price exclusive of VAT, all provisional or prime cost sums and allowances for contingencies and escalation) P = Rand value of penalty payable

C1.2: CONTRACT DATA (PART 2)

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause	Description / Wording
1.1.1.9	The Contractor is: (The legal name of the Contractor)
1.2.1.2	The Contractor's address for receipt of communications and notices is: Address (Postal): Address (Physical): Telephone: Facsimile:..... Email:

SIGNED BY/ON BEHALF OF TENDERER:

Signed

Date

Name

Position

C1.3: TENDERER'S DIRECT PARTICIPATION OF TARGETED LABOUR

1. Applicable Standard Specification

The applicable Standard Specification is SANS 10845 – Part 8 (2015): Construction Procurement – Part 8: Participation of targeted labour (local resources) in contracts.

2. Definitions

With reference to clause 3 of SANS 10845-8, the following definitions shall apply to this schedule:

2.1 Targeted Labour

Individuals, employed by the Contractor in the performance of the contract, who are defined as the target group in the contract and who permanently reside in the target area or who are recognised as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

2.2 Target Group

The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

- i) 55 % women;
- ii) 55% youth; and
- iii) 2% on persons with disabilities

Target Group specifically excluded contractor's own staff unless such staff are also from the Target Area.

2.3 Target Area

For this project, the target area is defined as the areas within the proximity of the site (Mqanduli, WARD 28 and ward 35) in the KSD Local Municipality, Eastern Cape Province.

2.4 Targeted Labour Contract Participation Goal (CPGL)

Sum of the wages (excluding any benefits), for which the Contractor, or any of his/her sub-contractors contracts targeted labour in the performance of the contract, expressed as a percentage of the value of the contract.

2.5 Threshold Value

Sectorial Determined Wage Rate for the Civil Engineering Industry as adjusted from time to time (excluding any benefits). As determined in accordance with the Basic Conditions of Employment Act, 75 of 1977.

2.6 Value of the Contract

The contract sum (accepted contract amount) less allowances for specialist work, provisional sums, contingencies and VAT.

2.7 Labour Maximisation

Labour maximisation shall contribute a minimum of 10% of the value of the contract.

3. Conditions associated with the granting of preferences

The tenderer, undertakes to:

- a) engage one or more targeted labour in accordance with the provisions of the SANS 10845-8 as varied in Section 4 hereunder;

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- b) accept the sanctions set out in Section 5 below, should such conditions be breached;
c) complete the Targeted Labour (CPG) calculation form contained in Section 8 below; and
d) complete the Supporting Contract Participation Goal Calculation contained in Section 9 below.

4. Variations to the targeted construction procurement specification SANS 10845-8

The variations to SANS 10845-8 are set out below. Should any requirements of the variations conflict with the requirements of SANS 10845-8, the requirements of the variations shall prevail.

- 1) Engage one or more targeted labour in accordance with the provisions of the SANS 1914-4 as varied in section 3 hereunder;

Calculations shall be based as a % of targeted labour costs of the Tender Sum (excluding VAT) and not calculated in accordance with methods 1 or 2 in Annexure G of SANS 10845-8.

5. Labour Intensive Work

(a) Competencies of Supervisory and Management

Established contractors shall only engage supervisory and management staff in labour-intensive works who have either completed, or are registered for training towards, the skills programme outlined in Table 1.

Emerging contractors shall have personally completed or be registered on a skills programme for the NQF level 2-unit standard. All other site supervisory staff in the employ of emerging contractors must have completed, or be registered on a skills programme for, the NQF level 2-unit standards or NQF level 4-unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / Supervisor	2	Apply Labour-Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and
		Use Labour-Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	Any one of these 3-unit standards.
		Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman / Supervisor	4	Implement Labour-Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use Labour-Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	Any one of these 3 unit standards
		Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	

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Personnel	NQF level	Unit standard titles	Skills programme description
Construction Manager/ Manager (i.e. the Contractor's most senior representative that is resident on the site)	5	Manage Labour-Intensive against this Construction Processes	Skills Programme against this single unit standard

Details of these skills programmes may be obtained from the CETA ETQA manager (e-mail: gerard@ceta.co.za, Tel: 011-265 5900)

(b) Employment of unskilled and semi-skilled workers

- (i) Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
- (ii) The rate of pay shall be as per the latest sectoral determination for the Civil Engineering industry.
- (iii) Tasks established by the Contractor shall be such that:
 - the average worker completes 5 tasks per week in 45 hours or less; and
 - the weakest worker completes 5 tasks per week in 55 hours or less.
- (iv) The Contractor shall revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of (iii) above.
- (v) The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference shall be given to people with previous practical experience in construction and / or who come from households:
 - where the head of the household has less than a primary school education;
 - that have less than one full time person earning an income;
 - where subsistence agriculture is the source of income;
 - those who are not in receipt of any social security pension income
- (vi) The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:
 - 55 % women;
 - 55% youth; and
 - 2% on persons with disabilities.

(c) Contract Participation Goals

Established contractors shall only engage supervisory and management staff in labour-intensive works who have either completed

In support of the National Department of Public Works' Expanded Public Works Programme which is aimed at the alleviation of poverty through the creation of employment opportunities, the Employer is seeking to increase the intensity of labour, as appropriate, in all of its infrastructure sector projects.

It is a requirement of this contract, therefore, that the work be executed in such a manner so as to maximise the use of labour intensive construction methods in order to provide low and semi-skilled employment opportunities.

To this end, a minimum targeted labour contract participation goal is specified below, which shall be achieved by the Contractor in the performance of the contract, failing which, penalties as described will be applied.

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The specified minimum targeted labour contract participation goal (CPGL) using labour intensive method is 10%

The minimum CPGL is such that the Contractor will have to carry out some of the work that would normally have been undertaken using mechanised construction methods, by using labour intensive construction methods instead. It is left to the discretion of the Contractor to identify suitable work activities for the intensification of labour. The Contractor shall, within 5 working days of being requested in writing by the Employer's Agent to do so, submit details of his/her plan to achieve the minimum CPGL.

(d) Training of targeted labour

The Contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the Contract in a manner that does not compromise worker health and safety.

The cost of the formal training of targeted labour, will be funded by the local office of the Department of Labour. This training will take place as close to the project site as practically possible.

The Contractor shall access this training by informing the relevant regional office of the Department of Labour in writing, within 14 days of being awarded the Contract, of the likely number of persons that will undergo training and when such training is required. The Employer and the Department of Public Works (Fax: 012 3258625/ EPWP Unit, Private Bag X65, Pretoria 0001) shall be furnished with a copy of this request.

The Contractor shall do nothing to dissuade targeted labour from participating in training programmes and shall take all reasonable steps to ensure that each beneficiary is provided with two days of formal training for every 22 days worked.

An allowance equal to 100% of the task rate or daily rate shall be paid by the Contractor to workers who attend formal training.

Proof of compliance with the requirements of the above shall be provided by the Contractor to the Employer prior to submission of the final payment certificate.

It is envisaged that all local labour employed on this Contract shall receive a level of training for which they will receive accreditation.

An employee shall, upon termination of his services, be entitled to a certificate of service showing the full names of his employer (i.e. the Contractor) and the employee, the type of work done by the employee, the date of commencement, a record of training received and the date of termination of his services.

(e) Generic labour-intensive specification

(i) Scope

This Specification establishes general requirements for activities which are to be executed by hand involving the following:

- a) trenches having a depth of less than 1,5 meters
- b) stormwater drainage
- c) low-volume roads and sidewalks

(ii) Precedence

Where this Specification is in conflict with any other standard or specification referred to in this Contract, the requirements of this Specification shall prevail.

(iii) Hand excavatable material

Hand excavatable material is material:

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a) Granular materials:

- i) whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
- ii) where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100 mm;

b) Cohesive materials:

- i) whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii) where the material is a gravel having a maximum particle size of 10 mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100 mm;

Note:

- A boulder, a cobble and gravel is material with a particle size greater than 200 mm, between 60 and 200 mm, and between 2 mm and 60 mm respectively.
- A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400 mm and drives a cone having a maximum diameter of 20 mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

GRANULAR MATERIALS		COHESIVE MATERIALS	
Consistency	Description	Consistency	Description
Very loose	Crumbles very easily when scraped with a geological pick	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle
Loose	Small resistance to penetration by sharp end of a geological pick	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure
Medium dense	Considerable resistance to penetration by sharp end of a geological pick	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade
Dense	Very high resistance to penetration by the sharp end of geological pick; required many blows for excavation	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

(iv) Trench excavation

Hand excavatable material has to have a consistency of:

Granular Materials – Very loose or Loose

Cohesive Materials – Very soft or Soft

All other consistencies are regarded machine excavatable materials.

Hand excavation only for trenches having a depth of less than 1,5 metres, all other trenches to be done by machine.

(v) Compaction of backfilling to trenches (areas not subject to traffic)

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Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100 mm. Each layer shall be compacted using hand stampers

- a) to 90% Proctor density;
- b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10 mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

(vi) Excavation

All excavation, as listed under C3.4.2.6(f)(iv) classified as hand excavatable shall be excavated by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

(vii) Clearing and grubbing

Grass and small bushes shall be cleared by hand.

(viii) Shaping

All shaping shall be undertaken by hand.

(ix) Spreading

All material shall be spread by hand.

6. Training

The Contractor shall make allowance for the employment of a CLO in accordance with the following terms of reference

7. Community Participation

The Contractor shall make allowance for the employment of a CLO in accordance with the following terms of reference (TOR), and a Graduate Engineer as Clerk of Works (COW).

(a) Terms of Reference of CLO

The Community Liaison Officer (CLO) will be responsible to the Project Steering Committee (PSC), who will be involved in the appointment of the CLO. The CLO should be the person with a good standing and respect in the local community and would be selected according to the set criteria by the interviewing panel consisting of Local and District Municipality, ISD Consultant, PSC, Ward Councillor and selected local leadership.

Two (2) CLOs will appointed for the period of physical construction, plus a period of 14 days prior to this period.

The period will include times where small team works are busy in the area e.g. chambers, standpipes and reservoirs. The period will end when no further work is required.

The Contractor will provide office space and stationery for the CLO to carry out his / her duties.

Remuneration for the CLO will be **R7 500 plus R500 for Airtime and Data per CLO per month** for the period of employment. Where the CLO is engaged for part of the month, they shall be paid an equivalent daily amount. The unit for measurement shall be the man-month of CLO employment.

A CLO who fails in their responsibilities may be replaced in consultation with the PSC and ISD Consultant.

The CLO will liaise with the following people in performing these activities:

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Contractor:

- a. Organise and assist the contractor in explaining to all workers the labour-based construction model.
- b. Ensure labourers understand their task and the principles behind task work.
- c. Ensure labourers are informed of their conditions of temporal employment.
- d. Attend all site meetings and briefing for work procedures.
- e. Keep written record of interviews and community liaison which should be summarised and included in the monthly progress reports.
- f. Collect monthly welfare reports and submit to social facilitators.
- g. Ensure that contractor's workers are paid what is due to them and in time.
- h. Assist in the recruitment of labour.
- i. Promote and maintain sound relations with community stakeholders and other role players.
- j. Screen the supplied labour by the community through Project Steering Committees to ensure compliance with the agreed upon recruitment policy and the government's labour employment targets.
- k. Inform local labour about their conditions of temporary employment, to ensure their timeous availability and inform them timeously when they would be relieved, where the rotation of labour is applicable.
- l. Keep the labour register of labour and manage records of project local labourers and be able to provide reports on employment statistics.
- m. Consult on all decisions regarding local problems and any matters of importance that, in any way will be of relevance to the Contract.
- n. To be on site on a daily basis.
- o. To register concerns / perceptions and raise them in the PSC meetings.
- p. Attend site and PSC meetings to present monthly report on the local community labour involvement and site matters.
- q. Identify possible labour dispute and any disciplinary matter and advise the Construction Manager / foreman and assist in the resolution, where necessary must call for the assistance of the Social Consultant for the resolution of the conflicts.
- r. Assist the contractor in preparing records of project employees. Assist the contractor in making task measurements and the records thereof.
- s. Monitor the production of individual task workers and arrange replacement of those workers who fail to produce a reasonable task output.
- t. Attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- u. Communicate daily with the contractor to determine additional labour requirements with regard to numbers and skills and pass this to the PSC.
- v. Attend weekly meetings with the contractor and make a weekly written report which shall be a prerequisite to being paid.

Social Facilitator:

- a. Assist in convening of workshops.
- b. Disseminate information to PSC members.
- c. Articulate implementing agency policies to PSC members.
- d. Communicate labour requirements.
- e. Attend induction training programmes for workers and induct labourers.
- f. Submit monthly welfare reports to the social facilitators PSC.
- g. Communicate labour and skills requirements to the PSC.
- h. Assist in the recruitment and engagement of work force.
- i. Verify labour records and ensure all engaged qualify as per the Contract requirements.

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- j. Investigate and report all labour dispute matters to the PSC, advise Construction Manager on resolution.
-

The residents of each village being served by the scheme are represented by a PSC. All liaison with the community and the committees is the responsibility of the Social Facilitator in conjunction with the Project Manager. The Contractor will be required to liaise through them for any matters to do with the community.

(b) Graduate Engineer (Clerk of Works)

The Contractor shall employ, for the duration of the contract, a Graduate Engineer (National Diploma or BTech) for the duties of a Clerk of Works (COW). The PSC will provide a list of suitable candidates which will be interviewed by the Contractor before selecting a suitable person. If this person has never done similar work before the Contractor must make allowance to train the person. The Graduate Engineer will be responsible to the Contractor and a short-term contract must be set up to formalise the conditions of the appointment.

The contractor will provide office space, stationery and all other tools and equipment for the COW to carry out his / her duties.

At completion of the contract the Contractor must provide the Graduate Engineer with a certificate of service.

Remuneration for the Graduate Engineer will be **R 9 500 per month for the period of employment**. Where the COW is engaged for part of the month, they shall be paid an equivalent daily amount. The unit for measurement shall be the man-month of Graduate Engineer employment.

The Graduate Engineer shall be trained and mentored in:

- Contract Administration
- Quality Control
- Measurement of Works,
- Site Management System
- Survey

A Graduate Engineer who fails in their responsibilities as outlined in the agreement, may be replaced in consultation with the PSC and ISD.

8. Sanctions

In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = \frac{0.5 \times (D - D_0) \times C_A}{(100)}$$

Where:

D = tendered Contract Participation Goal percentage.

D₀ = the Contract Participation Goal which the Employer's representative certifies, based on the credits passed, as being achieved upon completion of the contract.

C_A = Contract Amount

P = Monetary value of penalty payable

9. Tender Contract Participation Goal in respect of targeted labour and local enterprises

I/We hereby tender a Contract Participation Goal of 20% (minimum: **30%**) in compliance with the Employer's Socio-Economic Requirements.

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The undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm or sole proprietor confirms that he/she understands the conditions under which such preferences are granted.

Signature:

Name:

Duly authorised to sign on behalf of:

Telephone:

Fax:

10. Supporting Targeted Labour (CPG) calculation

TYPE OF TARGETED LABOUR	WORKING HOURS	RATE	TOTAL WAGE COST
Permanent labour*			
Temporary labour			
SMME labour			
Local Enterprises			
		TOTAL	

*Note: A tenderer may only claim permanent staff as eligible for preference points if said staff are also from the Target Area. Permanent staff are considered to be those who have been continuously employed by the tenderer for at least three months prior to the commencement of this project.

C1.4: SPECIFICATION FOR SMME SUB-CONTRACTOR EMPLOYMENT

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7.	ACCEPTANCE OF THE SMME SUB-CONTRACTOR SPECIFICATION

Revision list

Rev 0.1

- Change SAFCEC Subcontract Agreement to General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments
- Change SMME EoI document compiler from Employer's Agent to the Main Contractor

ACRONYMS

CIDB	-	CONSTRUCTION INDUSTRY DEVELOPMENT BOARD
CM	-	CONSTRUCTION MANAGER (MENTOR)
ECSA	-	ENGINEERING COUNCIL OF SOUTH AFRICA
GCC	-	GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS
EA	-	EMPLOYER'S AGENT
MC	-	MAIN CONTRACTOR (MENTOR)
PM	-	PROJECT MANAGER (MENTOR)
PMT	-	PROJECT MANAGEMENT TEAM
SAICE	-	SOUTH AFRICAN INSTITUTION OF CIVIL ENGINEERING
SARS	-	SOUTH AFRICAN RECEIVER OF REVENUE
SMME	-	SMALL MEDIUM & MICRO ENTERPRISE
SANS	-	SOUTH AFRICAN NATIONAL STANDARDS

1 DEFINITIONS AND INTERPRETATIONS

For the purposes of this section of the Project Specification, the definitions given in the General Conditions of Contract for Construction Works 3rd Edition 2015, the Standard Specifications and the Project Specifications, together with the following definitions shall apply:

- a) Main Contract: Any contract for the execution of civil engineering or building or similar construction works, in which the liabilities and responsibilities of the two parties thereto are assigned essentially in a manner which is consistent with that set out in the General Conditions of Contract for Construction Works 3rd Edition, 2015.
- b) Project Management Team (PMT): A team that is set up after award of the contract, consisting of a delegate from each of the Main Contractor, the Employer's Agent and the Employer. The function of the PMT will be to consult regarding the management of the subcontracts involving SMMEs. The PMT will also evaluate the Main Contractor's performance regarding the goals set for SMME involvement. The Employer's Project Manager will decide which party is to chair and lead the team. Minutes of these meetings will be taken by the Employer's Agent.
- c) SMME Construction Manager: Person provided by Main Contractor to guide, assist and mentor all eligible potential SMMEs tendering and awarded a contract as SMME Sub-Contractors as per section 2.2 of this section of the Specification.
- d) Small, Medium and Micro Enterprises: An Affirmable Business Enterprise which adheres to statutory labour practices, is a legal entity, registered with SARS and the Compensation Commissioner or FEMA and continues to operate as an independent enterprise for profit.
- e) SMME Sub-Contractor: An Emerging Contractor referred to as an SMME and chosen by the Main Contractor to tender for and, if successful, to provide works as part of the total service required by the Employer for the Contract.
- f) Sub-Contractor: A Contractor who contracts with the Main Contractor to provide works as part of the total services required by the Employer for that Contract.
- g) SMME Package: Specified work package identified for execution by SMMEs. The identifiers are Employer, Employer's Agent and Main Contractor.
- h) Joint Venture: An association of firms, companies or businesses for which purpose they combine their expertise, efforts, skills and knowledge to execute the Contract.

2 SMME TENDER PHASE

2.1 Identification of SMME Contractors

"Immediately upon the award of the Contract the Main Contractor in conjunction with the Employer and the Employer's Agent shall place an advertisement for Expressions of Interest for CIDB class CE SMME contractors to undertake part of the Works. It is intended that SMME subcontracts shall be issued covering certain items of the work which will be identified as set out below."

2.2 Identification of Works Opportunities

General items to be considered as possible work packages for the sub-contractors are listed below. These packages are not all inclusive and contractors are encouraged to exceed the minimum requirements. Specific work items to be performed by subcontractors will be agreed to post-award. It remains the main contractor's responsibility to ensure compliance with the stipulated contract participation goals.

- Site clearance
- Hand excavation
- Construction of chambers
- Installation of valve and pipeline markers
- Fencing
- Village reticulation

2.3 Tender process for SMMEs

"Potential SMME Sub Contractors shall be invited to tender for each work package."

2.4 Compilation and issue of tender documents

The Main Contractor supported where required by the Employer's Agent shall compile the tender documents in such a manner that it will facilitate the achievement of all objectives and principles pertaining to procurement and development of SMMEs as stated in or as may reasonably be inferred from the conditions of this contract.

All tender documentation shall be reviewed, approved and issued by the Main Contractor with all copies of tender documents compiled deemed to be included in the tendered rates or mark-up provision allowed for the various SMME work packages. The tender or quotation document will be issued to invited SMMEs at NO COST and the Main Contractor is to make allowance for such cost in his tendered rates.

2.5 Site Briefing Session

The Main Contractor shall facilitate a Site Briefing Session for the invited SMMEs. The Main Contractor will also make sure that all relevant parties including the PMT are present and given an opportunity to present specific aspects of the requirements pertaining to their tender requirements.

2.6 Pre-Tender Assistance to the SMMEs

At the briefing session, the Main Contractor assisted by the PMT will be responsible for ensuring that prospective SMME Tenderers fully comprehend the:

- i. implications of the liabilities and responsibilities inherent in the subcontract applicable;
- ii. scope and extent of the portion of the works included in the subcontract;
- iii. the requirements for quality control of works;
- iv. the requirements for occupational health and safety;
- v. proper procedures for the submission of the tenders;
- vi. procedures and basis on which tenders will be adjudicated and the subcontracts awarded.

2.7 Adjudication

- a) The Main Contractor shall receive all tenders at a location identified by him. All sealed tender submissions will be placed in a proper tender box provided by the Main Contractor for this purpose. A submission register will be maintained by the Main Contractor for all tenders received.
- b) All tenders received shall be evaluated by the Main Contractor for final approval. The draft tender evaluation report shall be distributed to the PMT members 5 working days prior to the PMT meeting for comments and perusal in order to finalise the evaluation before the meeting. The format of the tender evaluation report must be agreed upon at the first PMT meeting.

The evaluation of the Occupational Health and Safety plans will be done by the Main Contractor SHE Officer.

- c) The PMT shall have the right to interview any tenderer for the purpose of:
 - clarifying any aspect of the tender;
 - querying abnormally high or low rates and prices, and
 - clarifying rates and prices which are not in balance with other tendered rates and prices.

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- d) The Main Contractor shall provide all reasonable opportunity to such tenderers who have been interviewed, to correct obvious and patent errors, provided always that this can be achieved without altering the total tendered sum.

2.8 Award of Tender

The Main Contractor will award the work with the successful SMME Tenderers, and a Sub-Contract Agreement will be signed between the Main Contractor and the successful SMME Tenderers.

2.9 Sub-Contract Agreement

A Sub-Contract Agreement in accordance with the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments will be compiled by the Main Contractor with the assistance of the Employer's Agent. They shall be responsible for ensuring that the terms and conditions are consistent with all requirements as specified in or reasonably may be inferred from the provisions of this Contract. All costs associated with the tender process including the conclusion of the agreement are for the Main Contractor's account.

The final terms and conditions of each subcontract agreement shall be subject to the approval of the PMT, prior to entering into the subcontract agreement. The Main Contractor may not enter into any subcontract agreement that contains terms more onerous or disproportionate to the risks inherent in the main contract for either the SMME or the Main Contractor.

The terms and conditions of the subcontract agreement shall specifically ensure that the provisions of the main contract pertaining to:

- a) The allowable sources from which workers may be drawn in terms of the contract;
- b) The terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract works;
- c) Any training to be provided to the temporary workforce;
- d) Occupational health and safety; and
- e) The use of labour-intensive methods.

Shall apply in respect of all SMME Contracts.

3 CONSTRUCTION PHASE

3.1 Mentorship

The Main Contractor shall closely manage and supervise and assist all SMMEs in all aspects of management, execution and completion of subcontracts. This shall typically include assistance with planning the works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures, etc. The extent and level of such management, guidance and assistance to be provided by the Main Contractor shall be directed at enabling the SMMEs to achieve the successful execution and completion of the subcontract. Payment for such on-going assistance is deemed included in the rate tendered for the administrative cost of SMMEs.

3.2 Guide, Assist and Mentor SMMEs

The Main Contractor shall employ on a full-time basis an SMME Construction Manager. The CV of the proposed individual must be submitted to the Employer's Agent for approval based on the requirements shown below.

The SMME Construction Manager will manage the SMMEs and report monthly on progress of each SMME to the Project Management Team (PMT).

Such Construction Manager must be adequately experienced with SMME work(s) concern and the development thereof and will be subject to the approval of the Employer. The SMME Construction Manager will render full-time assistance to and mentor the SMMEs and shall:

- i. Possess a minimum of five years site-based experience in the civil engineering construction industry and have a sound knowledge of the minimum requirements to carry out construction work effectively and efficiently.
- ii. Possess 3 years civil engineering administrative experience.
- iii. Be registered with ECSA registration (Engineering Council of South Africa): Pr. Eng or Pr. Tech or SACPCMP (South African Council for the Project and Construction Management Professions) as a Pr. CPM or Pr. CM.
- iv. Would preferably hold a mentoring certificate.

- v. Maintain the programme of the subcontract.
- vi. Ensure continuous supervision and assistance to the SMME sub-contractors.

The SMME Construction Manager will report on performance of the SMME on a monthly basis. On completion, the Main Contractor will issue a Final Certificate as given in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments within seven days after the final completion.

3.3 Dispute Resolution Procedures

The Main Contractor shall at all times:

- a) Apply the terms and conditions of the subcontract fairly and justly, taking due cognisance of the level of sophistication and experience of the particular SMME concerned, as well as the level of subcontract applicable.
- b) Closely manage and supervise all SMMEs and wherever feasible, shall give reasonable warning to SMMEs when any contravention of the terms of the subcontract has occurred or appears likely to occur. The Main Contractor shall, whenever feasible, give the SMMEs reasonable opportunity to rectify any such contravention or to avoid such contravention and shall render all reasonable assistance to the SMME in this regard.
- c) If no agreement can be reached between the Main Contractor and the sub-Main Contractor, the matter shall be referred to a mutually acceptable mediator as required in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments.

When taking any actions or imposing any penalties as are provided for in the subcontract, the Main Contractor shall explain fully to the SMMEs that such actions are provided for in the subcontract.

3.4 Quality of Work and Performance of the Sub-Main Contractor

If the Sub-Contractor, in the opinion of the Main Contractor, fails to comply with the criteria as listed below, the Main Contractor shall issue a written warning to the Sub-Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Employer's Agent. These criteria include:

- a) Acceptable standard of works as set out in the specifications in the sub-contract tender document.
- b) Progress in accordance with the time constraints in the Sub-Contractor's tender document.
- c) Punctual and full payment of the workforce and suppliers.
- d) Occupational health and safety compliance.
- e) Compliance with environmental requirements.

The Sub Contractor shall have fourteen (14) days from the date of receipt of the warning letter from the Main Contractor to satisfactorily rectify the issues raised by the Main Contractor, with the exception of point (d) and (e), for which the response time shall be 24 hours. If a satisfactory solution cannot be reached after the mediation process this will be sufficient grounds for the Main Contractor to terminate the contract provided the Project Management Team is satisfied that the Main Contractor has made every effort to correct the performance by the Sub Contractor.

3.5 Payment of SMMEs

- 3.5.1 SMME Sub-Contractors are to be invited to submit their payment certification or claim monthly and are to be paid by the Main Contractor within Thirty (30) days of receipt of invoice.
- 3.5.2 Payment to SMMEs **MAY BE** delayed pending payment of the Main Contractor by the Employer.
- 3.5.3 Payment to SMMEs may not be subjected to set off costs unless provided for in law, and may not exceed 5% of the payment, unless approved by the Employer.
- 3.5.4 Payment to SMMEs may not be discounted for early payment.
- 3.5.5 No interim payment of the SMME invoice may be unfairly withheld or delayed for whatever reason.
- 3.5.6 The Main Contractor must acknowledge and honour cessions in favour of recognised financiers or suppliers of the SMME if presented to the PMT and approved.

3.6 Main Contractor's Liability

No provision or requirement set out in this specification shall be deemed to relieve the Main Contractor of any liability or obligation under the contract, and in accordance with the provisions of Clause 4.4 of the General Conditions of Contract for Construction Works 2015, the Main Contractor shall be fully liable for the acts, defaults and negligence of any SMMEs, his agents or employees, as fully as if they were the acts, defaults and negligence of the Main Contractor, his

agents or employees save as specified in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments.

Any failure or neglect by the Main Contractor to comply with the provision of the specifications, or any omission or neglect by the Main Contractor in adhering to or applying the principles as are described and inherent in the specifications, shall be deemed to constitute a warrant for the Employer's Agent to act in terms of Clause 9.2 of the General Conditions of Contract for Construction Works 2015.

3.7 Performance Guarantee

The following Performance Guarantees will be applied on the SMME Sub Contracts:

3.7.1	up to R1 000 000	shall be zero percent	(0%);
3.7.2	R1 000 001 to R4 000 000	shall be five percent	(5%);
3.7.3	Exceeding R4 000 000	shall be ten percent	(10%)

All the above will be of the accepted SMME Sub-Contract Value and will be required from SMMEs as stated in the General Conditions of Subcontract for Construction Works, SAICE, First Edition 2018 including all amendments.

Where such guarantees are provided by SMME, the return of same will be related to the time when the work carried out by the SMME is complete to the satisfaction of the Main Contractor and the Employer's Agent.

3.8 Retention

Five percent (5%) of the Sub-Contract Value (excluding VAT) will be deducted as retention on SMME, with half to be released on issue of the Completion Certificate for the specific SMME Sub-Contract with the remaining retention released on issuing of the Final Approval Certificate after the twelve (12) months Defects Liability Period. This deduction will be made from each payment certificate till it reaches the maximum of 5% of the Sub-Contract Value.

3.9 Measurements

An item has been measured in Bill of Quantities allowing the Main Contractor to price for the cost of the Main Contractor to manage and supervise the SMMEs during the execution of their works. The price tendered will be deemed to include all incidentals by the Main Contractor to comply with the conditions of this specification. No other claims will be entertained should SMMEs affect the contract works in any way, and the Main Contractor shall deem to include such effects in the handling cost percentage for the different SMME work packages above.

3.10 Sub-Contracting by SMME

The Main Contractor shall not permit SMME Sub-Contractors to further subcontract on any other conditions than those applying in the project specification to Sub-Contractors or SMME Sub-Contractors.

3.11 Joint Venturing & Consortium

The Main Contractor shall not permit the SMME Sub-Contractors to enter into a Joint Venture or form a consortium with an external SMME(s) unless PMT approves so before the tender award. The SMME may only be allowed to enter into Joint Venture or form a consortium with the other invited SMME(s) on the package concerned.

4 PORTFOLIOS OF EVIDENCE & UP-GRADE SUPPORT

4.1 Keeping of Records

The Main Contractor shall assume responsibility for the compilation and maintenance of comprehensive records detailing each SMME's progress during the construction period, starting from the award of a subcontract to an SMME until the successful completion of the subcontract work or termination of the subcontract. To this end the Main Contractor shall arrange for the completion, on behalf of the SMME Sub Contractor, of the Employer's pro-formas to be provided by the Employer at award of the Main Contract. The Main Contractor must also keep a register of the details of each SMME engaged.

The Main Contractor shall keep comprehensive records of the training given to each trainee and SMME, at the successful completion of each course; each trainee shall be issued with a certificate indicating the course contents as proof of attendance and completion. The Main Contractor shall keep a register of certificates issued. Whenever required, the Main Contractor shall provide copies of such records to the Employer's Agent.

4.2 Monthly Returns

The Main Contractor's participation performance will be measured monthly in order to monitor the extent to which he is striving to reach the targets in this contract. The Main Contractor shall complete and return on a monthly basis the following pro-forma forms of the Employer (to be provided by the Employer at award of the Main Contract):

- Report on employment.
- Report on the SMME's Plant and Equipment.
- Report on progress against programme.
- Report on financial status.
- Report on engineering training.
- Report on development training.
- Report on safety training.

The completed forms shall be presented to the Employer's Agent at each site meeting. Failure to adhere to this requirement shall result in the delay of any payment due until the Employer's Agent confirms that the forms have been received.

4.3 Main Contractor's duties upon completion of each sub-contract

The Main Contractor shall, on completion of each and every subcontract completed in accordance with the provisions of this specification, issue free of charge to the SMME within 7 (seven) days of the completion of the subcontract, a Certificate of Experience on a single A4 page containing the following:

- a) Contract data:
 - i. Contract title;
 - ii. Main Contractor's full name and address;
 - iii. Employer's Agent's name and address;
 - iv. Employer's name and address.
- b) Subcontract data:
 - i. SMME name and address;
 - ii. Scope or extent of the subcontract works;
 - iii. Value of the subcontract works;
 - iv. Applicable level of the subcontract;
 - v. Duration of the subcontract;
 - vi. Date of completion of the subcontract;
 - vii. Description of the training undergone by the SMME.

In addition, the SMME Construction Manager must provide comments of the performance of the SMME Sub Contractor in respect of contract execution, Labour management and OHS principles.

- c) Certifying the SMME's successful completion of the subcontract.

5 MEASUREMENT AND PAYMENT

Payment Ref	Unit

SM10.01 Provision of an SMME Construction Manager.....	Month

The monthly tendered rate must include for all costs arising from the full-time mentoring, guidance and supervision of the SMME Sub Contractors, including salary, accommodation, transport and all other expenses incurred.

SM10.02 Expressions of Interest for SMME's	Number (No)

The tendered sum must include all costs incurred in the preparation of the expressions of interest, advertising and evaluation of the replies for presentation to the PMT.

SM10.03 Tenders for SMME's	Number (No)

Payment under this item shall be the number of SMME sub contract, tender processes which the Contractor carries out. The tendered rate shall include full compensation for the compilation and issue of tender documents, tender invitation, training and provision of assistance to tenderers, evaluation of tenders and award of sub contracts.

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SM10.04 Administrative costs of mentoring SMME Sub Contractors Month

The tendered sum must include for all costs incurred in the administration of the mentoring of SMME Sub Contracts but not including the costs of the duties of the SMME Construction Manager or normal site supervision and administration activities. These could include the costs of outside specialists such as estimators, OHS or environmental specialists.

SM10.05 Preliminary and General costs associated with SMME's and fluctuation between the Contractor's tendered rates and the rates of SMME subcontractors Provisional Sum (Prov. Sum)

Measurement and payment shall be in accordance with the provisions of clause 6.6 of the Conditions of Contract.

The Contractor shall, for inclusion in his monthly certificate, produce a schedule of work packages undertaken by SMME subcontractors, clearly indicating the P&G costs incurred which shall be limited to 20% of each SMME package.

The provisional sum makes provision for the SMME subcontractor's establishment on site and general obligations, which will be included in the SMME subcontractors' contracts, and for funds to deal with the fluctuations between the Contractor's tendered rates and the rates of the approved SMME subcontractors."

SM10.06 Handling Costs and Profit Associated with SM10.05..... Percentage (%)

The Contractor is required to calculate the total percentage mark up for his handling costs and profit on Item SM10.05 which shall be claimed monthly under this pay item.

6 FINANCIAL PENALTY

In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty (P) calculated in the following manner:

$$P = 0,50 \times (L_M - L_A) \times V_A$$

Where:

L_M = SMME Subcontractors or Local Resources Goal % stated in the Contract Document

L_A = SMME Subcontractors or Local Resources component % which the Employer's representative certifies as being achieved upon completion of the Contract.

V_A = Award Value (Contract Price exclusive of VAT, all provisional or prime cost sums and allowances for contingencies)

P = Rand value of penalty payable

7 ACCEPTANCE OF THE SMME SUB-CONTRACTOR SPECIFICATION

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm or sole proprietor. confirms that he/she understands the conditions under which such preferences are granted.

Signature:

Name:

Duly authorised to sign on behalf of:

Telephone:

Fax:

C1.5: PERFORMANCE GUARANTEE (PRO FORMA)

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address:

"Employer" means: **O.R. TAMBO DISTRICT MUNICIPALITY**

"Contractor" means:

"Employer's Agent" means: **ROMH CONSULTING (Pty) LTD**

"Works" means: **MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2**

"Site" means: **MTHONJENI / eNGXANGXASINI WATER SUPPLY – CONTRACT 2**

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

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

Amount in words:

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

Amount in words:

Type of Performance Guarantee: **FIXED**

"Expiry Date" means: Within 14 days after the issue of the Certificate of Completion by the Employer's Agent in terms of Clause 5.14.4 of the General Conditions of Contract.

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

- 1 The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 2 The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Employer's Agent of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
- 3 The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

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- 3.2 its obligation under this Performance Guarantee is restricted to the payment of money.
-
- 4 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
- 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
- 4.2 A first written demand issued by the Employer to the guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
- 5 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
- 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
- 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
- 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 6 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
- 7 Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
- 8 Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 9 Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
- 10 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 11 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 12 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 13 This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

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

Signed at

Date

Guarantor's signatory: (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory: (1)

Witness signatory: (2)

C1.6: ADJUDICATION

Adjudication shall be carried out in terms of Clauses 10.5 and 10.6 of the General Conditions of CONTRACT 10015.

The Disclosure Statement and the Adjudication Board Member Agreement to be used in this Contract are contained Appendices 4 and 5 of the General Conditions of Contract GCC 2015.

C1.7: AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT No 85 OF 1993)

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

THIS AGREEMENT is made between

(hereinafter called "the Employer") of the one part, herein represented by.....

in his capacity as

and

(hereinafter called "the Mandatary") of the other part, herein represented by:

.....

in his capacity as

duly authorised to sign on behalf of the Mandatary.

WHEREAS the Contractor is the Mandatary of the Employer in consequence of an agreement between the Contractor and the Employer in respect of

CONTRACT No: CONTRACT TITLE

for the construction, completion and maintenance of such Works;

AND WHEREAS the Employer 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);

NOW THEREFORE THIS AGREEMENT WITNESSED AS FOLLOWS:

- 1 The Mandatary undertakes to acquaint the appropriate officials and employees of the Mandatary with all relevant provisions of the Act and the regulations promulgated in terms thereof.
- 2 The Mandatary shall execute the work in accordance with the Contract Documents pertaining to this Contract.
- 3 This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Employer's Agent requiring him to commence the execution of the Works, to either
 - (a) the date of the Final Approval Certificate issued in terms of Clause 5.16.1 (GCC 2015) of the General Conditions of Contract (hereinafter referred to as "the GCC"), or
 - (b) the date of termination of the Contract in terms of Clauses 9.1, 9.2 or 9.3 (GCC 2015) of the GCC.

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- 4 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), 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 employers to their employees;
 - (ii) Section 9 : General duties of employers and self-employed persons to persons other than employees;
 - (iii) Section 37 : Acts or omissions by employees or mandataries, and
 - (iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.
 - (b) The procedures and safety rules of the Employer as pertaining to the Mandatary and to all his subcontractors.
- 5 In addition to the requirements of Clause 8.4 (GCC 2015) of the GCC and all relevant requirements of the Contract, the Mandatary agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.
- 6 The Mandatary is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.
- 7 The Mandatary warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 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 Employer upon signature of the agreement.
8. The Mandatary undertakes to ensure that he and/or subcontractors and/or their respective employers 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 Employer. 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 Employer.
 - (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 Employer. The Employer will further be provided with copies of all written documentation relating to any incident.
 - (c) The Employer hereby obtains an interest in the issue of any formal inquiry 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 subcontractors.

In witness thereof, the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

Signature(s) of authorised agents: Date.....

Name(s) (in block letters):

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Capacity of authorised agents:

for and on behalf of the Mandatary
(Name and address of organisation)

Witness:..... (Full name – in block letters – and signature)
(Name)

.....
(Signature)

Date:

For and on behalf of the Employer:

Signature(s) of authorised agent(s) Date.....

Name(s) (in block letters)

Capacity of authorised agents:

for the Employer: (Name and address of organisation)

Witness:..... (Full name – in block letters – and signature)
(Name)

.....
(Signature)

Date:

O. R. TAMBO DISTRICT MUNICIPALITY
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C2 PRICING DATA

C2.1 Pricing Instructions

C2.2 Bill of Quantities

C2.1 PRICING INSTRUCTIONS

C2.1.1 PREAMBLE TO THE BILL OF QUANTITIES

C2.1.1.1 The Conditions of Contract, the Contract Data, the Scope of Work, the Site Information, and the Drawings shall be read in conjunction with the Bill of Quantities.

C2.1.1.2 Measurement and payment shall be in accordance with the relevant provisions of clause 8 of each of the SANS 1200 Standardised Specifications for Civil Engineering Construction or the Particular Specifications referred to in the Scope of Work, subject to the variations and amendments contained therein.

C2.1.1.3 The Bill of Quantities comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.

Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill of Quantities, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Employer's Agent 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 of Quantities.

Clause 8 of each Standardised Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Scope of Work, all set out which ancillary or associated activities are included in the rates for the specified operations.

C2.1.1.4 Descriptions in the Bill of Quantities are abbreviated and comply generally but may differ from those in the Standardised Specifications and Scope of Work. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill of Quantities has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities¹. Should any requirement of the measurement and payment clause of the appropriate Standardised or Particular Specifications be contrary to the terms of the Bill of Quantities or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardised or Particular Specification, as the case may be, shall prevail.

C2.1.1.5 Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.

C2.1.1.6 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 several items. 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.

¹ The standard system of measurement of civil engineering quantities published by the South African Institution of Civil Engineers.

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C2.1.1.7 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.

The Tenderer shall also fill in a rate against the items where the words "rate only" appears 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 be required.

Should the Tenderer group several 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.

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.

C2.1.1.8 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 Works Assignment and the quantities certified for payment.

Ordering of materials is not to be based on the Bill of Quantities, but only on information issued for construction purposes.

C2.1.1.9 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 Standardised 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

C2.1.1.10 The units of measurement indicated in the Bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

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mm	=	millimetre	H	=	hour
m	=	metre	Kg	=	kilogram
km	=	kilometre	T	=	ton (1 000 kg)
m ²	=	square metre	No	=	number
m ² .pass	=	square metre-pass	Sum	=	lump sum
ha	=	hectare	MN	=	Meganewton
m ³	=	cubic metre	MN.m	=	Meganewton-metre
m ³ .km	=	cubic metre-kilometre	PC sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kℓ	=	kilolitre	%	=	per cent
MPa	=	MegaPascal	Kw	=	kilowatt
Mℓ	=	Megalitre (1000 kℓ)	Kn	=	kilonewton

CORRECTION OF ENTRIES MADE BY TENDERER

Any entry made by the Tenderer in the Price Schedule, forms, etc., which the tenderer desires to change, shall not be erased or painted out. A line shall be drawn through the incorrect entry and the correct entry shall be written above in black ink and the full signature of the Tenderer shall be placed next to the correction.

C2.2 PRICING SCHEDULE

O. R. TAMBO DISTRICT MUNICIPALITY
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SIGNED BY/ON BEHALF OF TENDERER

NAME

SIGNATURE

DATE

COMPANY STAMP

DECLARATION

(In respect of completeness of Tender)

O. R. TAMBO DISTRICT MUNICIPALITY

Nelson Mandela Drive

Myezo Park

Mthatha

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part C2 of this Contract Document in consecutive order upon which my/our tender for the CONTRACT NUMBER: ORTDM SCMU 45-24/25 – MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2 has been based.

SIGNED BY/ON BEHALF OF TENDERER

NAME

SIGNATURE

DATE

Part C3: SCOPE OF WORK

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C3.1	Description of the Works
C3.2	Engineering
C3.3	Procurement
C3.4	Construction
C3.5	Management
C3.6	Health and Safety
C3.7	Project Specification

C3.1. DESCRIPTION OF THE WORKS

STATUS

In the event of any discrepancy between the Scope of Work and any part of the SANS 1200 Standardised Specifications, the Bill of Quantities or the Drawings, the Scope of Work shall take precedence and prevail in the Contract.

C3.1.1 Employer's Objectives

The Employer (O.R. TAMBO DISTRICT MUNICIPALITY) as the Water Service Authority (WSA) has a constitutional responsibility of providing sustainable and viable water services to communities within its area of jurisdiction. The Employer has embarked on a programme of providing basic potable water to variously disadvantaged rural communities through Water Services Infrastructure Grant (WSIG) programme.

Based on the specific goals, the Employer is aiming to promote enterprises located in O.R. Tambo District and in Mhlontlo Local Municipality in particular.

C3.1.2 Overview of the Works

O.R. Tambo District Municipality has embarked on a programme of providing basic potable water to variously disadvantaged rural communities through Water Services Infrastructure Grant (WSIG) programme.

The community of Mthonjeni Village are supplied via an existing protected spring west of the village. The potable water traverses via an existing ND40mm gravity pipe to four (4) 5kL plastic tanks north-west of the village. The community then draws their potable water from nine (9) existing standpipes, of which only one (1) is operational.

C3.1.3 Extent of the Works

The Works to be carried out by the Contractor under this Contract comprise mainly the following:

- a) Site Establishment and compliance with Contractual requirements;
- b) Clearing of areas where Infrastructure will be constructed (where necessary);
- c) Refurbishment of Spring Box NO-SP3;
- d) Connect Bulk Gravity Main to Mthonjeni Distribution Reservoir;
- e) Installation of the 1 360 m Bulk Gravity Main, complete with Couplings, Specials, and Fittings;
- f) Installation of 55 kL Distribution Reservoir, complete with Base Platform and Inlet- and Outlet Pipework;
- g) Installation of 9 485 m Reticulation Mains, complete with Couplings, Specials, and Fittings;
- h) Installation of 60 Communal Standpipes;
- i) Completion of Ancillary Works as per the Engineer's Instruction;
- j) Subcontracting a minimum of 5% of the of value of work excluding manufacture of pipes, contingencies, and provisional sums to SMMEs as per the project specification;
- k) Dealing with community participation with regards to the construction;
- l) Environmental management of the area during and after the completion of construction; and

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m) Compliance with the requirements of the Occupational Health & Safety Act of 1993, Construction Regulations 2014 and COVID-19 requirements.

This description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract. Approximate quantities of each type of work are given in the Bill of Quantities.

C3.1.4 Location of the Works

Mthonjeni is a rural village within the Mhlontlo Local Municipality (MLM), one of ORTDM's local municipalities. It is located about 90 km north of Mthatha, as illustrated in Figure 1, Appendix A. The location of the site is indicated on the locality plan bound as Appendix A.

C3.1.5 Temporary Works

The Contractor will be responsible for determining the extent of temporary works required to execute the contract, and the cost thereof shall be included in the rates for the respective items of work. Nonetheless, it is envisaged that temporary work may be required for the following activities:

- Pipeline trenches requiring shoring due to space and depth constraints.
- Construction of pipelines near existing fences, which must be temporarily removed, will require the erection and maintenance of temporary fencing until restoration of the original fences.
- Construction of pipe trenches near existing properties or through existing accesses may require the provision of temporary access for pedestrians, livestock or vehicles.
- Traffic control measures where construction takes place at or close to existing roads.
- Safety measures deemed necessary by the Health and Safety specification or the Contractor's own risk assessment (e.g. pedestrian barriers).

C3.1.6 Construction Programme

The programme of construction shall be submitted to the Employer's Agent within the time stipulated in these documents. The programme shall clearly show all activities related to the works and shall indicate which activities are on the critical path.

In compiling the programme, the Contractor shall consider the following:

- The requirements and effects of employing labour-intensive construction methods.
- The lead-time for training of local labour.
- The accommodation and safeguarding of public access and traffic.
- Establishment and de-establishment times.
- Time to obtain all permits and wayleaves.
- Appointment of Community Liaison Officer (CLO).
- All public and Contractor close down periods.
- All other activities required in terms of this document.

If during the contract, the execution of the work deviates in any manner from the programme, the Contractor shall, on instruction by the Employer's Agent, within one week of such instruction submit a revised programme. Should such a revision be because of the Contractor falling behind with his work, the programme shall clearly show the steps to be taken to rectify the situation so as to enable the contract to be completed within the stipulated contract period. Positive steps to increase production through increased resources, or the more efficient usage of existing resources shall accompany such a programme. The tender programme shall however be used.

C3.2. ENGINEERING

C3.2.1 Design Services and Activity Matrix

Responsibilities for design and related documentation are as follows:

• Concept, feasibility and overall process	Employer
• Basic engineering and detail layouts to tender stage	Employer
• Final design to approved construction stage	Employer
• Temporary works	Contractor
• Preparation of record drawings and GIS information	Contractor/Employer

C3.2.2 Employer's Design

The Employer's design encompasses the permanent Works described in C.3.1.3 and what is included on the drawings.

C3.2.3 Design Brief

The design of the permanent Works is the responsibility of the Employer's Agent.

The Contractor is responsible for the design of the temporary Works required for the construction and execution of the permanent Works.

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

C3.2.4 Drawings

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works and dimensions shall not be scaled from the Drawings, unless required by the Employer's Agent.

The Employer's Agent will, on the request of the Contractor, and in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate As-Built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends, and all other underground infrastructure shall be given by either co-ordinates, or stake value and offset. Where necessary, levels shall also be provided.

A marked-up set of Drawings shall be kept and updated by the Contractor on a day-to-day basis. This information shall be supplied to the Employer's Agent Representative on a regular basis.

All information in possession of the Contractor where required by the Employer's Agent and/or the Employer's Agent Representative to complete the As Built/Record Drawings, must be submitted to the Employer's Agent Representative before the Certificate of Completion may be issued.

The Drawings prepared by the Employer for the permanent Works are listed and bound under **Appendix J**. The Employer reserves the right to issue amended and/or additional Drawings during the Contract.

C3.2.5 Design Procedures

The Contractor is responsible for the design of all the temporary works required for the construction and execution of the Permanent Works. This includes, inter alia, temporary roads, access control, accommodation of traffic, shoring of trenches and excavations, dewatering, all health and safety measures, environmental management as well as temporary support systems, until the completion of the Contract.

C3.3.1 Preferential Procurement Procedures

All works to be completed in this contract shall be executed in accordance to the O. R. Tambo District Municipality's preferential procurement policies and procedures.

C3.3.2 Subcontracting

C3.3.3 Scope of Mandatory Subcontract Works

Where possible, work that can be subcontracted to EMEs and QSEs is identified and detailed in Part C1, Section C1.4 and in Part C1, Section C1.3, the requirements for the procurement and employment of local labour are specified. It is noted that the work identified in this document is not exhaustive and it shall be required from the Contractor to ensure that a minimum of 30% of the Works is done by local EMEs and QSEs.

No work may be sub-contracted to another party unless approval is given by the ORTDM in writing. The Contractor is to submit to the ORTDM in writing a request for appointment of a particular sub-contractor. Accompanying this request is to be the full detail of the sub-contractor, including:

- Previous experience.
- Work which will be sub-contracted to him/her.
- Approximate value of the work to be sub-contracted.

C3.3.4 Preferred Subcontractors / Suppliers

The Contractor will be required to liaise with the Employer, Employer's Agent and local community structures to finalise the list of local EMEs and QSEs to be employed as part of the project.

c3.3.4.1 Subcontracting Procedures

A formal tender process will be followed to appoint the Subcontractor which will be facilitated by the Employer, Employer's Agent and Main Contractor.

All subcontractors appointed under **C3.3.2.1** above shall be:

- Registered with the CIDB
- Allocated work within the category and value limits designated by their CIDB grading
- Be in good standing with the Department of Labour
- Registered on the Central Supplier Database.

Proof of the above is to be provided to the Employer's Agent before appointment of the subcontractor.

C3.3.5 Attendance on subcontractors

The Contractor shall guide, assist, advise and mentor the local EME and QSE subcontractor/s and guidance on how to establish and determine rates.

The Contractor shall be responsible for ensuring that the prospective local EME and QSE subcontractor/s fully comprehends the:

- Implications of the liabilities and responsibilities inherent in the contract into which the

- Implications of the tendered rates.
- Scope and extent of the Works.
- Proper procedures for the submission of a tender.
- Procedures and basis on which tenders will be evaluated and awarded.

The Contractor shall closely manage, mentor, supervise, guide and assist the EEs in all aspects of management, planning, execution and the completion of work.

The above shall include inter alia, but is not limited to, the following:

- (i) Planning and programming of the Works.
- (ii) The sourcing, ordering, purchasing, hiring all the necessary Construction Equipment, Materials, tools and incidentals necessary and required for the successful execution and completion of the Permanent as well as the Temporary Works.
- (iii) Labour relations and employment.
- (iv) Monthly measurements, costing and invoicing.
- (v) General safety, occupational health and safety matters.
- (vi) Functions of civil engineering infrastructure, structures, services and systems.
- (vii) Interpreting and understanding the contract.
- (viii) Construction and maintenance methods and procedures.
- (ix) Communication.
- (x) Cash-flow control, submitting invoices and payment certificates.
- (xi) Planning, programming, scheduling, critical path control and acceleration.
- (xii) Maintenance planning.
- (xiii) Material procurement and control.
- (xiv) Risk limitation and management.
- (xv) Quality assurance and procedures.
- (xvi) Compliances with all applicable laws, regulations, statutory provisions and agreements.
- (xvii) General Conditions of Contract and Contract Data.
- (xviii) Contractual claims, if situations arise that entitle a contractor to claims in terms of the Conditions of Contract.
- (xix) Profit and loss.
- (xx) Replacement and running costs of Construction Equipment.

The extent and level of management, mentorship, supervision, guidance and assistance to be provided by the Contractor shall be in commensuration with the expertise of the relevant EME and QSE and should be so directed as to enable the EME and QSE to achieve the successful execution and completion of the respective works.

C3.4.1 WORKS SPECIFICATIONS

C3.4.1.1 Applicable SANS 1200 Standardised Specifications

The SANS 1200 Standardised Specifications for civil engineering construction that are applicable are listed in C3.7.1.

C3.4.1.2 Particular Specifications

The Particular Specifications for work not covered by the SANS 1200 Standardised Specifications are listed in C3.7.1 and included in C3.7.3.

C3.4.1.4 Variations and Additions to the SANS 1200 Standardised Specifications

Variations and additions to the SANS 1200 Standardised Specifications listed in C3.7.1 are given in section C3.7.2.

C3.4.2 SITE ESTABLISHMENT

C3.4.2.1 Services and facilities provided by the Employer

(a) Water Sources

The Contractor shall make his own arrangements regarding the supply of water.

The Contractor shall, in accordance with the provisions of subclause C3.4.2.2(b), and at his own expense, make all arrangements necessary for the supply and distribution of water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use as well as for making all arrangements in connection therewith.

The Contractor shall further, at his own expense, be responsible for providing all necessities for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

The Contractor shall make himself thoroughly acquainted with the regulations relating to the use of water and shall take adequate measures to prevent the wastage of water.

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Employer's Agent, which approval shall not be unreasonably withheld. The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Employer's Agent, produce proof of such compliance.

The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations. All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract.

The Contractor shall, whenever reasonably required by the Employer's Agent, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy

The Employer accepts no responsibility for the shortage of water due to any cause whatsoever or for the additional costs incurred by the Contractor as a result of such shortage.

(b) Power / Electricity Supply

The Contractor shall make his own arrangements with the Electricity Department for a supply of electricity if required and shall pay establishment and consumption costs at the tariffs ruling at the time.

The Contractor shall, in accordance with the provisions of subclause C3.4.2.2(c), and at his own cost, make all arrangements necessary for the supply and distribution of electrical power required for construction purposes as well as for use in and about his site establishment.

The Contractor shall comply with all prevailing legislation in respect of the generation and distribution of electricity and shall, when required by the Employer's Agent, produce proof of such compliance.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's tendered rates and prices.

(c) Excrement Disposal / Sanitary Facilities

The Contractor shall, in complying with his obligations in terms of subclause C3.4.2.2(d), at his own cost, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, all to the satisfaction of the responsible health authorities in the area of the Site.

All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site. The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

The Contractor shall further, as a minimum, supply and maintain chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen personnel on site.

Under no circumstances will the Contractor's staff be allowed to use any other toilet facilities in and around the Site.

(d) Disposal Site

All material cleared on the site, rubble, spoil and refuse shall be disposed of at the one of the municipal solid waste sites. Hazardous material shall only be disposed of at the waste site with Waste license issued by the Department of Environmental Affairs.

These are dedicated disposal sites and therefore no separate overhaul shall be paid. The Contractor shall pay all charges levied at the waste site and must make allowance in his rates to cover these charges as no separate payment will be made in this regard.

(e) Area for Contractor's site establishment

The Employer has no suitable areas available where the Contractor may erect offices, workshops, stores and other facilities that he requires for the purposes of the Contract. The Contractor shall, at his own cost, be responsible for locating and making all arrangements necessary for securing an area suitable to meet his

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needs in respect of the erection of the Contractor's offices, stores and other facilities, including the facilities to be provided for the Employer's Agent in accordance with the Contract.

Any potential area proposed by the Contractor shall be within reasonable proximity to the Site of the Works and its location shall be subject to the approval of the Employer's Agent, which approval shall not be unreasonably withheld.

The Contractor shall be responsible for arranging, at his own cost, for the provision of all services he may require in the area, as well as elsewhere on the Site.

(f) Accommodation of employees

The Contractor shall make his own arrangements for the accommodation of his employees. Where field accommodation is required, the Contractor shall comply fully with the wishes of the various landowners, as in their agreement with the Employer, to the satisfaction of both land owner and Employer.

C3.4.2.2 Facilities provided by the Contractor

The Contractor shall provide for the use of the Employer's Agent, maintain and service, as applicable, the following facilities as specified in SANS 1200 AB and PSAB.

(a) Facilities for the Employer's Agent

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

(i) Contract Nameboard

The Contractor shall provide, erect and maintain 2 No. of Contract Nameboards at such positions and locations as directed by the Employer's Agent. The Contractor shall, before ordering or manufacturing any such Contract nameboards, obtain the Employer's Agent written approval in respect of all names and wording to appear on the Contract nameboards. The Contractor shall keep the Contract nameboard in good state of repair for the duration of the Contract and shall remove them on completion of the Contract.

(ii) Health and Safety Sign Board

The Contractor shall erect and maintain 1 No. of Health and Safety Sign Board at such positions and locations as directed by the Health and Safety Agent and the requirements specified on the Health and Safety Plan.

(iii) Office building

The Contractor shall provide on the Site an office for the exclusive use of the Employer's Agent and his Representative. Such office shall comply with and be furnished in accordance with the requirements of subclause 3.2 of SANS 1200 AB and PSAB. The Contractor shall maintain the office in accordance with the requirements of subclause 5.2 of SANS 1200 AB.

Such office accommodation shall be provided within the Contractor's site establishment facilities.

(iv) Site Meeting venue

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of **fifteen** (15) persons at site meetings. The Employer's Agent shall be allowed free use of such a venue for conducting any other meetings concerning the Contract at all reasonable times.

(v) Survey equipment and assistant(s)

The Contractor shall, for the duration of the Contract, in accordance with the requirements of PSAB provide survey equipment for the exclusive use of the Employer's Agent and his staff.

The Contractor shall, in accordance with the requirements of subclause 5.5 of SANS 1200 AB, make available to the Employer's Agent, two (2) survey assistants.

(vi) Site Instruction Book

The Contractor shall keep a triplicate book for site instructions on the Site at all times.

(b) Water

The Contractor shall, at his own expense, be responsible for obtaining and distributing all water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The Contractor shall further, at his own expense, be responsible for providing all necessities for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith.

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Employer's Agent, which approval shall not be unreasonably withheld.

The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Employer's Agent, produce proof of such compliance. The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract. The Contractor shall, whenever reasonably required by the Employer's Agent, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of water, the costs of which will be deemed to be included in the Contractor's tendered rates.

(c) Electricity

The Contractor shall, at his own expense, be responsible for obtaining and distributing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes

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and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the procurement, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's tendered rates and prices.

(d) Excrement disposal

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the responsible health authorities in the area of the Site and the Employer's Agent. All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No latrines are available and therefore the Contractor shall supply portable chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen personnel on site. Under no circumstances will the Contractor's staff be allowed to use private or public toilet facilities.

The Contractor shall provide water and soap for his staff to be able to wash with at each site of the Works. The waste water shall be disposed of off-site.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this subclause and the costs thereof shall be deemed to be included within the Contractor's tendered Preliminary and General Items.

C3.4.2.3 Site Usage and Security on site

Access to site shall be limited to the Contractor and his personnel. The Contractor shall be responsible to control unauthorised entry to the site and shall inform the Employer's Agent of any breach of such rules. The site shall be managed and used for its intended purpose. The Contractor is required to keep a visitors log and ensure full compliance with site safety standards.

The Contractor shall make provision for security on site against theft and robbery, as his sole responsibility. The cost for providing adequate security, as and when required, must be borne by the Contractor.

C3.4.2.4 Permits and Wayleaves

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

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

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

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

C3.4.2.5 Features requiring special attention

(a) Site maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner and shall keep the Site free from debris and obstructions.

The general neatness and tidiness along the pipe route is to be maintained and therefore the Contractor shall on a day to day basis, keep the area of the Works in a condition acceptable to the Employer's Agent, the Employer's Health and Safety Agent and the Environmental Control Officer.

(b) Testing and Quality Control

(i) Contractor to engage services of an independent laboratory

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved independent laboratory to undertake all testing of materials, the results of which are specified in, or may reasonably be inferred from, the Contract. These results will be taken into consideration by the Employer's Agent in deciding whether the quality of materials utilised, and workmanship achieved by the Contractor comply with the requirements of the Specifications. The foregoing shall apply irrespective of whether the specifications indicate that the said testing is to be carried out by the Employer's Agent or by the Contractor.

The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified. The Contractor shall promptly provide the Employer's Agent with copies of the results of all such testing carried out by the independent laboratory.

For the purposes of this clause, an "independent laboratory" shall mean an "approved laboratory" (as defined in subclause PSA 7.2) which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

(ii) Additional testing required by the Employer's Agent

In addition to the provisions of subclause C3.4.2.5(b)(i): Contractor to engage services of an independent laboratory, the Employer's Agent shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in subclause C3.4.2.5(b)(i), at such times and at such locations in the Works as the Employer's Agent shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Employer's Agent, and copies of the test results shall be promptly submitted to the Employer's Agent.

(iii) Cost of Testing

a) Testing in term of subclause C3.4.2.5(b)(i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of subclause C3.4.2.5(b)(i), above shall be borne by the Contractor and shall be deemed to be included in the tendered rates and prices for the respective items of work as listed in the Bill of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of subclause C3.4.2.5(b)(i).

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (e.g. re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor's account.

The costs of any additional tests required by the Employer's Agent in terms of subclause C3.4.2.5(b)(ii): Additional testing required by the Employer's Agent, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Bill of Quantities; provided always that the costs of any such additional tests ordered by the Employer's Agent, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

(c) Contractor supplied equipment

The Contractor shall when required to supply any testing, measuring and/or survey equipment for the Employer's Agent's use provide calibration certificates or verification certificates (as appropriate) for all equipment. This shall apply for both shared equipment as well as for equipment specified to be provided for the Employer's Agent's use on site.

Calibration or verification, by certified authorities shall be subject to the Employer's Agent's approval prior to the delivery of any equipment to the Employer's Agent; and thereafter at intervals as prescribed for the relevant equipment but not less than every twelve (12) months.

The calibration or verification certificate for each item of equipment shall be submitted to the Employer's Agent for approval prior to its use or within seven (7) days of subsequent re-calibration/verification.

Unless otherwise provided for in the bill of quantities the cost of providing the above specified equipment shall be deemed to be included in the tendered rates and prices for the respective items of work as listed in the Bill of Quantities.

Failure to submit certificates shall result in payment for the equipment being withheld.

(d) Opening up and closing don of designated borrow pits

Measurement and payment for opening up and closing down designated borrow pits, including removing and stockpiling overburden and restoring the Site, shall be made under item 8.3.4 of SANS 1200 D. This item applies to all borrow material required under this Contract.

The requirements of subclause 5.2.2.2 of SANS 1200 D regarding the opening up, maintenance and closing down of borrow pits shall be adhered to.

(e) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 8.1.2 of the Conditions of Contract.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the afore-going, the Contractor may, with the prior approval of the Employer's Agent (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations

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under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

(f) Monthly statements and payment certificates

The statement (measured quantities) to be submitted by the Contractor in terms of Clause 6.10 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Employer's Agent, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

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

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Employer's Agent within three (3) normal workings days from the date on which the Employer's Agent communicated to the Contractor the adjustments required. The Contractor shall submit to the Employer's Agent five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Employer's Agent the requisite copies of the adjusted statement for the purposes of the Employer's Agent payment certificate will be added to the times allowed to the Employer's Agent in terms of Clause 6.10.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

The Contractor is further required to complete the monthly reporting template forms, refer to PSA 8.1.2.2 and Appendix B. These forms shall be submitted together with the Contractor's monthly payment certificates. Payment of the Contractor is conditional on this information being accurate and timeously provided. The Employer's Agent payment certificate template will be used as the only format for submission to the Employer.

The monthly statements accompanying the payment certificates shall include:

- i. Contractor's Invoice;
- ii. Interim Payment Certificate;
- iii. Proof of Delivery and Invoices of all materials Claimed as Materials on Site;
- iv. Construction Progress Report, including all items as per C1.4 Item 4.2 Monthly Returns
- v. Programme update
- vi. Cashflow vs Expenditure to date report, including all items as per C1.4 Item 4.2 Monthly Returns
- vii. Proof of Job Creation / Signed Labour Returns
- viii. Detailed report on monthly and cumulative Contract Participation Goals achieved, as per Item C1.4 Item 4.2 Monthly Returns.

(g) Construction in restricted areas

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

(h) Notices, signs, barricades and advertisements

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

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

(i) Workmanship and quality control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced Employer's Agents, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing and mix designs carried out by the Contractor, will be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardised Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Employer's Agent for examination and measurement, the Contractor shall furnish the Employer's Agent with the results of the relevant tests, mix designs, measurements and levels to demonstrate the achievement of compliance with the Specifications.

C3.4.2.6 Extension of time due to abnormal rainfall

- a) Extension of time in respect of delays resulting from wet climatic conditions on the Site will only be considered in respect of abnormally wet climatic conditions and shall be determined for each calendar month or part thereof, in accordance with the formula given below:

$$V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$$

Where:

V = Extension of time in calendar days in respect of the calendar month under consideration:

If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.

When the value of V for any month exceeds the number of days in the particular month, V will be the number of days in the month.

Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.

Nn = Average number of days in the relevant calendar month, as derived from existing rainfall records, on which a rainfall of 20mm or more has been recorded for the calendar month.

Rw = Actual average rainfall in mm recorded for the calendar month under consideration.

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R_n = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.

The factor $(R_w - R_n)/X$ shall be deemed to be a fair allowance for variations from the average number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

- b) The rainfall records for Mthatha for the period 2000 to 2020 from South African Weather Service (see Appendix G) are reproduced in the accompanying table, and the monthly averages (R_n and N_n) for this period shall, for the purposes of this Contract be taken as normal and as the values to be substituted for R_n and N_n . The values of X and Y shall be 20 and 10 respectively.
- c) The potential extension of time V has been calculated for each month and year of the period concerned to indicate the possible effect of the rainfall formula. The values of V were obtained by applying the rainfall formula and using the actual rainfall figures and the calculated values of R_n and N_n indicated in the table.
- d) The Contractor shall, at his own cost, provide and erect on the Site at a location approved by the Employer's Agent, an approved rain gauge, which shall be fenced off in a manner which will prevent any undue interference by workmen and others. The Contractor shall, at his own cost, arrange for the reading of the rain gauge on a daily basis for the duration of the Contract. The gauge readings, as well as the date and time at which the reading was taken shall be recorded in a separate record book provided by the Contractor for this purpose. All entries in the rainfall record books shall be signed by the person taking the reading and the gauge shall be properly emptied immediately after each reading has been taken. If required by the Employer's Agent, the Employer's Agent shall be entitled to witness the reading of the gauge.
- e) The Contractor's claims in terms of Clause 5.12 of the Conditions of Contract for extension of time in respect of delays resulting from wet climatic conditions on the Site during each month, shall be submitted in writing to the Employer's Agent monthly; provided always that
 - (i) the period allowed to the Contractor in terms of Clause 10 of the Conditions of Contract in which to submit his claim for each month shall be reduced to seven (7) days, calculated from the last day of the month to which the claim applies; and
 - (iii) the 28-day period allowed to the Employer's Agent in terms of Clause 10.1.2 of the Conditions of Contract in which to give his ruling on the claim, shall be reduced to fourteen (14) days.

The Contractor's monthly claim shall be accompanied by a copy of the signed daily rainfall readings for the applicable month.

- f) The extent of any extension of time which may be granted to the Contractor in respect of wet climatic conditions (whether normal or abnormal) shall be determined as the algebraic sum of the "V" values for each month between the Commencement Date and the Due Completion Date of the Contract, calculated using the formula above; provided always that:
 - (i) rainfall occurring within the period of the Contractor's Christmas shut-down period (referred to in the Conditions of Contract) shall not be taken into account in the calculation of the monthly "V" values;
 - (ii) rainfall occurring during any period during which the Contractor was delayed due to reasons other than wet climatic conditions on the Site, and for which delay an extension of time is granted by the Employer's Agent, shall not be taken into account in the calculation of the monthly "V" values;
 - (iii) if the algebraic sum of the "V" values for each month is negative, the time for completion will not be reduced on account of subnormal rainfall, and
 - (iv) where rainfall is recorded only for part of a month, the "V" value shall be calculated for that part of the month using pro rata values for N_n and R_n .

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- g) The Employer's Agent shall, simultaneous with granting any extension of time in terms of this clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the algebraic sum of all the "V" values for all the preceding months of the Contract, less the aggregate of the "Nn" values for the remaining (unexpired) months of the Contract (viz less aggregate of the potential maximum negative "V" values for the remaining Contract Period). Thus, provided that where such period is negative, the Due Completion Date shall not be revised.
- h) Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of Clause 5.12 and Clause 10 of the Conditions of Contract.

MONTH	N _n	R _n
January	7	132
February	5	137
March	4	112
April	3	58
May	2	20
June	2	20
July	2	25
August	2	30
September	4	53
October	5	89
November	5	119
December	6	127
TOTAL	47	922

C3.4.3 PLANT AND MATERIALS

C3.4.3.1 Plant and materials supplied by the Employer

The Employer will not provide any plant. The Contractor shall provide all plant of whatever nature necessary to enable him to undertake the works as specified.

C3.4.3.2 Materials, Samples and Shop Drawings

Materials or work, which does not conform to the approved samples submitted in terms of Clause 7.4.1 (GCC 2015) of the Conditions of Contract, will be rejected. The Employer's Agent reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such test conducted by or on behalf of the Employer's Agent, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Clause 7 of the Conditions of Contract, be for the Contractor's account.

C3.4.4 CONSTRUCTION EQUIPMENT

C3.4.4.1 Requirements for equipment

All construction plant and equipment used on this contract shall be in good working order, well maintained, of adequate size and fit for purpose. No plant or equipment that leaks oil, fuel or hydraulic fluids may be used on site.

Equipment must be such that work can be executed in an efficient manner.

Any plant or equipment that, in the opinion of the Employer's Agent, is not of adequate size or fit for use shall be removed from the site and replaced with acceptable plant and equipment, all at the Contractor's cost.

All equipment must comply with the requirements as stipulated in the Environmental regulations and specifications and contained in the OHS Act.

C3.4.4.2 Equipment provided by the Employer

The Employer shall not provide any equipment.

C3.4.5 EXISTING SERVICES

C3.4.5.1 Known services

The Contractor shall familiarise himself with all existing services and liaise with all relevant authorities for the location and detection of existing services.

No guarantee can be given that all affected services are indicated on the drawings, or that, if they are shown, they are shown exactly in the correct location. Once located, the exact location, level and nature of the service shall be recorded and given to the Employer's Agent's Representative in writing.

The Contractor shall, subject to the provisions of PSA 5.4, expose all services by hand in advance of his trenching operation in order to reduce the risk of damage to existing services.

The Contractor shall take special care not to damage any existing services and shall comply with all the requirements of the relevant authorities during construction. The Contractor will be held solely responsible for the protection of all known services and for any claims for damages arising from damage to any such service. (See also PSA 5.4).

C3.4.5.2 Treatment of existing services

The Contractor to ensure that existing services supply are not interrupted. All existing services have to remain operational, either through protection or re-routing. Temporary re-routing of existing services is allowed, with the approval of the owner of the service.

C3.4.5.3 Use of detection equipment for the location of underground services

The Contractor to make use of the necessary detection equipment to determine the location of an existing service, before excavation commences to expose the service.

C3.4.5.4 Damage to services

The Contractor shall take special care not to damage any existing services and shall comply with all the requirements of the relevant authorities during construction. The Contractor will be held solely responsible for the protection of all known services and for any claims for damages arising from damage to any such service. (See also PSA 5.4).

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

C3.4.5.5 Reinstatement of services and structures damaged during construction

The Contractor will be responsible for the repair and reinstatement of damaged services in compliance with the service owner's specifications.

C3.5. MANAGEMENT OF THE WORKS

C3.5.1 SPECIFICATIONS

The following Specifications are applicable:

- (i) The SANS 1200 Standardised Specifications listed in C3.7.1;
- (ii) The Particular Specifications given in C3.7.2; and
- (iii) The Variations and Additions to the SANS 1200 Standardised Specifications given in C3.7. 3.

C3.5.2 PLANNING AND PROGRAMME

C3.5.2.1 General

The Contractor's Programme to be submitted in terms of Clause 5.6.1 of the Conditions of Contract shall take all matters that may impact the Contractor's sequence of executing the various components of the Works and the requisite rate of progress of the Works, as may be specified in or reasonably inferred from the Contract.

C3.5.2.2 Format

The Construction Programme to be submitted by the Contractor in accordance with the provisions of Clause 5.6.1 of the Conditions of Contract shall;

- (a) Be in the form of a bar chart; and
- (b) Clearly indicate the start and end dates and duration of all construction activities and identify the critical path; and
- (c) Take full cognizance of all the Contractor's risks and obligations in terms of the Contract.

The said Programme and all revisions thereto shall also be provided to the Employer's Agents in electronic digital format using the MS PROJECT software on a Monthly basis as per Clause 5.6.4.

C3.5.2.3 Failure to maintain construction programme

If the Construction Programme has to be revised in terms of the Conditions of Contract, because the Contractor is falling behind in its programme, the Contractor shall submit a revised programme of how it intends to regain lost time to ensure completion of the Works before the Due Completion Date.

C3.5.2.4 Additional Programming Information

The following (but not limited to) programming information shall be incorporated into the Contractor's initial programme and all subsequently adjusted programmes. The Contractor's programme shall also take full account of the matters described in the sub-clauses hereunder. No additional payments will be made to the Contractor in respect of any additional costs as it may incur in consequence of arranging or adjusting its programme to accommodate the said matters and the Contractor's various tendered rates and prices shall be deemed to fully inclusive of such costs.

- (a) Time related items, in respect of the following:
 - (i) Time to submit documentation before commencing to carry out the Works – refer to Clause 5.3.1 C1.2 of Contract Data
 - (ii) Construction Regulations, 2014 requirements:
 - Regulation 3, Construction work permit process period
 - Regulation 4, notification of construction works period
 - (iii) Due Completion Date

- (b) All special non-working days defined in the Contract Data.
- (c) Contractor's annual shutdown period between December and January
- (d) Allowance for a 30 – day float period in the programme for unforeseen circumstances
- (e) Meeting the requirements of the Environmental Management Plan
- (f) The time needed for preparation and approval of the various mix designs specified in the relevant construction sections of the Scope of Works.

C3.5.3 QUALITY PLANS AND CONTROL

Refer the various and applicable SANS/SABS specifications, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

The Contractor to submit the Quality Management Plan for the approval by the Employer's Agent before commencing any work.

C3.5.4 ENVIRONMENTAL MANAGEMENT

The Contractor will be responsible for managing his activities so that damage to the environment is minimised, as per the approved Environmental Management Plan contained in Specification PEM. A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance and provision of the Method Statement.

C3.5.5 FORMAT OF COMMUNICATIONS

All contractual communication shall be in writing.

The Contractor shall, for the full duration of the Contract Period, supply and maintain the following documentation:

- (a) Site Communication and Request Book.
- (b) Safety File containing all relevant safety data.
- (c) Daily register of all labour, plant and equipment.
- (d) Quality Control file containing all quality control/assurance forms and records.
- (e) One full set of Contract Drawings and documents.
- (f) Latest revision of the Construction Programme.

The above-mentioned shall be kept on Site and shall be accessible to the Employer's Agent at all times.

The Contractor will be responsible for managing his health and safety activities as per the approved Health and Safety Plan, as indicated in Specification PHS. A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014

C3.6.1 HEALTH AND SAFETY REQUIREMENTS AND PROCEDURES

(a) Construction Regulations, 2014

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37305 and Regulation Gazette No 10113 of 7 February 2014 including COVID-19 requirements. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Bill of Quantities and Drawings, as well as in the Employers' health and safety specifications (regulation 5(1)(b)) of the Construction Regulations 2014, which are bound in the Contract document.

The Contractor shall in terms of regulation 7(1)(a) provide a comprehensive Health and Safety Plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

C3.6.2 PROTECTION OF THE PUBLIC

The Contractor to ensure the sufficient screening and barricading of the site of works is done to prevent unauthorised public access. If screening/barricading will impact on the movement of the public, the Contractor is to ensure that safe detour routes are allowed and clearly indicated.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

C3.6.3 BARRICADES AND LIGHTING

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

C3.6.4 TRAFFIC CONTROL ON ROADS

The Contractor shall carry out, erect and maintain such temporary works and provide all temporary road signs, pipes, deviations, warning boards, barricades, signs, lighting and demarcations and the like, as are necessary to maintain and safeguard the normal flow of public and private vehicular and pedestrian traffic.

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014.

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C3.6.5 MEASURES AGAINST DISEASE AND EPIDEMICS

Refer to the Occupational Health and Safety Act, 1993 and the Construction Regulations, 2014. The Contractor also needs to refer to the Health and Safety Specification and the COVID-19 specification included as Specification PHS to this document for measures to be deployed on site.

C3.6.6 AIDS AWARENESS

The Contractor is required to refer to SANS 1921 – 6 as further amended below and HIV/AIDS Awareness Education Specification (Appendix D). Payment items have been included in the Schedule of Quantities to ensure compliance.

SANS 1921-6	
Variations	
Clause	Specification Data
1 e)	Appointment of an HIV / AIDS Awareness Champion.
4.1 f)	Appointing an HIV/ AIDS Awareness Champion within 14 days of site handover from amongst the workers (which could include the Community Liaison Officer). The champion should be able to speak, read and write English, speak and understand the local languages spoken by the Workers and shall be on site at all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and has the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner. The Awareness Champion shall be responsible for: • Liaising with the Service Provider to assist in organising awareness workshops; • Filling condom dispensers and monitoring condom distribution; • Handing out information booklets; • Placing and maintaining posters
4.1 g)	Provide information about the names of the closest service providers to be displayed on a poster of size not smaller than A2.
4.2.3 c)	Understand and communicate the purpose of voluntary HIV/AIDS testing and counselling.
4.2.3 d)	Recognise the importance of caring for people living with HIV/AIDS and be familiar with the various treatments available, including treatment of opportunistic infections.
4.2.3 e)	Understand and communicate the rights and responsibilities of those living with HIV/AIDS in the workplace and the importance of non-discrimination.
4.3.2	The HIV/AIDS Awareness Champion and the Employer's representative shall certify the report and schedule described in 4.3.1 whenever a claim for payment is issued to the Employer.
5	Sanctions In the event that the Contractor fails to satisfy the requirements of this specification, the Employer may apply sanctions which include the rejection of claims for payment as being incomplete or the withholding of completion certificates (interim or final).

C3.7. PROJECT SPECIFICATIONS

C3.7.1 LIST OF APPLICABLE SPECIFICATIONS

C3.7.1.1 Applicable SANS 1200 Standardised Specifications

For the purpose of this Contract the latest issues of the following Standardised Specifications for Civil Engineering Construction, applicable at the date of the tender advertisement shall apply:

SANS 1200 A	-	1986 GENERAL
SANS 1200 C	-	1980 SITE CLEARANCE
SANS 1200 D	-	1988 EARTHWORKS (As amended 1990)
SANS 1200 DB	-	1989 EARTHWORKS (PIPE TRENCHES)
SANS 1200 DK	-	1996 GABIONS AND PITCHING (First Revision)
SANS 1200 GA	-	1982 CONCRETE (SMALL WORKS)
SANS 1200 GB	-	1984 CONCRETE (ORDINARY BUILDINGS)
SANS 1200 H	-	1990 STRUCTURAL STEELWORK
SANS 1200 L	-	1983 MEDIUM-PRESSURE PIPELINES
SANS 1200 LB	-	1983 BEDDING (PIPES)

Any reference to a SABS standard, in any context or forum, will be deemed to be a reference to the corresponding SANS standard, and vice versa. Any ambiguity in relation to the standard specifications to be referred to the Employer's Agent for clarity, in terms of the GCC 2015 3rd edition.

The term "project specifications" appearing in any of the SANS 1200 standardised specifications must be replaced with the term "Scope of Work"

C3.7.1.2 Particular Specifications

The following Particular Specifications for work not covered by the SANS 1200 Standardised Specifications are also included hereunder:

PA: SECURITY FENCING

C3.7.2 VARIATIONS AND ADDITIONS TO SANS 1200 STANDARDISED SPECIFICATIONS

SANS 1200 A	-	1986 GENERAL
SANS 1200 DB	-	1989 EARTHWORKS (PIPE TRENCHES)
SANS 1200 L	-	1983 MEDIUM-PRESSURE PIPELINES
SANS 1200 LB	-	1983 BEDDING (PIPES)

The following variations and additions to the SANS 1200 Standardised Specifications referred to shall apply to this Contract. The prefix "PS" indicates an amendment to SANS 1200. The prefix "PSA" indicates an amendment to SANS 1200 A, "PSDB" to SANS 1200 DB and so on. The letters and numbers following these prefixes respectively indicate the relevant Standardised Specification and clause numbers in SANS 1200 to which the variation or addition thereto applies.

An asterisk (*) placed next to a PS Subclause number denotes the inclusion of an additional Subclause for which no equivalent appears in SANS 1200.

The term “project specifications” appearing in any of the SANS 1200 Standardised specifications must be replaced with the term “Scope of Work”.

Further to the above it should be noted that where in a specific Standardised Specification reference is made to a Subclause in another Standardised Specification, any amendment or addition to the Subclause referred to, as provided for in the Specification, shall apply. The aforementioned shall also apply with respect to Clauses referred to in a Particular Specification.

PSA GENERAL

PSA 1 SCOPE

Replace the contents of Clause 1.1, including the notes, with the following:

“1.1 This specification covers requirements, principles and responsibilities of a general nature which are generally applicable to Civil Engineering construction and building works contracts, as well as the requirements for the Contractor’s establishment on the Site.”

PSA 2 INTERPRETATIONS

PSA 2.3 DEFINITIONS

In the opening phrase, insert the words: “the definitions given in the Conditions of Contract and” between the words “specification” and “the following”.

a) General

Add the following definitions:

‘Employers’ Agent’ (Clause 1.1.1.16 of Conditions of Contract) shall have the same meaning and be synonymous with Engineer throughout the Contract documentation.

‘General Items’ (Clause 1.1.1.21 of Conditions of Contract) shall have the same meaning and be synonymous with Preliminary and General items.

‘General Conditions and Conditions of Contract’. The General Conditions of Contract specified for use with this Contract as amended in the Contract Data.

Specified As specified in the Standardised Specifications, the Drawings or the Scope of Work. “Specifications” shall have the corresponding meaning.”

c) Measurement and payment

Replace the definitions for “Fixed charge”, “Time-related charge” and “Value-related charge” with the following:

“Fixed charge. A charge that is not subject to adjustment on account of variations in the value of the Contract Price or the time allowed in the Contract for the completion of the work.

Time-related charge. A charge, the amount of which varies in accordance with the Time for Completion of the Works, adjusted in accordance with the provisions of the Contract.

Value-related charge. A charge, the amount of which varies pro rata with the final value of the measured work executed and valued in accordance with the provisions of the Contract.”

PSA 2.4 ABBREVIATIONS

a) Abbreviations relating to standard documents

Add the following abbreviation:

“CKS: SANS Co-ordinating Specification.”

PSA 3 MATERIALS

PSA 3.1 QUALITY

Where applicable, materials shall bear an official standardisation mark.

Add the following:

"Where proprietary materials are specified, it is to indicate the quality or type of materials or articles required, and where the terms "or similar approved" or "or approved equivalent" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Employer's Agent."

"PSA 3.3* ORDERING OF MATERIALS

The quantities set out in the Bill of Quantities have been carefully determined from calculations based on data available at the time of its compilation but are to be considered as approximate quantities only. Before ordering materials of any kind the Contractor shall be solely responsible for determining, from the Drawings issued or approved by the Employer's Agent for construction purposes, the actual quantities of materials required for the execution of the Works. No liability or responsibility whatsoever shall be attached to the Employer or the Employer's Agent in respect of materials ordered by the Contractor except when ordered in accordance with the Drawings issued or approved by the Employer's Agent for construction purposes."

PSA 4 PLANT

PSA 4.1 SILENCING OF PLANT

Replace the contents of Clause 4.1 with the following:

"The Contractor's attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act (Act No. 85 of 1993) as amended.

The Contractor shall at all times and at its own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other Plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations."

PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

Add the following new paragraph before the existing paragraph in Clause 4.2:

"The Contractor's buildings, sheds and other facilities erected or utilised on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only night-watchmen may be on the Site after hours."

Delete "and first-aid services" in the second paragraph of Clause 4.2 and add the following:

"The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 15 workmen, which toilets shall be effectively screened from public view and their use

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enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

The Contractor shall, where applicable, make all necessary arrangements and pay for the removal of night soil."

"PSA 4.3* RESTRICTION ON THE USE OF PLANT

Except for the type of plant, and to the extent permitted or approved by the Employer's Agent, the Contractor shall use only hand tools and equipment in the construction of the Works, or portion(s) of the Works, that are required to be constructed using labour intensive methods."

PSA 5 CONSTRUCTION

PSA 5.1 SURVEY

PSA 5.1.1 Setting out of the Works

The installed benchmarks shown on the Drawings shall be used by the Contractor for setting out the works. Add the following paragraph:

"The Contractor shall be required to check and verify, prior to commencement of any construction work, all benchmarks and boundary reference pegs, as shown and detailed on the Drawings. Reference and benchmark pegs disturbed and/or removed during the construction period shall be replaced by a Professional Land Surveyor and the Contractor shall bear the cost of such replacement. Payment to check and verify the reference and benchmark pegs will be made in terms of PSA 8.8.5.

Where labour intensive work is specified, the Contractor shall be responsible for the setting out of the task work."

PSA 5.1.2 Preservation and replacement of survey beacons and pegs subject to the Land Survey Act

Delete from the second sentence "Before the commencement "to" apparently in their correct positions" and replace with the following:

"Immediately on taking over the site, the Contractor, in consultation and liaison with the Employer's Agent, shall search for all pegs and the Contractor shall compile a list of pegs that are apparently in their correct position."

Replace the third sentence of Clause 5.1.2 with the following:

"At completion of the Contract, the Contractor shall expose and mark all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor the replacement of pegs that have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Employer's Agent, a certificate from the Registered Land Surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions of this Clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

The costs of replacement and certification as aforesaid shall be entirely for the Contractor's account, provided always that the Contractor shall not be held liable for the cost of replacement of pegs which:

(a) cannot reasonably be re-established in their original positions by reason of the finished dimensions of the Permanent Works ; and

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(b) the Contractor can prove beyond reasonable doubt and to the satisfaction of the Employer's Agent,
were disturbed, damaged or destroyed by others beyond its control, and

(c) were in close proximity to the work and which would unavoidably be removed, subject to the Employer's Agent approval being given to remove such pegs."

Add the following:

PSA 5.1.3 As-built Survey

The Contractor shall supply the Engineer with as-built survey data for the entire works, including cover and invert levels, coordinates of manholes, reservoirs, chambers and structures, points of intersection, etc. The Certificate of Completion will not be issued until the as-built survey data has been approved by the Engineer.

PSA 5.2 WATCHING, BARRICADING AND LIGHTING AND TRAFFIC CROSSINGS

Add the following:

"The Contractor shall comply in all aspects with the requirements of the Occupational Health and Safety Act (Act 85 of 1993), refer also PSA 5.7, PSA 5.9 and PSA 5.10."

PSA 5.3 PROTECTION OF STRUCTURES

Replace: "Machinery and Occupational Safety Act, 1983, (Act No. 6 of 1983)" with: "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended," and insert the following after "(Act No. 27 of 1956)": "as amended".

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

Replace the heading and the contents of Clause 5.4 with the following:

"PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 Location of existing services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent Contractor to be present on, under, over or within the Site.

Without in any way limiting its liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Employer's Agent, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where it intends to work.

Neither the Employer nor the Employer's Agent offer any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site. No excavation may commence until the position of the service at the crossing point has been marked out and verified by an official of the responsible authority.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Employer's Agent, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the requirements of Clauses 4.4 and 5.1.2.2 of SANS 1200 D (as amended) shall also apply.

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The aforesaid procedure shall also be followed in respect of services not shown on the plans, but which may reasonably be anticipated by an experienced Contractor to be present or potentially present on the Site.

All services, the positions of which have been determined as aforesaid at critical points, shall henceforth be designated as "Known Services" and their positions shall be indicated by the Contractor on a separate set of Drawings, a copy of which shall be furnished to the Employer's Agent without delay.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the Site, it shall henceforth be deemed to be a "Known Service" and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the Site shall apply. The Contractor shall notify the Employer's Agent immediately should any such service be encountered or discovered on the Site.

Whilst it is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to:

(a) Known Services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognisance being taken of such deviations in line and level which may reasonably be anticipated; and

(b) any other service which ought reasonably to have been a Known Service in accordance with the provisions of this Clause;

as well as for consequential damage, whether caused directly by the Contractor's operations or by the lack of proper protection; provided always that the Contractor will not be held liable in respect of damages occurring to services not being Known Services.

No separate payment will be made to the Contractor in respect of any costs incurred in preparing and submitting to the Employer's Agent, the Drawings as aforesaid and these costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

Payment to the Contractor's in respect of exposing services at the positions agreed by the Employer's Agent and as described above will be made under the payment items (if any) as may be provided therefore in the respective sections of the Specifications pertaining to the type of work involved.

PSA 5.4.2 Protection during construction

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all known services during the period which the Contractor has occupation and/or possession of the Site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising there from to the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

Unless otherwise instructed by the Employer's Agent, no services shall be left exposed after its exact position has been determined and all excavations carried out for the purpose of exposing underground services shall be promptly backfilled and compacted. In roadways, the requirements of subclause 5.9 of SANS 1200 DB should be observed. In other areas compaction is to be to 90% modified AASHTO density.

PSA 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly specified in the Contract or ordered by the Employer's Agent, the Contractor shall not carry out alterations to existing services. When any such alterations become necessary, the Contractor

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shall promptly inform the Employer's Agent, who will either make arrangements for such work to be executed by the owner of the service or instruct the Contractor to make such arrangements himself.

Should damage occur to any existing services, the Contractor shall immediately inform the Employer's Agent, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases, the Contractor shall take appropriate steps to minimise damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor, unless approved by the Employer's Agent.

The Employer will accept no liability for damages due to a delay in having alterations or repairs effected by the respective service owners. The Contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services."

PSA 5.8 GROUND AND ACCESS TO THE WORKS

Add the following:

The Contractor shall further, before commencement of any of the Works, compile a photographic / video recording of all the existing roads, structures, fences, gates, pipeline routes and trees which may be affected during the Works.

Payment will be made in terms of PSA 8.3.2.2 and PSA 8.4.2.3."

"PSA 5.9* MAINTAINING SERVICES IN USE

The Contractor shall take note that he shall not cut off any service in use without the prior approval of the Employer's Agent.

Failure on the part of the Contractor to comply with any of the above provisions will constitute sufficient reason for the Employer's Agent to stop the works until the situation has been remedied, or should he deem it necessary, arrange for the situation to be remedied at the Contractor's cost.

No direct payment will be made for the cost of maintaining services in use. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract."

"PSA 5.10* DEALING WITH AND ACCOMMODATING TRAFFIC

The Contractor shall take note that the existing roads and tracks within and to the Sites shall remain operational throughout the contract period. To this end the Contractor shall provide and maintain all temporary fences, security, barriers, kerb ramps, signs, markings, flagmen, drums, lighting, personnel and all other incidentals necessary to ensure safe and easy passage of all traffic.

Temporary traffic signs etc. as well as all necessary markings shall be erected and maintained by the Contractor and the number and layout of the traffic signs shall comply with the Site Manual entitled "Safety at Roadworks in Urban Areas", as published by the Department of Transport.

Traffic signs shall have a yellow background with either a red / black border.

No direct payment will be made for the cost of dealing with and accommodating traffic. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the contract. Further, the provision of PSA 5.2 shall apply."

"PSA 5.11* SITE MEETINGS

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The Contractor's authorised Construction Manager and Contracts Manager will be required to attend regular site meetings, which shall normally be held once a month on dates and at times determined by the Employer's Agent, but in any case, whenever reasonably required by the Employer's Agent. Unless otherwise indicated in the Contract or instructed by the Employer's Agent, such meetings shall be held at the Contractor's offices on the Site. At such monthly meetings, matters such as general progress on the Works, quality of work, problems, claims, payments, and safety etc, shall be discussed, but not matters concerning the day-to-day running of the Contract.

"PSA 5.12* PROVIDING ACCESS TO ERVEN AND PROPERTIES

Access to erven and properties along the route of trenches and roads shall be provided by the Contractor at all times. To this end suitable crossings shall be constructed where required.

Temporary crossings shall be in the form of portable bridges, temporary backfill or other approved means and shall be capable of permitting the safe passage of all vehicles and pedestrians. The Contractor shall also be responsible for maintaining crossings and for removing same when they are no longer required. If as a result of restricted road reserve widths and the nature of the Works the construction of bypasses is not feasible, construction shall be carried out under traffic in order to provide access to the properties.

The Contractor may, with the approval of the Employer's Agent, arrange with the occupiers of the affected properties to temporarily close off a portion of a road, footpath entrance, property access road or other access, provided that the Contractor shall give due notice of the intended closure and its probable duration to the occupiers and shall as punctually as possible re-open the route at the prescribed time. Where possible, roads shall be made safe and re-opened to traffic overnight. Any such closure shall be an arrangement between the Contractor and the occupiers and shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs and drums shall be provided by the Contractor to suit the specific conditions.

No direct payment will be made for the cost of providing access. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract."

"PSA 5.14* PROTECTION OF LIVESTOCK

From the time of the occupancy of the Site until the date of the Completion Certificate the Contractor shall take all measures necessary for the protection and control of livestock on the sections of the properties affected by his operations. He shall provide gates in existing fences cut by him for the purpose of access and control, and where necessary, to store materials and plant and the Contractor shall ensure that all gates are kept closed during such time as they are not actually in use by his traffic.

Where the Contractor cannot make alternative arrangements, the Contractor shall erect temporary fencing where necessary to protect livestock exposed to straying through his operations. The fencing shall be maintained in good order during construction operations and on completion of the work it shall be removed from the Site and all surfaces restored to the satisfaction of the property owner.

Payment for the protection of livestock, including the erection of temporary fences and gates where required, shall be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract.

Claims by property owners for loss of or injury to livestock due to negligence on the part of the Contractor, shall be settled by the Contractor."

"PSA 5.15* COMMUNITY LIAISON OFFICER (CLO) MEASUREMENT AND PAYMENT

Employment process for CLO and payment as detailed in Clause/Section C1.3 and C1.4."

"PSA 5.16* GRADUATE ENGINEER MEASUREMENT AND PAYMENT

Employment of Graduate Engineer (COW) and payment shall be as detailed in Clause/Section C1.3 and C1.4."

PSA 6 TOLERANCES

"PSA 6.4* USE OF TOLERANCES

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Employer's Agent, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorised' dimensions.

If the work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorised' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Employer's Agent may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed."

PSA 7 TESTING

PSA 7.1 PRINCIPLES

PSA 7.1.2 Standard of Finished Work Not to Specification

Insert the words "or checks by an approved laboratory ..." after the words "Where the Employer's Agent checks ..." in the first line of Clause 7.1.2.

PSA 7.2 APPROVED LABORATORIES

Replace the contents of Clause 7.2 with the following:

"Unless otherwise specified in the relevant specification or elsewhere in the Scope of Work, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Employer's Agent of the quality of materials used and/or workmanship achieved, may be carried out:

- (a) any testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;
- (b) any testing laboratory owned, managed or operated by the Employer or the Employer's Agent;

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(c) any testing laboratory established and operated on the Site by or on behalf of the Employer or the Employer's Agent;

(d) any testing laboratory designated by the Employer's Agent."

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.1 Method of measurement, all sections of the Schedule
Delete the words "and South West Africa".

PSA 8.1.2 Preliminary and General item or section

PSA 8.1.2.1 Contents

Replace the contents of item (c) with the following:

"The 'duration of construction' applicable to a time-related item shall be the tendered contract period for the total works, plus as applicable, the Civil Engineering Industry Holiday (Dec / Jan) and all gazetted public holidays for the Civil Engineering Industry."

REPLACE THE LAST SENTENCE OF SUBCLAUSE 8.1.2.1(B) WITH THE FOLLOWING:

"Separate items will be scheduled to cover the fixed, value-related and time-related components of the Contractor's General items (clause 1.1.1.21 of the Conditions of Contract) in respect of:

(a) Construction work period:

The number of days for reaching the Due Completion Date (Clause 1.1.1.14 of the Conditions of Contract), being the number of days for achieving Practical Completion of the Works, as specified in the Contract Data and as adjusted by such extensions of time or acceleration as may be allowed in terms of Contract.

(b) Construction Work Permit process period (if applicable):

The actual number of days that the Employer or his agent (in terms of the Construction Regulations, 2014) takes to process and issue the instruction to commence with the Works (Clause 5.3.3.2 of the Conditions of Contract, as amended) from the date of submission of the documentation referred to in Clause 5.3.1 of the Conditions of Contract.

PSA 8.1.2.2 Tendered sums

Replace the contents of this Sub-Clause with the following:

"Except only where specific provision is made in the Specifications and/or the Bill of Quantities for separate compensation for any of these items, the Contractor's tendered sums under items PSA 8.3.1 and PSA 8.4.1 shall collectively cover all charges for:

- risks, costs and obligations in terms of the Conditions of Contract and of this standardised specification; and
- head-office and site overheads and supervision; and
- profit and financing costs; and

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- expenses of a general nature not specifically related to any item or items of the permanent or temporary work; and
- providing such facilities on site as may be required by the Contractor for the proper performance of the Contract and for its personnel, including, but without limitation, providing offices, storage facilities, workshops, ablutions, services such as water, electricity, sewage and rubbish disposal, access roads and all other facilities required, as well as for the maintenance and removal on completion of the works of these facilities and cleaning-up of the site of the Contractor's establishment and reinstatement to not less than its original condition, and
- providing the facilities for the Employer's Agent and his staff as specified in the Contract and their removal from the site on completion of the Contract.
- completion of monthly reporting template forms (Refer to Appendix B for Pro Forms)"

PSA 8.2 PAYMENT

PSA 8.2.1 Fixed-charge and Value-related items

Replace the contents of Clause 8.2.1 with the following:

"Payment of fixed charges in respect of Clause 8.3.1 (Contractual requirements) will be made as follows:

- (a) EIGHTY PERCENT (80%) of the sum tendered will be paid when the facilities have been provided and approved; and
- (b) The remaining TWENTY PERCENT (20%) will be paid when the Works have been completed, the facilities have been removed and the site of the Contractor's establishment has been cleared and cleaned to the satisfaction of the Employer's Agent.

No adjustment will be made to the sum tendered in respect of item 8.3.1 should the value of the Works finally executed, or the Time for Completion vary in any way from that specified in the Tender.

The fixed charged items will include all associated cost to deal with the compulsory sub-contracts, other than cost already included under clause 8.3.1.

Payment for the sum tendered under clause 8.3.2 (Establishment of facilities on site) will be made in three separate instalments as follows:

- (a) The first instalment, which is 40% of the sum, will be paid when the Contractor has fulfilled all its obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract, and when the value of work certified for payment, excluding materials on Site and payments for preliminary and general items, is equal to not less than 5% of the total value of the work listed in the Schedule of Quantities.
- (b) The second instalment, which is 40% of the sum, will be made when the amount certified for payment, including retention monies but excluding this second instalment, exceeds 50% of the Tender Sum.
- (c) The final payment, which is 20% of the sum, will be made when the Works have been certified as completed and the Contractor has fulfilled all its obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract.

Should the value of the measured work finally completed be more or less than the Tender Sum, the sum tendered under clause 8.3.2 will be adjusted up or down in accordance with the provisions of Clause 7.8 of the Conditions of Contract, and this adjustment will be applied to the third instalment.

The fixed charged items will include all associated cost to deal with the compulsory sub-contracts, other than cost already included under clause 8.3.2."

PSA 8.2.2 Time-related items

Replace the contents of Clause 8.2.2 with the following:

"Subject to the provisions of subclauses 8.2.3 and 8.2.4, payment under item PSA 8.4.1 (time-related preliminary and general charges) will be made as follows:

(a) Construction work period:

Payment shall be made monthly in equal amounts, calculated by dividing the sum tendered for the item by the number of days stated in Contract Data (Clause 1.1.1.14) in months.

Payment for this item shall be inclusive of the time specified in Clause 1.1.1.14 plus any Extension of Time for Practical Completion but shall exclude all days included in PSA 8.2.2(b) and PSA 8.2.2(c).

(b) Construction work permit process period (if applicable):

Payment shall be for the actual number of days it takes the Employer or his agent (in terms of the Construction Regulations, 2014) to process and obtain a construction work permit (if applicable) after the submission of documentation contemplated in Clause 5.3.1 of the Conditions of Contract. The number of days stated in the Contract Data is for tendering purposes only and shall not be used as an entitlement to substantiate any claim.

The daily rate shall be fully inclusive of all costs associated with this period (refer Programme – Scope of Works) and no claim for additional cost will be considered.

The Contractor shall note that any EoT during this period will be extended by the number of days and will be compensation for at the rate priced for in the BOQ."

provided always that the total of the monthly amounts so paid for the item is not out of proportion to the value of the progress of the Works as a whole.

Should the Employer's Agent grant an extension of time for the completion of the total works, the Contractor will be entitled to an increase in the sums tendered for time-related items, which increase shall be in the same proportion to the original tendered sums, as the extension of time is to the duration of construction as defined in PSA 8.1.2.1. The Contractor shall however note that the aforementioned will not apply to extensions of time granted in terms of PSA 8.4.6.

Payment of such increased sums will be taken to be as full compensation for all additional preliminary and general costs, either time-related costs or fixed costs that result from the circumstances pertaining to the extension of time granted."

The payment to the Contractor for Time-Related Items shall be adjusted in accordance with the following formula in the event of the Contract being extended by means of a Variation Order (VO):

Sum of Tendered amounts for Time Related Items x Extension of Time authorised by VO
Tender Contract period

For the purposes of applying this formula "Extension of Time" will exclude the Contractor's December / January close-down period, if applicable.

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The abovementioned adjustment of the payment for Time-Related Items shall be made in the completion
Payment Certificate and shall be the only payment for additional Time-Related costs irrespective of the actual
period required to complete the Contract including its authorised extensions.

In the case of fixed price contracts, the amount by which the Time-Related Items is adjusted shall not be
subject to the Contract Price Adjustment formula.

In the case of contracts subject to Contract Price Adjustment the amount by which the time-related items are
adjusted shall be subject to the Contract Price Adjustment formula."

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS

REPLACE THE CONTENTS OF SUBCLAUSE 8.3.1 WITH THE FOLLOWING:

"PSA 8.3.1 Fixed preliminary and general charges. Unit: sum

The sums tendered shall include full compensation for all fixed-charge preliminary and general charges as
described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.1.1.

PSA 8.3.2 Value-related preliminary and general charges. Unit: sum

The sums tendered shall include full compensation for all value-related preliminary and general charges as
described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.1.2."

"PSA 8.3.2.1 Facilities for the Employer's Agent as specified in PSAB Unit: sum"

"PSA 8.3.2.2 Facilities for the Employer's Agent as specified in PSA & PSAB..... Unit: sum"

PSA 8.4 SCHEDULED TIME-RELATED ITEMS

PSA 8.4.1 Contractual requirements Unit: Sum

REPLACE THE CONTENTS OF SUBCLAUSE 8.4 WITH THE FOLLOWING:

"PSA 8.4.1 Time-related preliminary and general charges

The sum tendered shall include full compensation for all time-related preliminary and general charges as
described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.2."

(a) Construction work period Unit: sum

(b) Construction work permit process period (if applicable) Unit: days

"PSA 8.4.2.1 Facilities for the Employer's Agent as specified in PSAB Unit: sum"

"PSA 8.4.2.2 Facilities for the Employer's Agent as specified in PSA & PSAB..... Unit: sum"

"PSA 8.4.6* Compensation in terms of Subclause 5.12.2.4 and Clause 9 of the Conditions of Contract for
delays incurred:

(a) Plant Unit: Sum per working day

(b) Labour Unit: Sum per working day

(c) Supervision Unit: Sum per working day

(d) Other services, facilities etc. not covered by

The sum tendered for each item shall cover the full and final standing cost per day of delaying the specified resource or facility and no additional compensation shall apply, notwithstanding any provisions to the contrary in the contract documents, or in respect of any extension of time granted in relation to the circumstances described in Subclauses 5.12.2.4 and 9 of the Conditions of Contract.

For the purposes of calculating the total delay, a working week shall be held to consist of five working days and a working day 9 hours.

Payment for the partial standing of any of the scheduled resources for a day or part thereof, or the standing of a complete resource for a part day, will be made pro-rata in proportion to an appropriate factor assessed by the Employer's Agent.

The amount by which compensation for delays is adjusted shall be subject to the contract price adjustment formula as defined in the Conditions of Contract.

This payment item shall only apply to delays which in the opinion of the Employer's Agent are due to the circumstances described in Subclauses 5.12.2.4 and 9 of the Conditions of Contract. No Payment will be made for any salary related or other internally caused strikes. The cost of delays incurred for all other circumstances shall be treated as provided for in the Conditions of Contract.

The provision of this Clause shall in no way prejudice the right of either the Employer or the Contractor to determine the Contract in terms of the provisions of Clause 9 of the Conditions of Contract.

The Contractor shall take note that no payment will be considered for any additional cost incurred in protecting his plant and site establishment, as well as for costs incurred in respect of damage to constructional plant and equipment."

PSA 8.5 SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT

Replace the contents of Clause 8.5 with the following:

"PSA 8.5.1 Works Executed by the Contractor Unit: Prov Sum

The Contractor will be reimbursed in substitution of the Provisional Sums (if any) allowed in the Bill of Quantities for work to be executed by the Contractor, in the amounts determined in accordance with the provisions of Clause 6.6 of the Conditions of Contract.

Replace Clause 8.6 with the following:

"PSA 8.6 PRIME COST ITEMS

PSA 8.6.1 Prime Cost Sums

(a) Description of Item to which Prime Cost Sum Applies..... Unit: PC Sum

(b) Charge Required by Contractor on Sub-item (a) above Unit: %

Sub-items (a) and (b) will be provided in the Bill of Quantities for each different item to which a Prime Cost Sum applies.

The Contractor shall be reimbursed under sub-item(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services

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supplied, but excluding any charges for the Contractor's labour, profit, carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under sub-item (b), the respective percentage, as stated by the Contractor in its Tender, of the amount certified by the Employer's Agent for payment under the related sub-item (a). The percentages tendered by the Contractor for each respective sub-item (b) included in the Bill of Quantities shall be deemed to in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related sub-item (a).

If the Contractor shall have omitted within its Tender to insert a tendered percentage under sub-item (b), or tendered a zero percentage, the Contractor's tendered rate for sub-item (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under sub-item (b)."

Note:

1. Only payments for successful test will be made under the Prime Cost Sum provided in the Bill of Quantities for "additional acceptance control testing by the Employer's Agent".
2. The Contractor is responsible for the cost of process control testing. Payment in terms of the above will only be made for acceptance control testing ordered by the Employer's Agent.

"PSA 8.7 DAYWORK

Replace the contents of subclause 8.7 with the following:

"Measurement and payment shall be in accordance with the provisions of Clause 6.5 of the Conditions of Contract."

PSA 8.8 TEMPORARY WORKS

Replace the heading and contents of subclause 8.8.1 with the following:

PSA 8.8.2 Dealing with Traffic

Delete the entire Clause. The provision of PSA 5.10 shall apply. Refer also PSA 5.2, PSA 5.3, PSA 5.7 and PSA 5.10"

PSA 8.8.4 Existing services

Replace the heading of paragraph (c) with the following:

"(c) Excavate by hand in soft material to expose existing services Unit: m³

Add the following:

"The rate tendered for (c) shall further cover the cost of backfilling the excavation with excavated material compacted to 90% of modified AASHTO maximum density, loading, transporting within a free haul distance of 0,5 km and disposing of surplus material as directed, keeping the excavation safe, dealing with water, protecting the exposed services, and any other operation necessary to complete the work.

No distinction will be made between the various types of services to be exposed, or the depths to which excavations are taken.

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Excavation in excess of that authorised will not be measured for payment."

PSA 8.8.5 Cost of survey in terms of Land Survey Act

Delete the entire Clause. The provision of PSA 5.10 shall apply.

"PSA 8.8.7 Dealing with water

- (a) Dealing with subsurface water Unit: Sum
(b) Dealing with surface water Unit: Sum

The sum shall cover the cost for the provision, operation, maintaining and removal of all plant and materials required to deal with any water anywhere on site as required in terms of Sub clause 5.1.3 of SANS 1200 D and Sub clause 5.1.2 of SANS 1200 DB. No additional payment will be made for "Special water hazards".

The sum shall cover the cost of providing the necessary plant or materials, or both, fully erected and operative on the Site, the cost of operating and maintaining pumps, well points, sheeting, close timbering, and other equipment, as applicable, for 24 Hours a day, 7 days a week, throughout the period during which the facilities are required, and the cost of removing such goods and restoring the Site to its original condition on completion of that part of the project for which the temporary works were erected.

"PSA 8.8.8* Construct and remove temporary road to be used by the Contractor for haulage and access for the duration of the Contract Unit: Km

The Contractor shall determine the road width required, the necessary surface material, stormwater drainage and layerworks necessary to provide a durable and all-weather haul road.

The rate tendered shall cover the cost of all labour, plant and material necessary to construct and remove at the end of the Contract, the temporary haul road to be used by the Contractor for haulage and access to the reservoir Site.

No contractual claim or associated additional costs shall be evaluated, entertained or paid for any delays due to whatever circumstance incurred as a result of the construction, the use and the maintenance of haul or access roads."

PSA 8.9 WAYLEAVE Unit: sum

The tendered sum shall include full compensation to the Contractor for all the costs involved in obtaining all the necessary wayleaves required on the contract.

PSA 8.10 CONTRACT NAMEBOARDS Unit: No

The tendered sum shall include full compensation to the Contractor for all the costs involved in the supply, installation and maintaining of the specified number of contract nameboards as shown on the drawings, including the removal of the boards at the end of the contract period.

PSA 8.11 QUALITY MANAGEMENT PLAN Unit: sum

The costs of whatever nature for providing the Quality Management Plan as specified in Part C3 will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.12 PROVISION OF SECURITY PERSONNEL Unit: sum

The costs of whatever nature for providing security personnel the Contractor deems appropriate, taking cognisance of the location of the site, will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.13 EMPLOYMENT OF COMMUNITY LIAISON OFFICER Unit: Prov. Sum

The costs of whatever nature for Community Liaison Officers, taking cognisance of the location of the site, will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.14 EMPLOYMENT OF GRADUATE ENGINEER Unit: Prov. Sum

The costs of whatever nature for Graduate Engineer, taking cognisance of the location of the site, will be deemed to be covered by the sums tendered for the respective items in Section A of the Bill of Quantities.

PSA 8.15 SURVEY FOR AND PREPARATION OF AS-BUILT DATA Unit: sum

The sum tendered shall include all costs associated with providing the Engineer with the required as-built information of the works in terms of PSA 5.1.3.

PSDB	EARTHWORKS (PIPE TRENCHES)

PSDB 3 MATERIALS

PSDB 3.1 CLASSES OF EXCAVATION

Delete the contents of Clause 3.1 and replace with the following:

"The classification shall be as described in PSD 3.1".

PSDB 3.5 BACKFILL MATERIAL

Delete the contents of Clause 3.5(b) and replace with the following:

"In areas subject to road traffic loads which shall be held to extend 1000mm beyond the edge of the roadway, backfill shall comprise of material having a PI = 10 and a CBR at the specified density ≥ 45 compacted in 150mm layers to 95% of modified AASHTO maximum density."

Add the following paragraphs to sub-clause 3.5:

"(c) Cement-stabilised backfilling

Backfilling shall, where directed by the Employer's Agent, be stabilised with 5% cement. The aggregate shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed with 5% cement and shall be compacted in layers of 100 mm thick to 90% of modified AASHTO density.

(d) Soilcrete backfilling

The aggregate for soilcrete shall be mixed with 5% cement and shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed in a concrete mixer with the cement and enough water to acquire a consistency that allows the mixture to be placed with vibrators to fill all voids between the pipe and the sides of the trench. Shuttering shall be used where necessary."

PSDB 3.7 SELECTION

Replace the words "if he so wishes" in the first line of the second paragraph with the words "at his own cost".

REPLACE THE SECOND AND THIRD SENTENCES OF SUBCLAUSE 3.7 WITH THE FOLLOWING:

"The Contractor is required to use selective methods of excavation. The Contractor shall selectively remove and keep separate the sandy materials from unsuitable material and place it adjacent to the trench for reuse as backfill, selected fill, selected granular material, selected rockfill or for other use as ordered by the Employer's Agent."

ADD THE FOLLOWING AT THE END OF SUBCLAUSE 3.7:

"Material which, in terms of Subclause 6.2 of SANS 1200 D or Subclause 6.1 of SANS 1200 LB, is too wet for immediate use in the trench (but which is otherwise suitable) will not be regarded as "unsuitable"

material and, if so ordered by the Employer's Agent, the Contractor shall spread such material in a suitable area until it has dried sufficient for later use. Should the material which is replaced in the trench become too wet again, due to the fact that the Contractor made insufficient provision for the handling and removal of groundwater in accordance with Subclause 5.5 of SANS 1200 A, the Contractor shall replace the material at his own cost with material which is, in the opinion of the Employer's Agent, suitable.

When preparing his programme and construction methods, the Contractor shall make allowance for selective excavation and the handling and drying out of materials which is too wet for immediate use."

PSDB 4 PLANT

PSDB 4.1 Excavation equipment

Where it is required that the work is to be carried out using labour intensive methods, 4.1 shall read:

"Except that the Contractor may use the tools, equipment and plant specified for the classification of the material in the excavation of that material, the Contractor shall use only hand tools such as picks, shovels and sledgehammers".

PSDB 4.3 Compaction equipment

Where it is required that the work is to be carried out using labour intensive methods, 4.3 shall read:

"The Contractor shall use only hand tampers and hand-held pneumatic tampers to compact the material in the trench. He shall carry out his compaction in such a manner that the pipeline, duct or cable is not stressed or damaged. The material directly above the pipe, duct or cable shall not be compacted until sufficient backfill has been placed to ensure the loads transmitted to the top of the pipe, etc. are no greater than would be imposed by normal road traffic over a pipeline with cover of depth 600 mm".

PSDB 5 CONSTRUCTION

PSDB 5.1.2.2 Special water hazards

The Contractor shall take note that no special water hazards are designated. The Contractor shall therefore deal with all water as specified in 5.1.2.1, including flow into trenches due to a high or perched water table and any overland flow.

PSDB 5.1 PRECAUTIONS

PSDB 5.1.3 a) Sloping ground

DELETE THE SUBCLAUSE AND SUBSTITUTE WITH THE FOLLOWING:

"The Contractor shall be responsible throughout the duration of the Contract, inclusive of the Defects Liability Period, for the provision of all soil erosion preventative measures necessary to protect the trenches, pipeline(s) and land utilised by the Contractor during the Contract from any adverse effects of soil erosion, settlement, scour, etc., resulting from the construction of the Works.

Cross embankments, generally extending across the full width of the working strip, consisting of low earth mounds shaped to rounded form and so oriented as to have a fall of 1% along their length, shall be constructed with compacted material having a minimum density of 90% modified AASHTO density and minimum dimensions and maximum spacings dependent on the slope of the ground along the length of the pipeline, as indicated on the drawings.

Cross-embankments shall be constructed to the same minimum standards and dimensions indicated above wherever artificial slopes have been formed on the working strip or other areas used during construction and, with the approval of the Employer's Agent, are permitted to be so left.

Payment will be made for the construction of cross-embankments provided construction thereof has been either ordered or approved by the Employer's Agent prior to the commencement of such construction."

b) New Subclause under Subclause 5.1.2

ADD THE FOLLOWING NEW SUBCLAUSE TO SUBCLAUSE 5.1.2:

"5.1.2.4 Cross-walls in trenches.

In steeply sloping trenches at between 15 and 20% grade, or where erosion becomes evident on site, or where ordered by the Employer's Agent, the Contractor shall place sacks of earth as cross walls around and above the pipe up to ground level, prior to backfilling, as a soil erosion measure as indicated on the drawings.

Where required, an item will be included in the Bill of Quantities to cover the cost of the supply, installation and maintenance of sack breakers.

5.1.2.5 Concrete anchor blocks where gradient equals or exceeds 20%.

Where the grade of the pipe equals or exceeds 20% the Contractor shall provide concrete anchor blocks.

Where required, an item will be included in the Bill of Quantities to cover the cost of the supply, installation and maintenance of concrete anchor blocks, including the wrapping of the encased pipe portion with an approved tape wrapping such as Denso Ultraflex or similar approved."

c) Accommodation of traffic and access to properties

REPLACE THE SEMICOLON AND THE WORD "and" AT THE END OF SUBCLAUSE 5.1.3(a) WITH A FULL STOP AND REPLACE ITEM (b) WITH THE FOLLOWING:

"(b) Where necessary to achieve compliance by the Contractor with his obligations in terms of subclause C3.4.2.5(e) Scope of Works to provide and maintain pedestrian and vehicular access to properties affected by the works, the Contractor shall construct and maintain to the satisfaction of the Employer's Agent, such temporary access roads around, and/or steel or timber bridges over excavations in roads, pavements, entrances or accesses to properties.

Temporary pedestrian access bridges shall be at least 1,2 m wide and temporary access bridges for vehicles shall be at least 3,6 m wide. All temporary access bridges shall be fitted with handrails as well as protective mesh fencing on both sides.

On completion of the work, the Contractor shall dismantle and remove all such temporary constructions and reinstate these areas to their former condition.

Except only where the Employer's Agent has included in the Schedule of Quantities, particular payment items specifically therefor, the Contractor will not be paid directly for the construction and maintenance of temporary access roads and/or the provision and maintenance of bridges as aforementioned, and the costs thereof shall be deemed included in the Contractor's tendered rates for excavation."

ADD THE FOLLOWING NEW SUBCLAUSE TO SUBCLAUSE 5.1:

"PSDB 5.1.5 Removal of existing pipelines

Where existing pipes have to be removed, they shall be carefully opened up by machine excavation to 300 mm above the pipes after which the whole pipe shall be fully exposed by means of hand excavation. The excavation width shall comply with subclause 8.2.3.

The pipes shall be removed from the trench in a manner approved by the Employer's Agent and brought to the surface for inspection by the Employer's Agent.

Pipes that are declared suitable for reuse and pipes declared unfit for reuse shall be dealt with in an applicable manner described in the specifications, or on the Drawings or on the Employer's Agent's instructions, as relevant.

"PSDB 5.2 MINIMUM BASE WIDTHS

REPLACE PARAGRAPH (a) WITH THE FOLLOWING:

"Where two pipes are placed in the same trench, they shall be 300 mm apart and the specified side allowance shall still be applicable."

ADD THE FOLLOWING AFTER PARAGRAPH (b):

"The above is not applicable to trenches for subsurface drains.

Trenches for subsurface drains shall be excavated to the dimensions and gradients shown on the Drawings or directed by the Employer's Agent.

The specified width of trenches and the width of the excavation measured for payment shall not be less than 0,5 m, but the Contractor may reduce the actual width with the Employer's Agent's permission."

PSDB 5.4 EXCAVATION

Add the following:

"Except where otherwise specified, trenches shall be of such a depth that the minimum cover over the pipes shall be 750 mm, except at road-crossings, where the minimum cover shall be 1000 mm (see drawing 1005270-0000-DRG-CC-603).

No trench may be left open over the period 16 December to 8 January inclusive.

In the open veld the Contractor shall limit the length of trenches open, at any time, to a maximum of 300 m per pipelaying team or between fence crossings, whichever is the shorter. Similarly, the maximum length of open trenches within the villages shall be 100m.

Where trenches have to be excavated under this Contract adjacent to live services / other services laid under other contracts, it may be necessary to shore trenches to prevent damage to the live services / other services. It will be the responsibility of the Contractor to ensure that services constructed under other contracts of live services are not damaged by his operations during the Contract."

Should the Contractor detect areas where the cover is doubtful, he shall report this immediately in writing to the Employer's Agent, before any pipes are laid, so that remedial steps can be taken.

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The Contractor shall exert maximum caution in excavating alongside or near existing services, pipelines, buildings or structures. The Contractor shall use non-explosive methods for the excavation of hard rock in these cases and where instructed by the Employer's Agent (see 5.2.2.5)."

PSDB 5.6 BACKFILL

PSDB 5.6.1 General

Replace the first sentence with the following:

"Backfilling of pipe trenches may only commence after the pipe has been laid, firmly bedded in the specified cradle, the blanket placed and compacted as specified and after the pipe has been tested in terms of Clause 7 of SANS 1200 L."

PSDB 5.6.2 Material for backfilling

Replace the last paragraph of this Clause "In areas.....backfill" with the following:

"The material for backfilling in areas subject to road traffic loads shall comply with PSDB 3.5."

PSDB 5.6.3 Disposal of soft excavation material

Replace the words "unless otherwise required in the project specification." at the end of this Subclause with:

"or to spoil in accordance with the requirements of PSD 5.2.2.3 and Subclause 5.2.2.3 of SANS 1200 D, as instructed by the Employer's Agent."

PSDB 5.6.4 Disposal of intermediate and hard rock material

REPLACE THE LAST SECTION OF SUBCLAUSE 5.6.4 ".....disposed of as specified in 5.6.3 or removed to designated sites," WITH "....disposed of outside the site boundaries."

PSDB 5.6.6 Completion of backfilling

Add the following:

"If in the opinion of the Employer's Agent insufficient progress is being made with the backfilling of trenches, the Employer's Agent will be entitled to order that no further excavation takes place until the backfilling operation has caught up."

ADD THE FOLLOWING:

"PSDB 5.6.9 Backfilling around structures

Backfilling around a structure shall not be commenced before it has been approved by the Employer's Agent.

Granular material shall be used as backfill material around structures as shown on the drawings and shall be placed in layers not exceeding 150 mm compacted thickness, each layer being thoroughly compacted to 100% of modified AASHTO density as instructed by the Employer's Agent before the succeeding layer is placed. Unsuitable or surplus excavated material shall be spoiled off site."

ADD THE FOLLOWING NEW SUBCLAUSE UNDER SUBCLAUSE 5.6:

"PSDB 5.6.10 Selection and disposal of rockfill to erosion channels.

Where directed by the Employer's Agent, the Contractor shall select rockfill from surplus excavated material and dispose of the material at erosion channels identified by the Employer's Agent.

Rockfill shall be comprised of 40% to 50% by volume of rocks/boulders of size in the range of 0.02–0.50 m³, with the remaining volume made up of material of smaller particle sizes of which at least 80% passes a 6mm sieve. The rockfill shall be thoroughly mixed before disposal.

The material shall be disposed of at the identified erosion channel sites, to the dimensions and levels confirmed by the Employer's Agent, and compacted."

PSDB 5.7 **COMPACTION**

PSDB 5.7.1 Areas not subject to Traffic Loads

Add the following sentence:

"All non-cohesive material shall be compacted to 100% of modified AASHTO maximum density."

Replace the heading and contents of subclause 5.7.2 with the following:

PSDB 5.7.2 Areas Subject to Traffic Loads:

In areas subject to traffic loads, trenches shall be backfilled from the top of the bedding to the extent scheduled below in layers of thickness not exceeding 150mm after compaction, and the material shall be compacted to 95% of modified AASHTO maximum density.

TRENCH DESCRIPTION	EXTENT OF BACKFILL
Trenches beneath roadways to be constructed under the contract	Up to designated level of underside of layerworks

PSDB 5.12 **UNSTABLE TRENCH BOTTOM**

The Employer's Agent may, upon consideration of the condition of the trench bottom, particularly with regard to the properties of the soil materials, order the use of a crushed stone layer in order to provide a stable platform for placing of the pipe bedding and laying the pipe in certain sections of the trenches. The stone layer shall consist of 19 mm single-sized crushed stone and shall have a specified thickness of 150 mm over the specified minimum base width.

Should the material in the trench bottom or the bedding material be of such a nature that it can penetrate the stone layer, the Employer's Agent may instruct the Contractor to enclose the stone layer completely within a geotextile filter blanket which shall comply with the requirements of PSLB 3.6, and shall have overlaps of at least 200 mm.

PSDB 5.13 **LENGTH OF OPEN TRENCH**

No more than 300 m of trench per pipe-laying team may be open at any one time.

PSDB 5.14 **DEPOSITING MATERIAL EXCAVATED FROM TRENCH**

Unless otherwise ordered by the Employer's Agent, all excavated material shall be kept within 5 m of the pipeline centreline. The toe of the bank of excavated material shall be trimmed well back from the edge of

the trench so as to leave a minimum 0,6 m clearance between the toe of the bank and the edge of the trench.
The Contractor shall keep this strip clear of excavated material at all times.

The Contractor shall take steps to avoid burying or contaminating topsoil which shall be set aside for replacing, as far as practical, on the surface from which it was excavated.

PSDB 5.15 CLEANING UP AS WORK PROCEEDS

The Contractor shall complete all backfilling, trimming, levelling and cleaning up of the Site as work proceeds. This work shall not lag by more than 1 km behind the pipe-laying team."

PSDB 7 TESTING

The Contractor shall carry out density tests as specified in TMH1, in the positions indicated by the Employer's Agent, to determine the compaction of the backfill material in the trenches and the material used for reinstating the road construction layers. No single test result which is below the specified density, will be accepted.

In the case of trenches in areas subject to traffic loads, the Contractor shall, notwithstanding the terms of the second sentence of Subclause 7.1, bear the cost of all density tests carried out except as follows. Where the test results are equal to or exceed the specified density, the Employer will bear the cost of that number of those tests ordered by the Employer's Agent in excess of one test per 20 m³ of compacted material, based on the total volume of backfill and reinstated road layers, including the replacement of any over-excavation, in areas subject to traffic loads.

The Contractor shall also bear the cost of those density tests, carried out by the Employer's Agent, of which the test results are below the specified density.

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.1 BASIC PRINCIPLES

PSDB 8.1.1 Replace "along the route of the pipeline" in the third line of Clause 8.1.1 with "as specified in PSDB 5.6.3".

PSDB 8.1.2 ADD THE FOLLOWING:

"In the road prism or building platform the ground surface from which depth will be measured will always (irrespective of operation sequenced) be the road bed level at centre-line."

PSDB 8.2.3 REPLACE THE CONTENTS OF SUBCLAUSE 8.2.3 WITH THE FOLLOWING:

"Wherever volumetric measurement is required, the volume will be computed according to the depths indicated on the drawings, or to the bottom of the specified bedding cradle, whichever is the greater, and the width determined from the applicable side allowance (see drawing 1005270-0000-DRG-CC-603) plus the nominal width of the pipe. Side allowance shall be measured from the outside of the pipe. No allowance shall be made for the extra thickness of the collars or couplings.

The side allowance for ducts shall be 150 mm and there shall be 300 mm between a Telkom duct and any other duct/service placed in the same trench.

Where two or more pipes/ducts are to be placed in one trench, the specified base width shall be calculated as follows:

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"(3) Extra over 8.3.2a. and PSDB 8.3.2a for disposing of spoil material on a site provided by the Contractor
..... Unit: m³

The unit of measurement shall be the cubic metre, measured in accordance with Sub-clause 8.2 of SANS 1200 D, of surplus and/or unsuitable material disposed of, on the instruction of the Employer's Agent, at a spoil site or spoil sites provided by the Contractor.

The tendered rate shall include full compensation for the additional cost of providing a spoil site or other means of disposing of surplus spoil material, for transporting the material regardless of the distance involved, for acceptance charges for such material and for all other incidental costs to dispose of the spoil material.

(4) Backfill stabilised with 5% cement where directed by the Employer's Agent Unit : m³

The unit of measurement shall be the cubic metre of backfill material, measured in place after compaction according to the authorised dimensions, which was stabilised on the Employer's Agent instructions in accordance with Sub-clause PSDB 3.5(c).

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing, backfilling and compacting the stabilised material to 90% of modified AASHTO density."

(5) Soilcrete backfill where directed by the Employer's Agent..... Unit : m³

The unit of measurement shall be the cubic metre of soilcrete placed on the Employer's Agent instructions in accordance with Sub-clause PSDB 3.5(d), measured in place according to the authorised dimensions.

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing and placing the soilcrete as well as for the cost of shuttering if required."

"(6) Hand excavation where ordered by the Employer's Agent in:

- i) Soft material Unit: m³
- ii) Hard material Unit: m³

The unit of measurement shall be the cubic metre of material, measured in place according to the authorised dimensions, which was excavated by hand on the specific prior written instructions of the Employer's Agent; provided always that the Employer's Agent's said instruction shall have stated that measurement and payment for such hand excavation will be in accordance with this item.

The tendered rate shall include full compensation for the additional cost, effort and time resulting from excavating in the respective materials using hand methods only.

The Employer's Agent shall not be obliged to authorise payment under this item in respect of any hand excavation carried out (whether ordered in writing or otherwise), which hand excavation was in any case necessary to achieve compliance by the Contractor with his obligations under the Contract to

- utilise construction appropriate to the nature of the specific parts of the works; and/or
- protect existing structures and/or services; and/or
- comply with all prevailing legislation and regulations.

Add the following subclauses after subclause 8.3.2(c):

"(d) Excavate in all materials for stormwater inlet and outlet structures and for manholes, catchpits, valve chambers and the like, irrespective of depth, and backfill around structures: Unit: m³

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The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised dimensions, and excluding the volume of material excavated and paid for under subitem (a).

The tendered rate shall include for the costs of excavating in all materials, backfilling, compacting, trimming and tidying the final surface around the structure, disposing of surplus and unsuitable materials within the free-haul distance and, where applicable, selecting and keeping separate, excavated material suitable for use as backfill.

(e) Excavate open drains in all materials Unit: m³

The tendered rates shall include full compensation for excavating in all materials within the dimensions specified or authorised by the Employer's Agent and to the specified lines and profiles, for the disposal of surplus and unsuitable excavated material where applicable, and in the case of item (d), for backfilling with suitable approved material compacted to 90% of modified AASHTO density around the structures.

(f) Extra over subitems (d) and (e) for excavating in:

(1) Hard rock material Unit: m³

Measurement and payment shall be in accordance with the provisions of 8.3.2(b) of SANS 1200 D (as amended)."

PSDB 8.3.3 Excavation ancillaries

PSDB 8.3.3.3 Compaction in road reserves

REPLACE THE HEADING OF SUBCLAUSE 8.3.3.3 WITH THE FOLLOWING:

" 8.3.3.3 Compaction in road crossings"

REPLACE THE SENTENCE, "The volume will be measured as specified in 8.2.2, 8.2.3 and 8.3.3.1", WITH THE FOLLOWING:

"To determine the volume in the case of gravel roads, the depth will be measured from the underside of the gravel wearing course to the top of the fill blanket, and in the case of bitumen roads, from the underside of the subbase to the top of the fill blanket.

The rest of the trench shall be backfilled as specified in clauses 5.9.3, 5.9.4 and 5.9.5, as applicable, and payment will be made under item 8.3.6.1."

PSDB 8.3.3.4 Overhaul

Replace the contents of this subclause with the following:

"Measurement and payment shall be in accordance with subclause PSD 5.2.5."

PSDB 8.3.6 Finishing

PSDB 8.3.6.1 Reinstatement road surfaces complete with all courses

ADD THE FOLLOWING:

"Where the trench crosses asphalt road surfaces, the rate shall include for neatly saw cutting the existing asphalt surfacing on all edges."

PSDB 8.3.7 Accommodation of Traffic

Delete Subclause 8.3.7. The provisions of PSA 5.10 shall apply.

ADD THE FOLLOWING ITEMS TO SUBCLAUSE 8.3:

"PSDB 8.3.8 Removal of existing pipes

(a) Excavate in all materials to 300 mm above the pipelines Unit: m³

The unit of measurement shall be the cubic metre of material excavated for the removal of pipelines in accordance with PSDB 5.11, measured in place according to the authorised dimensions. Depth shall be measured from the ground surface on the centreline of the pipeline to 300 mm above the pipe barrel.

The tendered rate shall include for excavating by any method in all materials and placing the excavated material alongside the trench.

(b) Excavate by hand to expose pipes Unit: m

The unit of measurement shall be the linear metre of pipeline finally exposed by hand excavation methods, measured in plan view along the centreline of the pipeline, irrespective of the class of pipe. Separate items will be scheduled for each different diameter of pipe. The pipe volume as well as the volume of all associated structures such as junction boxes, manholes, valve chambers and the like shall be excluded from the volume of excavation measured.

The tendered rates shall be in full and final compensation for excavating by hand methods from a depth of 300 mm above the pipe barrel in accordance with PSDB 5.11.2 to expose the pipe to its bottom, irrespective of the type or class of pipe, as well as for excavating by hand around junction boxes, manholes, valve chambers and the like.

(c) Remove pipes from trench and stack for inspection Unit: m

The unit of measurement shall be the linear metre of each type and diameter of pipe removed from the trench in accordance with subclause 5.11, measured in plan view along the centreline of the pipeline, without deduction for specials, junction boxes, manholes, valve chambers and the like as may be encountered. Separate items shall be scheduled for each different class and diameter of pipe.

The tendered rates shall be fully inclusive for uncoupling the individual pipes and specials, all additional excavation as may be necessary to facilitate the insertion of lifting slings or the utilisation of other lifting equipment, the provision and utilisation of all such lifting equipment as may be necessary (e.g. cranes), for lifting the pipes and specials out of the trench, cleaning and stacking them along the side of the trench for inspection, attending during the Employer's Agent's inspection and recording the Employer's Agent's decisions on each pipe/special. The tendered rate shall further include for the demolition and removal from the trench of all associated pipeline structures as may be encountered, such as junction boxes, inlet and outlet structures, valve chambers, anchor blocks and the like, and the loading and removal of the debris to spoil.

(d) Deliver pipes and specials declared reusable

(i) Pipes Unit: m

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The unit of measurement shall be the linear metre of pipe declared reusable by the Employer's Agent and delivered to the address specified in subclause PSDB 5.11. Separate items will be scheduled for each different type and class of pipe.

The tendered rates shall be fully inclusive for loading the pipes at the side of the trench, transporting to and off-loading at the location specified in PSDB 5.11, and carefully stacking separately according to the type, class and diameter of the pipes.

- (ii) Specials Unit: number

The unit of measurement shall be the number of specials declared reusable by the Employer's Agent in accordance with subclause PSDB 5.11 above, irrespective of the type or diameter of the special, delivered to the address specified in subclause PSDB 5.11.

The tendered rate shall be fully inclusive for loading the specials at the side of the trench, transporting to and off-loading at the location specified in PSDB 5.11, and carefully stacking separately according to the type, class and diameter of the specials.

- (e) Dispose of pipes and specials unsuitable for reuse

- (i) Pipes Unit: m

The unit of measurement shall be the linear metre of pipe declared by the Employer's Agent to be unsuitable for reuse and disposed of by the Contractor in accordance with the requirements of PSDB 5.11.5. Separate items will be scheduled for different types and diameters of pipe.

The tendered rates shall be fully inclusive for loading the pipes at the side of the trench, transporting to and off-loading at the spoil site and dealing with them as specified in PSDB 5.11.5.

- (ii) Specials Unit: number

The unit of measurement shall be the number of specials declared by the Employer's Agent to be unsuitable for reuse and disposed of by the Contractor in accordance with the requirements of PSDB 5.11.5. Separate items will be scheduled for different types of special.

The tendered rate shall include for loading the specials at the side of the trench transporting them to and off-loading them at the spoil site and dealing with them as specified in PSDB 5.11.5.

- (f) Backfill and compact trench Unit: m³

The unit of measurement shall be the cubic metre of compacted fill, measured tight according to the authorised dimensions of the trench.

The tendered rate shall be fully inclusive for placing excavated material in the trench and compacting in accordance with subclauses SANS 1200 DB 5.6 and 5.7 (as amended).

- (g) Make up deficiency in backfill material Unit: m³

The unit of measurement shall be the cubic metre of backfill obtained from sources other than the trench excavated for the purposes of removing the pipeline in order to make up any deficiencies in backfill material resulting from the volume previously occupied by the pipeline.

Except that the volume shall be determined as the external volume of the pipes removed together with the external volume of all ancillary structures removed along the pipeline, measurement and payment shall be in accordance with 8.3.3.1 of SANS 1200 DB.

PSDB 8.3.9 Provision of temporary bridges for maintaining access to Properties

(a) Temporary pedestrian bridges Unit: No

(b) Temporary vehicular bridges Unit: No

The unit of measurement shall be the number of temporary pedestrian and vehicular bridges actually provided in accordance with the Specifications.

The tendered rates shall include full compensation for the supply, first installation, maintenance and final dismantling and removal of the temporary access bridges when no longer required, as specified in subclause PSDB 5.1.3.

PSDB 8.3.10 Moving of temporary bridges to and their re-erection in new positions

(a) Temporary pedestrian bridges Unit: No

(b) Temporary vehicular bridges Unit: No

The unit of measurement shall be the number of times each temporary bridge is moved to and re-erected in an entirely new position, excluding its first erection in the position where it was originally installed. No payment shall be made without the Employer's Agent's prior approval for moving and re-erecting a temporary bridge.

The tendered rates shall include full compensation for taking down, transporting, handling, re-erecting and maintaining the temporary bridges in the new positions."

PSDB 8.3.11 Slope Stabilisation

(a) Cross embankments Unit: m³

(b) Cross Walls Unit: m³

(c) Concrete anchor blocks Unit: m³

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised or actual dimensions, whichever is the lesser.

The tendered rates shall include full compensation for slope stabilisation as specified on drawings or authorised by the Employer's Agent. The rate shall include all material, labour, transporting and plant required.

PSL MEDIUM PRESSURE PIPELINES

PSL 3 MATERIALS

PSL 3.1 GENERAL

Add the following paragraphs:

"Each type of pipe delivered to the Site shall have a standard length corresponding with the standard lengths offered by the pipe manufacturer in his catalogue, with a maximum permissible variation in length of $\pm 2\%$.

A pipe that is a shorter or longer than the defined standard will be rejected by the Employer's Agent, except when such non-standard lengths are required in terms of the Contract and have been specifically manufactured or cut as such by the pipe manufacturer or supplier."

PSL 3.4 STEEL PIPES, FITTINGS, AND SPECIALS

PSL 3.4.2 Pipes of nominal bore up to 150 mm

Add the following:

"The pipes shall be 'normalised' or seamless steel pipes and shall be used with malleable cast-iron fittings complying with the requirements of SANS 14.

Where flanges are required, they shall comply with SANS 1123 table 1600 unless otherwise indicated on the Drawings."

PSL 3.7 OTHER TYPES OF PIPES

Replace the heading and contents of subclause 3.7.1 with:

"PSL 3.7.1 uPVC pipes and fittings

uPVC pipes and fittings shall be provided with spigot and socket rubber ring joints and shall comply with SANS 966-1 and shall carry the SABS mark. Solvent welded fabricated fittings will not be acceptable.

"PSL 3.7.2 Polyethylene pipes and fittings

"Polyethylene pipes shall be black HDPE type IV pipes and shall comply with SANS/ISO 4427 and shall carry the SABS mark, manufactured from PE80 or PE100 material with a nominal pressure rating (PN) as indicated on the Drawings and scheduled in the Bill of Quantities.

The HDPE pipes shall be joined together by means butt-welded joints. Where HDPE pipes is to be connected to steel flanges, this shall be done with HDPE stub-flange, supplied with gasket and grade 316 stainless steel backing ring and fasteners.

Compression fittings to be used with HDPE pipes and shall be "Plasson", "Alprene" or approved equivalent with a nominal pressure rating (PN) as indicated on the Drawings and scheduled in the Bill of Quantities."

"PSL 3.7.3 mPVC pipes and fittings

mPVC pipes and fittings shall be provided with spigot and socket rubber ring joints and shall comply with SANS 966-2 and shall carry the SABS mark. Solvent welded fabricated fittings will not be acceptable."

“PSL 3.7.4* Copper tubing and fittings

Copper tubing shall be class 0 and comply with the requirement of SANS 460. Fittings shall be brass “Conex” compression fittings to SANS 1067 and shall carry the SABS mark.”

PSL 3.8.3 Flanges and accessories

Add after “insertion piece” in the second line “consisting of a full face gasket”.

Notwithstanding the provisions of this clause, Flanges shall comply with SANS 1123 or BS EN 1092 unless required to match existing flanges. Raised face flanges shall be provided for pipework of PN 25 and higher. Flange drilling shall be “off centre” unless required to match an existing flange which is drilled otherwise. The jointing material used on flanged joints shall be of a suitable rubber or compressed mineral fibre at least 3mm thick complying respectively with BS EN 681 or BS EN ISO 23936, as applicable. Gaskets shall be full face. Properly designed O-ring seals are also acceptable subject to receiving approval from the Employer’s Agent.

All fasteners, including studs welded to flanges, shall be of stainless steel grade 316 and shall comply with EN ISO 3506-44, as applicable.

All pipes, specials and fittings shall be supplied complete with all necessary stainless steel grade 316 bolts, washers and nuts as well as appropriate full face insertion pieces, applicable to diameter and material.

PSL 3.8.4 Loose flanges

Bolts and nuts shall comply as stated in PSL 3.8.3.

Add new subclause

“PSL 3.8.8* Orifice Plates

Orifice plates shall be manufactured from 10mm thick grade 316 stainless steel and shall be inserted between flanges where it is stated in this document and or the Drawings that orifice plates are required. The orifice shall be sharp edged, double bevelled, with a 4mm edge and shall be manufactured by an approved supplier.”

PSL 3.9 CORROSION PROTECTION

PSL 3.9.1 CI pipes

“Notwithstanding the provisions of this subclause, all CI pipes, fittings, specials, valves, meters and hydrants shall be coated internally and externally using “Rilsan” or equivalent to a dry film thickness of at least 200 micron. The coating shall be applied by an approved applicator. Fusion bonded epoxy (FBE) coating applied internally and externally to SANS 1217 or DIN 30677 will also be accepted”.

PSL 3.9.2 Steel pipes

PSL 3.9.2.1 Steel pipes of nominal bore up to 150 mm

Add the following:

“Steel pipes utilised for the air vent shall be galvanised only as shown on the Drawings. Steel pipes, fittings and flanges within the chambers shall be hot dip galvanised and FBE coated after fabrication, in accordance with the requirements of SANS 32 for heavy duty applications. Further machining, cutting or welding after hot

dip galvanizing will not be allowed. Fusion bonded epoxy (FBE) coating shall comply with the provisions of SANS 1217 or DIN 30677 will also be accepted"

PSL 3.9.2.2 Steel pipes of nominal bore over 150 mm

Add the following:

"Steel pipes shall be hot-dip galvanised where shown on the Drawings and as specified in sub-subclause 3.9.2.1. The hot-dip galvanising shall comply with the requirements of the hot-dip galvaniser's Association of South Africa"

PSL 3.9.6 Corrosive soil

Add the following:

"Where shown on the Drawings, steel pipes in contact with corrosive soil shall be wrapped with Densopol 80 HT or an equivalent approved product, strictly in accordance with the manufacturer's instructions."

PSL 3.10 VALVES

Replace the contents of this subclause with the following:

"Definition of valves will be deemed to also include water meters and Prefabricated Break Pressure Tanks (BPTs).

Valves shall comply with the following requirements in addition to the Specification per valve type detailed below.

- Meet a minimum Pressure Class of 25 bar and or the pressure class as stated in the BOQ, in cases where the BoQ does not specify a pressure class, it shall be taken as 25 Bar.
- They shall be complying with SANS 664/1974 with pressure class as per the Drawings and Bill of Quantities.
- They shall comply with the requirements of SANS 1123 and further specified in this Specification and Bill of Quantities.
- Valves shall be coated before delivery, both internally and externally with a suitable bitumastic paint free of phenols."

PSL 3.10.1 Gate Valves

The following type of gate valves shall be used on this project as measured in the Bill of Quantities

- Flanged gate valves with spindle cap or handwheel (AVK Series 43/60 RSV valves or approved equivalent)
- Flanged Gate Valve with spindle cap (AVK Series 06/40 or approved equivalent)
- Flanged Gate valve with handwheel (AVK Series 06/40 or approved equivalent)
- Socketed gates valves for uPVC pipes shall be AVK Series 01/60 RSV valves or approved equivalent
- Class 8 "Prestex" (Cobra) or similar approved cast brass full way gate valves complying with SANS 776-1975 shall be used. The valves shall be fitted with non-rising spindles and guided wedges and shall have taper threaded female end connections.

A valve shall be provided with double flanged or double spigoted or double socketed end connections, as billed. Unless otherwise billed, it shall be supplied complete with all jointing material such as insertions, rings, packings, bolts, nuts and washers etc. as necessary for the type of connection billed.

PSL 3.10.2 Air valves

The following type of valves shall be used on this project as measured in the Bill of Quantities

- Three pieces full-bore stainless-steel ball valve
- Three stage double orifice air release and vacuum break valve (Vent-o-Mat model RBX or similar approved air valve)

The valves shall further be as specified on the Drawings and in the Bill of Quantities in terms of size, connection type, pressure rating and model number.

Each air valve shall be supplied with:

- i) a bronze isolation cock, (for DN 25 valves only), and
- ii) flanged isolating RSV gate valve as specified in this document, and with or without bevel gears and spindle cap or handwheel as specified
- iii) three-piece full-bore stainless-steel ball valves with PTFE seats as supplied by Vac-Cent Services, or approved equivalent. The maximum working pressure of 16 bars.

Each double or multiple orifice air valve (flanged) shall be fitted with a suitable drain cock to release the pressure inside the valve when the isolating valve is closed at a time when the float is sealing the large orifice.

Double and Triple orifice air valves shall be provided with cast iron shield plates so designed as to prevent the entry of dirt when the large orifice is open.

PSL 3.10.3 Water Meters

The meter on the outlets of the reservoirs and the Main Supply shall be 50mm - 250mm "Kent Helix 4000", combination bulk water meter or approved equivalent with flanges to suit PSL 3.8.3.

For the village reticulation / standpipes, the water meter shall be the 165mm long x 15mm VT110T KSM meter or similar approved RDP standard standpipe water meter.

Flanged end connections shall comply with SABS 1123 for a nominal pressure corresponding to that of the water meter and the stated working pressure of the adjacent pipework.

The meter design shall provide for a reasonable clearance behind the rear face of flanges to allow access to e.g. bolts and nuts for installation and removal. The flow rate shall be between 0.35m³/h – 2000m³/h and the maximum working pressure of 16 bars. The accuracy of the meter shall be guaranteed equal or better than $\pm 0.5\%$ of the measured value.

PSL 3.10.4 Check valves

Check valves shall be AVK Series 53/35 or similar approved resilient seated ball check valves. The ball shall be ductile iron, vulcanised with NBR rubber and shall be of the full-bore type. It shall be externally and internally coated with epoxy coating to DIN 30677. The valve shall further be pressure rated to 20 bar.

The valve shall be suitable for horizontal or vertical mounting, of robust construction, and shall close drop tight at the required operating head. Access to the moving parts shall be possible without removing the valve from the line. In addition, the following shall apply:

- a) For flanged check valves:
 - i) the valve shall be double flanged;
 - ii) the body, cover and door shall be of close-grained cast iron;

iii) the door shall be fitted with a zinc-free phosphor-bronze face closing on a corresponding bronze face in the body, and

iv) the door suspension lugs shall be hinged on a long zinc-free, phosphor-bronze spindle supported in trunnion bearings on both sides of the body;

b) For wafer type spring check valves:

i) the discs shall be either stainless steel or carbon steel with resilient seats, and

ii) the valve bodies shall be manufactured of the materials specified.

PSL 3.10.5 Control valves

The following type of level and flow control valves shall be used on this project as measured in the Bill of Quantities

For the reservoirs, the following control valves shall be used

- Bermad WW-EN-750-03-66-3Q-Y-C-16-EB-PB-F or similar approved, flow control with Bi-Level and Anti-Surge Closing
- DN50 Equilibrium (ball) float control valves, PN16, with flanged end, or similar approved.

PSL 3.10.6 Prefabricated Break Pressure Tanks (BPTs)

The following type of BPT shall be used on this project as measured in the Bill of Quantities

The LW Tank Systems Prefabricated stainless steel BPTs or similar approved shall be used. The model numbers for the BPTs to be used as below.

- LWTS-50-BPT-01 or similar approved
- LWTS-80-100-BPT-01 or similar approved

PSL 3.11.1 Bricks

Bricks complying with the details shown on the Drawings and Bill of Quantities shall be used.

PSL 3.11.4 Step irons

Step irons complying with the details shown on the Drawings shall be used.

PSL 3.11.5 Manhole covers and frames

The requirements of the subclause shall apply, except that the type of cover and frame to be used shall be as detailed on the Drawings.

PSL 3.11.6 Surface Boxes

All surface boxes, including air, scour and inlet chambers shall be as specified and detailed on the Drawings.

PSL 3.13 PROTECTION DURING STORAGE, HANDLING AND CONSTRUCTION

The Contractor shall satisfy the Employer's Agent that the manufacturer's recommendations for good practice for the transporting, handling, stacking, storing and installing of pipes, pipe fittings, seal rubber etc. are being diligently followed. The Employer's Agent's Representative shall be given the opportunity to inspect all materials immediately upon delivery and prior to installation and shall have the right to reject any materials

which, in his or her opinion has / have suffered damage which may impair the long-term durability and or strength of said items.

Pipes and specials shall be protected against damage during all stages of manufacture, delivery, storage and handling.

PSL 5 CONSTRUCTION

PSL 5.1.1 General

Add the following to Clause 5.1.1:

"PVC pipes shall be laid, cut and jointed strictly in accordance with the manufacturer's instructions. A pipeline shall further be laid continuously; the leaving of gaps for fittings will not be permitted.

Where applicable, pipes to be laid in a combined trench shall further be laid so that their joints are directly opposite one another and so that all pipe markings printed on the pipes are positioned at the top."

PSL 5.1.4 Depths and cover

Notwithstanding the requirements of this Subclause, the pipeline shall be laid to the levels shown on the Drawings or as ordered by the Employer's Agent.

Add the following new subclause under PSL 5.1.4

"PSL 5.1.4.6* Position of spindle of gate valves

The top of the spindle of a gate valve shall not be less than 75 mm nor more than 600 mm below the level at which the soffit of the valve box is to be set. To ensure the aforementioned, valve spindle extension pieces shall be fitted by the Contractor, complete with stabilisers, where required."

PSL 5.6 VALVE AND HYDRANT CHAMBERS

PSL 5.6.1 General

Replace the words "drawing L-1" in the second line with "the Drawings".

PSL 5.6.2 Construction of chambers

Replace the words "drawing L-1, L-2 and L-3" in the fourth line with "the Drawings".

Add the following subclauses:

"PSL 5.11 STANDPIPES

Standpipes shall be erected in the positions and to the details shown on the Drawings.

PSL 5.12 MARKER BLOCKS

Type 1 and Type 2 marker blocks shall be manufactured and positioned as shown on the Drawings.

PSL 5.13 PIPELINE ROUTE MARKERS

Route markers for the various water pipelines shall be erected in the positions and shall be manufactured according to the details shown on the Drawings."

PSL 7 TESTING

PSL 7.3 STANDARD HYDRAULIC PIPE TEST

PSL 7.3.1 Test pressure and time of test

PSL 7.3.1.2 The maximum working pressure for the different pipes is indicated by the class of the pipe.

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.1 GENERAL

Replace the second sentence of this Clause with the following:

"No payment will be made for depths of excavation in excess of those specified unless ordered in writing by the Employer's Agent."

PSL 8.2 SCHEDULED ITEMS

PSL 8.2.1 Supply, lay and bed pipes complete with couplings Unit: m

Add the following:

"The rate tendered shall further cover the cost of the work provided for under 8.2.4, for the supply and installation of all stainless-steel bolts, nuts, washers, insertion pieces, for corrosion protection as specified, and with respect to testing, for the supply and installation of all equipment, fittings and specials required, as well as the cost of water drawn and the disposal of the sterilisation solution. The measured quantity of pipe length will not, except for the payment of materials on site, be measured for payment until the length under consideration has been accepted in terms of subclause 7.3, PSL 7 3.1 and 7.3.3.

"The Contractor shall be responsible for all costs associated with obtaining water for pressure testing of the pipelines. Programming of the testing and commissioning of the scheme should be performed such that once watertightness testing of the reservoirs has been successfully completed, the water inside the reservoirs can be used to test and commission the installed pipelines. No additional provision or payment will be made for water required for testing the pipelines.

The contractor would be required for testing /commissioning/repairing work done by others and accept responsibility/liability for the work done by others following his testing.

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The Contractor will be allowed to claim the following percentages for interim payment purposes as the various activities are completed:

Stage of Completion	Percentage Applicable
Pipes laid, fully bedded and backfilled in trench	85.00%
Pipes cleaned, disinfected and tested successfully.	100.00%

Note that the percentage applicable is given in the above table as a cumulative figure.”

**PSL 8.2.2 Extra over 8.2.1 for the supplying, laying and bedding of specials complete with couplings
..... Unit: No**

Tees

Specials will be measured by number, extra over the cost of the installation of the pipes. The tendered rate shall include the supply, lay, bedding, jointing and testing of the specials.

The tendered rate for specials shall be held to include machine collars (where required) on the specials and the couplings / welds necessary to fit the special to the associated pipeline and one set of bolts, nuts and gaskets per flanged special.

Mechanical couplings shall be measured separately by number. The tendered rate shall also include for petroleum mastic and tape wrapping where mechanical couplings and flanges are buried.

Bends

Bends will be measured by number, extra over the cost of the installation of the pipes. The tendered rate shall include the supply, lay, bedding, jointing and testing of the bends. The tendered rate shall also include the cutting of pipes, preparation of pipe ends and repair of corrosion protection (where required)”

PSL 8.2.3 Extra over 8.2.1 for the supplying, fixing and bedding of valves..... Unit: No

Add the following:

“The rate tendered shall also as applicable cover the cost of the provision of corrosion protection as specified as well as the supply and installation and testing of all stainless-steel bolts, nuts, washers, insertion pieces, as required.”

PSL 8.2.4 Extra over 8.2.1 for the cutting of the pipe and the supplying and fixing of the extra coupling

Delete this Clause:

Provision has been made under PSL 8.2.1 for the measurement and payment of work included under this Sub-Clause.

PSL 8.2.11 Anchor blocks/Thrust blocks and pedestals

Insert "concrete" before "and" in the last line of the last paragraph.

REPLACE THE LAST SENTENCE OF SUBCLAUSE 8.2.11 WITH THE FOLLOWING:

"Where measured by number or sum, the rate or sum shall cover the cost of excavation, trimming, backfilling, concrete, formwork, and steel reinforcement (including 80 kg high tensile steel per cubic metre of concrete where the amount of steel is not indicated on the drawings) as well as labour, etc., to complete the thrust block as shown on the drawings in addition to the operations and materials specified in this subclause."

Replace the heading and contents of subclause 8.2.13 with the following:

PSL 8.2.13 Chambers

a) Valve and Meter Chambers, etc...... Unit: No

REPLACE THE SECOND SENTENCE IN SUBCLAUSE 8.2.13 (a) WHICH STARTS WITH THE WORDS "The rate shall cover ..." WITH THE FOLLOWING:

"The rates for valve chambers and other pipeline structures shall cover the costs specified for thrust blocks and for all other necessary materials, such as air vents, access covers and access ladders to complete the chamber as detailed on the drawings, but excluding:

- i) reinforcing steel, and
- ii) pipe specials (valves and fittings).

The rates shall also cover the costs of providing padlocks to all chambers, opened by the same master key."

b) Extra over for chambers of depth exceeding 1,5m Unit: No

Additional depths of chambers in excess of 1,5m will be measured in increments of 0,5m depth for each type of chamber.

The rate tendered shall cover the cost of the complete construction of each extra 0,5m additional depth as well as for additional step irons as required.

Note:

The Contractor shall note that all pipes, specials and fittings in the various valve chambers along the route of the pipeline have been grouped together in the Bill of Quantities and not separately itemised per Sub-Clauses 8.2.2 and 8.2.3. The payment provisions as specified shall none the less apply as appropriate."

PSL 8.2.15 Special Wrapping in Corrosive Soil

Delete this subclause. Provision has been made under PSL 8.2.1 for the measurement and payment of work included under this Sub-Clause.

Add the following new Clauses:

PSL 8.2.16* Marker blocks

(a) Installation of valve markers complete as per Drawing Unit: number

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(b) Installation of pipe markers complete as per Drawing Unit: number

(c) Installation of road crossing markers complete as per Drawing..... Unit: number

The tendered rate shall include full compensation for all excavation and backfill, labour, equipment and materials to manufacture and install the blocks as shown on the Drawings.

PSL 8.2.17* Supply and install overflow, scour, inlet and outlet pipes at reservoir (description, diameter, and material type specified)
Unit: Number

The rate tendered shall cover the cost of the work provided for under 8.2.1, PSL 8.2.1 and 8.2.4, for the supply and installation of all stainless steel bolts, nuts, washers, insertion pieces, for corrosion protection as specified, and with respect to testing, for the supply and installation of all equipment, fittings and specials required, as well as the cost of water drawn and the disposal of the sterilisation solution. The measured quantity of pipe length will not, except for the payment of materials on site, be measured for payment until the length under consideration has been accepted in terms of subclause 7.3, PSL 7.3.1 and PSL 7.3.3.

PSL 8.2.18* Extra over 8.2.1, PSL 8.2.1 and PSL 8.2.17 for building in of overflow, scour, inlet and outlet pipes at reservoir Unit: Sum

The rate tendered shall cover the cost of all labour, materials and equipment to build in the overflow, scour, inlet and outlet into the floor of the reservoir.”

PSL 8.2.19* Standpipes complete:

(a) (Give description with reference to drawing) Unit: number

(b) Etc for other descriptions

The tendered rate shall include full compensation for all excavations for the pipe, for the drain, if required; the base of the concrete pedestal (for the tap); the supply and installation of all pipework and fittings including a 1,2 m long section of the supply pipe measured from the rising pipe; the supply and installation of the taps; backfilling the drain with stone, and the trench with approved backfill material; all formwork and concrete, and; all equipment, labour and diverse material required to complete the standpipe as shown on the Drawings.

PSL 8.2.20* Connection to existing main supply pipe Unit: number

The tendered rate shall include full compensation for the cost of excavation, connection to existing 350 mm diameter main supply pipe, removal of surplus material, all labour and equipment necessary to make the connection and all liaison with the local authorities.

PSL 8.2.21* Testing, disinfecting and commissioning of work by Others Unit: m

Contractor shall be required to incorporate into his Works length of pipes as shown in the Drawings work done by Others and this rate shall be for the exposing, testing, disinfecting and commissioning as part of his Works pipes done by Others as indicated in the Drawings.

The Contractor shall be responsible for all costs associated with obtaining water for pressure testing of the pipelines. Programming of the testing and commissioning of the scheme should be performed such that once watertightness testing of the reservoirs has been successfully completed, the water inside the reservoirs can be used to test and commission the installed pipelines. No additional provision or payment will be made for water required for testing the pipelines.

PSL 8.2.22* Exposing and repairing work by Others Unit: m

In cases where the testing fails, this item shall be used to compensate the Contractor for exposing and repairing of Work done by others. The rate shall be for labour and plant only. The materials shall be measured under the relevant items in this Specification.

PSL 8.2.23* Supply, Delivery, Installation, Disinfection, Test and commissioning of prefabricated stainless steel Break Pressure Tanks

As per Clause PSL 3.10.6, the Contractor shall supply, deliver, install, disinfection, test and commission prefabricated stainless steel Break Pressure Tanks complete as per drawing 1005270-0000-DRG-CC-614, including galvanised inlet, outlet and overflow pipework, the valves required complete as follows.

- (a) LWTS-50-BPT-01 or similar approved for 50mm - 63mm HDPE dia. pipes Unit: number
- (b) LWTS-80-BPT-01 or similar approved for 75mm - 90mm uPVC dia. pipes Unit: number
- (c) LWTS-100-BPT-01 or similar approved 90mm - 250mm uPVC dia. pipes Unit: number

The tendered rate shall include full compensation for all the pipes, fittings, valves, disinfecting, watertightness testing and commissioning of BPT. The cost shall also include providing the water required for the watertightness test.

PSL 8.2.24* Extra-over item PSL 8.2.23 for the clearing, excavations, formwork and construction of the BPT bases Unit: Number

The tendered rate shall include full compensation for all excavation and backfill, labour, equipment and materials to construct the reinforced concrete base, 300mm thick, 25/19 MPa.

PSL 8.2.25* Extra-over item PSL 8.2.23 and PSL 8.2.24 for any other items not included above however critical for the installation and functioning of the BPTs Unit: Sum

The tendered rate shall include full compensation for all labour, equipment and materials required for the successful installation of the BPTs as detailed in this Specification however not included in the items above

PSL 8.2.26 Take ownership, lay, bed, test and disinfect pipes complete with couplings:

Where allowance has been made for the Contractor to take ownership of material from the Employer, lay, bed, test and disinfect, the tendered rate shall exclude the cost to procure the material, but include all other costs noted in PSL 8.2.1, as well as the costs to take ownership of the material from the Employer, performing all necessary tests and inspection to ensure the material meets the requirements of the contract specification and transport of the material to the site.

PSLB	BEDDING (PIPES)

PSLB 2 INTERPRETATIONS

PSLB 2.3 DEFINITIONS

Flexible pipe

Add the following:

“mPVC, HDPE and steel pipes shall all be classified as flexible pipes.”

PSLB 3 MATERIALS

PSLB 3.1 SELECTED GRANULAR MATERIAL

Replace the contents of Clause 3.1 with the following:

"Selected granular material shall have a PI not exceeding 6 and shall be free from sharp-edged particles exceeding 19 mm."

PSLB 3.2 SELECTED FILL MATERIAL

ADD THE FOLLOWING:

"Selected fill material used for bedding shall be stabilised with 5% cement as specified under Subclause PSDB 3.5(c)."

PSLB 3.3 BEDDING

Add the following:

“For the purposes of this clause mPVC, HDPE and steel pipes shall be classified as flexible pipes.”

Where structures are to be built over pipework, where shown on the drawings, or where ordered by the Employer’s Agent, the bedding cradle specified shall be stabilised with 5% cement as specified under Subclause PSDB 3.5(c)."

PSLB 3.4.1 Suitable material available from trench excavation

Replace the words “(but is not required)” in the fifth line with the words “(at his own cost).”

“PSLB 3.5* BEDDING IN WATERLOGGED CONDITIONS

Where ordered by the Employer’s Agent a bedding cradle of the specified thickness, comprising of 6,7 mm concrete stone complying with SANS 1083, shall be used in waterlogged conditions.”

PSLB 5 CONSTRUCTION

PSLB 5.1.1.2 Bottom

Add the following:

"Where expansive clay is encountered in the trench bottom, the selected fill blanket shall comprise of selected granular material."

PSLB 5.1.2 Details of bedding

Notwithstanding the provisions of this subclause, pipes shall be bedded and protected in accordance with the details shown on the Drawings, which shall supersede, as applicable, drawings LB 1 through to LB 5.

Add the following paragraph.

"The dimension "X" for flexible and rigid pipes as indicated on drawing LB-1 will be 150 mm unless otherwise indicated on the drawing. The dimension "X" will be measured from the invert of the pipe."

PLSB 5.1.4 Compacting

REPLACE "90%" WITH: "90% (100% for sand)".

PSLB 5.3 PLACING AND COMPACTING OF FLEXIBLE PIPES

Notwithstanding the provisions of this subclause, the bedding for flexible pipes shall be constructed to the dimensions shown on the Drawings and by using the bedding material specified (refer also PSLB 5.1.2).

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1.3 Volume of bedding materials

Notwithstanding the provisions of this subclause, the volume of bedding will be computed from the dimensions shown on the Drawings.

Replace the last sentence with the following:

"No allowance will be made for bulking of material or any additional volume of bedding material required due to over break or any other cause.

Further, the volume of bedding displaced by the pipeline will not be measured for payment."

PSLB 8.1.5 Disposal of displaced material

Replace the contents of this Clause with the following:

"Material displaced by the pipeline and by imported material from sources other than trench excavation, shall be disposed of at an approved site furnished by the Contractor. No haulage shall be payable for such material."

PSLB 8.1.6 Free-haul

Delete the words "of 0,5 km" in the first line of this Clause.

Refer to SANS 1200 D, Subclause 5.2.5 (Transport for earthworks).

PSLB 8.2.2.3 From commercial sources

(c)* 6,7 mm concrete stone to SANS 1083 Unit: m³

Add the following to the end of this Clause:

“Commercial sources shall include off-site sources located by the Contractor.”

PSLB 8.2.5 Overhaul of Material for Bedding ... etc.

Delete this subclause

“PLSB 8.2.6* Extra over 8.2.1 and 8.2.2.1 to screen material for:

(a) Selected granular material Unit : m³

(b) Selected fill material..... Unit : m³

The tendered rate shall cover the cost of supplying all labour, plant and equipment necessary to select and stockpile suitable material, as well as for screening the material to comply with the specifications for the different types of bedding material.”

ADD THE FOLLOWING:

"PSLB 8.2.7 Provision of stone/geofabric to deal with water..... Unit: m³/m²

If in the opinion of the Employer's Agent, the Contractor complied with the requirements for dealing with water as specified in PSA 8.8.7., the Employer's Agent may instruct the installation of crushed stone and filter fabric. Payment for these items will only be made where instruction was given in writing by the Employer's Agent.

The provision of crushed stone bedding material will be measured by volume based on the specified trench width and a maximum layer thickness of 300 mm unless a greater depth has been specified by the Employer's Agent.

The unit rate shall cover the cost of supplying and laying the crushed stone.

The filter fabric will be measured separately by area based on the specified trench width, a stone bedding thickness of 300 mm and an overlap of 300 mm.

The rate shall cover the cost of the supply, delivery and laying of the filter fabric.

PARTICULAR SPECIFICATIONS

PA SECURITY FENCING

PA 01 SCOPE

This is a Particular Specification and covers the erection of new fences. The fence shall be a security fence and shall be erected in accordance with the dimensions shown on the Drawings.

PA 02 DEFINITIONS

<u>Intermediate post</u>	A fencing member that supports the straining wires.
<u>Mesh</u>	Razor mesh.
<u>Stay</u>	A member connected to a straining post and so embedded in the ground at an angle to assist the straining post in withstanding the pull of the straining wires.
<u>Straining post</u>	A member of the fence that withstands the pull of the straining wires and, where relevant, supports a gate.

PA 03 MATERIALS

PA 03.1 Posts, Stays and Standards

Posts, stays and standards shall be of the type and size indicated on the Drawings. Posts shall include gate posts, straining posts and corner posts.

Metal posts, stays and standards shall comply with the requirements of CKS 82 and SANS 280. "Acceptable" in CKS 82 means "acceptable to the Employer's Agent".

Tubular posts, standards and stays shall be hot dipped galvanised in accordance with SANS 32:1997 Table 1 for Type A.1 articles. All rail and Y-sections shall be provided with a protective coating of tar or other approved material.

Standards shall be 2,5kg/m Y sections of the lengths specified on the drawings.

Corner, gate and straining posts shall be suitably drilled for stay bolts or gate fittings as indicated on the Drawings.

PA 03.2 Bolts for Stays

Bolts, nuts and washers shall be of mild steel and hot dipped galvanised in accordance with SANS 135 Grade 4.6. The length and diameter of the bolts shall be as shown on the Drawings. All the necessary bolts, together with nuts and washers, shall be supplied with each post.

PA 03.3 Wire

All wire shall conform to the requirements of SANS 675:2009 and shall be class B galvanised, except where otherwise specified below:

a) Barbed wire

Barbed wire shall be one or both of the following types:

- (i) High-tensile grade, oval shaped, single-strand wire, 2,60 mm x 2,00 mm.
- (ii) Mild-steel grade, double strand, uni-directional twist wire, each strand 2,50 mm in diameter.

Barbs shall be spaced at not more than 150 mm intervals.

b) Smooth wire

Smooth wire shall be as shown on the drawings.

All wire used in the construction of fencing and gates shall be Class A zinc coated according to SANS 675.

PA 03.4 Razor Mesh

Razor mesh shall comply with the requirements of SANS 592/84, with 2,5 mm high tensile galvanised core, 0,5 mm galvanised 3 575 blade-drip. The width shall be as shown on the drawings and the edge finish shall be both sides clinched or barbed.

The mesh openings shall be 100 mm across.

PA 03.5 Gates

Gates shall comply with the requirements of CKS 146 and shall be manufactured to the dimensions shown on the Drawings.

Gates shall be complete in every respect, and shall include hinges, washers, bolts and the locking mechanism shown on the Drawings.

PA 03.6 Concrete

Concrete used for fencing shall comply with the requirements of SANS 1200 G, as amended.

PA 03.7 Welded Components

Should items be made up of smaller components, welded together, all hot dipped galvanising shall be performed after items have been welded together. No Welding shall be permitted on site.

PA 03.8 Anchor Pegs

Anchor pegs shall comprise of 10mm diameter mild steel rods, 400mm long and of acceptable design.

PA 04 CLEARING OF FENCE LINE

The clear width for the fence line shall be 2m and shall be carried out in accordance with SANS 1200 C (as amended). The clear width shall be measured and paid as per clause PSC 8.2.1.

PA 05 INSTALLING POSTS AND STANDARDS

Straining posts shall be erected at all ends, corners and bends in the line of fencing and at all junctions with other fences. Straining posts shall not be spaced further apart than shown on the Drawings, but at most 30m apart. The height of the posts above the ground shall be such that the correct clearance between the lowest wire and the ground can be obtained.

Posts shall be accurately set in holes and, where indicated, shall be provided with concrete bases to the dimensions shown on the Drawings.

Holes shall be dug to the full specified depth. Where, due to the presence of rock, the holes cannot be excavated by hand or by pneumatic tools and the Contractor has to resort to the use of explosives, he will be paid separately for the drilling and blasting operations required. Special permission for blasting will be required as it is not permitted on this project and the Contractor is to provide evidence that pneumatic tools cannot perform the necessary hard rock excavation (inclusive of boulder excavation of all types).

Corner, gate, end and straining posts shall be braced by means of stays or anchors, as shown on the Drawings. Pipe stays shall be bolted to the posts. Gate posts shall not be used as straining posts, but at each gate post a straining post shall be placed as shown on the Drawings and stayed by means of an anchor consisting of six strands of wire.

Standards shall be firmly planted in the ground at the spacing shown on the Drawings or as directed by the Employer's Agent. The spacing of standards between any two straining posts shall be uniform. In rock or hard material standards shall either be driven or set in holes drilled into the rock. The size of drilled holes shall be such that a tight fit is obtained.

Care shall be taken not to buckle or damage the standards when driven. Where indicated, standards shall be provided with concrete bases to the dimensions shown on the Drawings.

All posts and standards shall be accurately aligned and set plumb and shall be planted with the overhang as shown on the Drawings and at right angles to the direction of the fence. After posts and standards have been firmly set in accordance with the foregoing requirements, the fencing wire shall be attached thereto as described below.

PA 06 INSTALLING WIRE

All fencing wire shall be carefully stretched and hung without sag and with true alignment, and care shall be taken not to stretch the wire so tightly as to cause breaking, to pull up straining posts, or to be easily damaged during veld fires.

Each strand of fencing wire shall be securely fastened in the correct position to each standard with galvanised binding wire. The binding wire for each horizontal fence wire shall pass through a hole or notch in the standard, and the ends of the wire shall be wound at least four times around the fencing wire.

At corner, straining and gate posts the fencing wire shall be securely wrapped twice around the post and secured against slipping by tying the end tightly around the wire by means of at least six snug tight twists. In the case of high-tensile wire, two long windings must first be made before the six tight twists, to prevent the wire from breaking at the first twist. Where smooth wire is used, the loose end shall be bent back and hooked into the opening between the fencing wire and the first winding.

Splices in the fencing wire will be permitted if made in the following manner with the use of a splice tool: The end of each wire at the splice shall be carried at least 75 mm past the splice tool and wrapped snugly around the other wire for not less than six complete turns, after which the two separate wire ends shall be wound in opposite directions. After the splice tool has been removed, the space left by it in the splice wire shall be closed by pulling together the wire ends. The unused ends of wire shall be cut close, to leave a neat splice.

The gaps between gate posts and the adjacent straining posts shall be fenced off with short fencing wires.

PA 07 INSTALLING RAZOR MESH

The razor wire shall be the height indicated on the Drawing. Where indicated on the Drawings, the mesh shall, after being suitably tensioned to ensure that the apertures are square, be attached by binding wire to the straining wires at distances not exceeding 450 mm on top and bottom straining wire and 960 mm intervals on centre wires. In addition, the mesh shall be attached to each post by means of binding wire taken around the post at distances not exceeding 300 mm c/c. The bottom of the fence shall be located level with the ground.

Each mesh panel has a male and female end, care should be taken to fit panels together so that the apertures interlock male to female. The mesh is joined by binding each aperture in 2 places with linking wire.

PA 08 INSTALLING BARBED-TAPE CONCERTINAS

Not applicable.

PA 09 CLOSING OPENINGS UNDER FENCES

At ditches, streams, drainage channels or other hollows where the fence cannot follow the general ground contour, the Contractor shall close the opening under the fence by means of horizontal barbed wires 150 mm apart and stretched between additional straining posts as shown on the Drawings. The opening shall be covered with strips of razor mesh, 1 000 mm wide, fixed to the barbed wires.

In the case of larger streams, the opening below the lower fencing wire shall be closed by means of loose-hanging wire nets/mats as shown on the Drawings. These mats shall be erected at streams only on the instructions of the Employer's Agent.

PA 10 INSTALLING GATES

Gates shall be installed at the positions indicated on the Drawings or as instructed by the Employer's Agent on site. The gates shall be hung on gate fittings in accordance with the details shown on the Drawings. Gates shall be so erected that they swing in a horizontal plane at right angles to the gate posts and clear of the ground in all positions. The top of the gate shall be level with the top of the mesh. Double swing gates shall close to have a gap of not more than 25 mm between them, and other gates shall close to be not further than 25 mm from the gate post.

PA 11 GENERAL REQUIREMENTS AND TOLERANCES

The completed fences shall be plumb, taut, true to line and to the ground contour, and with all posts, standards and stays firmly set.

The height of the lower fencing wire above the ground at posts and standards shall not vary by more than 25 mm from that shown on the Drawings. Other fencing wires shall not vary by more than 10 mm from their prescribed relative vertical positions.

Anchoring of a fence to structures shall be done as shown on the Drawings.

The Contractor shall, on completion of each section of fence, remove all cut-offs and other loose wire or mesh so as to leave the fence with a neat and finished appearance.

PA 12 MEASUREMENT AND PAYMENT

PA 12.01 Supply and erection of new fencing material

- (a) Barbed wire (grade, size and type of wire indicated) Unit : m
- (b) Smooth wire (grade and size indicated) Unit : m
- (c) Barbed tape concertinas (coil diameter indicated) Unit : m

The unit of measurement shall be the metre of each type of fencing wire and barbed-tape concertinas measured between end posts. Binding wire and wire used for the bracing and anchoring of posts shall not be measured for payment.

- (d) Razor mesh (mesh size indicated) Unit : m²

The unit of measurement shall be the square metre of diamond mesh and the quantity shall be calculated on the prescribed width and the length between straining posts or gate posts, or the length of strips for covering openings under fences, or the length used for the covering of gates.

- (e) Corner, gate and straining posts, including anchors (type, size and length indicated)
Unit : No

The unit of measurement shall be the number of posts erected in accordance with the maximum specified spacing or such lesser spacing as authorised by the Employer's Agent.

- (f) Standards (length and type indicated) Unit : No

The unit of measurement shall be the number of standards erected in accordance with the maximum specified spacing or such lesser spacing as authorised by the Employer's Agent.

- (g) Droppers (length and type indicated) Unit : number

The unit of measurement shall be the number of droppers erected in accordance with the maximum specified spacing or such lesser spacing as authorised by the Employer's Agent.

The tendered rates shall include full compensation for all excavations, concrete, binding wire, straining wire, bolts, washers and nuts, for the drilling of holes for standards, and for the complete erection of the fence as specified and as shown on the Drawings. The tendered rate for posts shall make provision for the construction of the stays of the types shown on the Drawings.

The quantity of material used shall be determined by measuring the quantities of individual items of material installed in the completed fence. No linear measure of completed fence shall be applicable.

PA 12.02 NEW GATES:

- (a) Single leaf (size and type indicated) Unit : No
(b) Double leaf (size and type indicated) Unit : No

The unit of measurement shall be the number of new gates erected. A pair of gates shall be measured as one.

The tendered rate shall include full compensation for gate posts, hinges, bolts, concrete, locking mechanism and straining wire, and for the erection of the gates complete as specified and as shown on the Drawings. It shall not include compensation for any fencing wire or mesh used on the gate.

PA 12.03 THE DRILLING AND BLASTING OF HOLES FOR POSTS AND ANCHORS Unit : No

The unit of measurement shall be the number of holes for posts and anchors made, in accordance with the relevant detail drawings, by drilling and blasting where excavation by hand tools or pneumatic tools cannot be done economically and only upon approval by the Employer's Agent.

The tendered rate shall include full compensation for drilling and blasting the holes and for all other expenses in connection with the provision, storage, transportation and use of explosives.

Part C4: SITE INFORMATION

Part C5: TENDER DRAWINGS

See **Appendix J** for following tender drawings:

APPENDIX B: MONTHLY REPORTING TEMPLATES

LABOUR MONTHLY SUMMARY SHEET

Name of Contractor
Project Name
Project Number
Applicable Month

No of Working Days: Maximum including training = 23 days per month

Number of workers	Surname	Initials	First Name	ID Number	Birth Date	(M)ale / (F)emale	(D)isabled	Rate per day	Number of days worked this month	Number of training days this month	Total amount paid to beneficiary	Course name	Course Code
1											0		
2											0		
3											0		
4											0		
5											0		
6											0		
7											0		
8											0		
9											0		
10											0		
11											0		
12											0		
13											0		
14											0		
15											0		
16											0		
17											0		
18											0		
19											0		
20											0		
20	Totals for month								0	0	0		

Signature Consultant

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

PAYMENT REGISTER

Contractor Name

Period

Project Number

Month:

[illegible]

Signature of CLO

Signature of Contractor to verify accuracy

Signature of Consultant

Signature of Contractor for receipt of monies

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25
MONTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

DAILY SITE ATTENDANCE REGISTER

Name of Contractor
Project Name

Project Number
Month:

1 = At Work
SL = Sick Leave

A = Absent
P = Public Holiday

L = Leave
2 = Training

SC = Site Closed

Validation: Cannot
be more than 23
days per person
per month.

	Surname	Initials	ID Number	Birth Date	Rate per day (R)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Work days	Total Training Days	Total work days + training days
1																																							
2																																							
3																																							
4																																							
5																																							
6																																							
7																																							
8																																							
9																																							
10																																							
11																																							
12																																							
13																																							
14																																							
15																																							
16																																							
17																																							
18																																							
19																																							
20																																							
20	TOTALS																																						

Signature of CLO

Week 1: Signature of Contractor

Week 1 -2: Signature of Contractor Organisation

Week 2: Signature of Contractor

Week 3: Signature of Contractor

Week 3-4: Signature of Contractor Organisation

Week 4: Signature of Contractor

Validation: Total work
days
Total training
days
Total work
days + training
days
Variance
Variance must
be 0

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: **ORTDM SCMU 45-24/25**
MTHONJENI / eNGXANGXASINI WATER SUP-PLY - CONTRACT 2

BENEFICIARY LIST

Name of Contractor
Project Name
Project Number
Month:

Youth = 35yrs and less

Number of workers	Surname	Initials	Name	ID Number	Date of Birth	Male/Female	Has Disability (Y?N)	Is Youth (Y/N)	Education Level*	Date Start	Contact Number
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											

Signature of CLO

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25

MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

5. Actual EMPLOYMENT GENERATION

5.1. Actual Number of persons employed

Occupational Category			Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days	Persons	Person Days
Clerical														
Labourer														
Managerial														
Semi-skilled														
Skilled														
Supervisor														
Total														

Please note: - The definition of youth is any person under the age of 35 years. (18-35 Years)

- Each person may only be counted once. If a person falls into more than one category, disabled persons take preference, then youth, then adults.

- Must include all occupational categories (Clerical, Labourer, Managerial, Semi-skilled, Skilled and Supervisor).

5.2. Average daily wage per category

Please note that the totals are calculated averages for the number of records submitted per category.

Occupational Category	Category Average	Adult		Youth		Disabled	
		Women	Men	Female	Male	Female	Male
		Daily wage	Daily wage	Daily wage	Daily wage	Daily wage	Daily wage
Clerical							
Labourer							
Managerial							
Semi-skilled							
Skilled							
Supervisor							
Average of the Daily Wage							

O. R. TAMBO DISTRICT MUNICIPALITY

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MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

6. TRAINING ACTIVITIES**6.1 Non-Accredited Training**

Training Type	Totals		Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons Trained	Training days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days
Administration														
Technical														
Lifeskills/ ISD														
Literacy & Numeracy														
Vocational Skills														
Business Skills														
Total Training														

6.2 Accredited Training

Training Type	Totals		Adult				Youth				Disabled			
			Women		Men		Female		Male		Female		Male	
	Persons Trained	Training days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days	Persons	Days
Administration														
Technical														
Lifeskills/ ISD														
Literacy & Numeracy														
Vocational Skills														
Business Skills														
Total Training														

O. R. TAMBO DISTRICT MUNICIPALITY
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MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

6.3 Categories of Accreditation

Training Type	If Accredited			Note:
	NSB Number	NQF Level	ETQA/CETA	
Administration				NQF Level of Training Level 1 – General Education and Training Level 2,3,4 - Further Education and Training Level 5 - Higher Education and Training NSB Number: NSB 01: Agriculture and Nature Conservation NSB 02: Culture and Arts NSB 03: Business, Commerce and Management Studies NSB 04: Communication Studies and Language NSB 05: Education, Training and Development NSB 06: Manufacturing, Employer's Agenting and Technology NSB 07: Human and Social Studies NSB 08: Law, Military Science and Security NSB 09: Health Science and Social Services NSB 10: Physical, Mathematical, Computer and Life Sciences NSB 11: Services NSB 12: Physical Planning and Construction
Technical				
Lifeskills / ISD				
Literacy & Numeracy				
Vocational Skills				
Business Skills				
Total Training				

7. SMME'S USED SINCE THE START OF THE PROJECT:

Please remember to include all the SMME's that worked on the project since it started. Then add all the person days and all the funds paid to each SMME since the start of the project, and only record the latest total in the table.

For example, if a SMME completed all their work during the first reporting period, the name and details of that SMME must be added to every subsequent report.

SMME	Information about the SMME. (If it is a subsidiary: provide information for whole group and not for the SMME only)		Information about the work on the PROJECT			
	No. of permanent employees	Turnover previous 12 months	Total no. of person days to date	Amount paid to SMME to date. (Total)	Person days locally sourced: 0-25% 26-50% 51-75% 75-100%	Total value of work: SMME Involvement
Name of SMME						

O. R. TAMBO DISTRICT MUNICIPALITY
CONTRACT NO.: ORTDM SCMU 45-24/25

MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2

8. BEE ORGANISATIONS USED SINCE THE START OF THE PROJECT:

Note that Black Economic Empowerment (BEE) Organisations are referred to in the table below as Affirmable Business Enterprises (ABE's).

The definition of an ABE is as per the Department of Public Works definition: *A sole trader, partnership or legal entity which adheres to statutory labour practises, is registered with South African revenue Services and is a continuing and independent enterprise for profit, providing a commercially useful function and for which at least two thirds (67%) is owned by one or more PDI's and whose management and daily business operations are in control of one or more PDI's who effectively own it, and provided that the annual average turnover excluding VAT, does not exceed the maximum values given for each respective ABE category.*

Please remember to include all the ABE's that worked on the project since it started. Then add all the person days and all the funds paid to each ABE since the start of the project, and only record the latest

ABE	Information about the ABE. (If it is a subsidiary: provide information for whole group and not for the ABE only)		Information about the work on the PROJECT			
	No. of permanent employees	Turnover previous 12 months	Total no. of person days to date	Amount paid to ABE to date. (Total)	Person days locally sourced: 0-25% 26-50% 51-75% 75-100%	Total value of work: SMME Involvement
Name of ABE						



APPENDIX C: PEM ENVIRONMENTAL SPECS

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DEFINITIONS:

Environmental Management Programme	A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life-cycle of a project.
Environment	In terms of the National Environmental Management Act (NEMA) (No 107 of 1998), “environment” means the surroundings within which humans exist and that are made up of: • The land, water and atmosphere of the earth; • Micro-organisms, plant and animal life; and • Any part or combination of (i) of (ii) and the interrelationships among and between them; and the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
Client’s Project Manager	The person appointed by the client who is responsible for the construction site as a whole.
Environmental Site Agent	An individual appointed by the Contractor/client to be present on site to act on behalf of the contractor/client in matters concerning the implementation and day to day monitoring of the EMPR.
Environmental Control Officer	A person appointed by the developer, to monitor environmental compliance of the contractor and produce monthly environmental compliance reports.
Contractor	A person or company appointed by the client to carry out stipulated activities.
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 re-vegetation of a disturbed area and the insurance of a stable land surface. Re-vegetation should aim to accelerate the natural succession processes so that the plant community develops in the desired way, i.e. promote rapid vegetation establishment.
Site Manager	The person, representing the Contractor/Client/Developer, responsible for all the Contractor’s activities on the site including supervision of the workers and activities associated with the construction phase.
Incident	An undesired event which may result in significant environmental impacts but can be managed through internal response.
Impact	A description of the potential effect or consequence of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.
Environmental Impact	A change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation’s activities, products or services.
Mitigation	Measures designed to avoid, reduce or remedy adverse impacts.
Emergency	An undesired event that does result in significant environmental impacts and requires the notification of relevant statutory body such as a local or provincial authority.

Waste disposal facility	Waste disposal facility means any site or premise used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premises that has been licensed by the competent authority.
Hazardous Waste Landfill Site	A waste disposal site that is designed managed and permitted to allow for the disposal of hazardous waste and is licensed for same by the competent authority.
Hazardous Waste	Hazardous waste means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste have a detrimental impact on health and the environment.
Domestic Waste	Domestic waste means waste, excluding hazardous waste, that emanates from premises that are used wholly or mainly for domestic, residential, educational, health care, sport or recreation purposes.
Building Waste	Building and demolition waste means waste, excluding hazardous waste, produced during the construction, alteration, repair or demolition of any structure, and includes rubble, earth, rock and wood displaced during that construction, alteration, repair or demolition.

ACRONYMS:

ORTDM	O.R Tambo District Municipality
BA	Basic Assessment
DEA	Department of Environmental Affairs
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism
DMR	Department of Mineral Resources
DWS	Department of Water and Sanitation
EMPr	Environmental Management Programme
EIA	Environmental Impact Assessment
ECO	Environmental Control Officer
ESA	Environmental Site Agent – sometimes referred to as Environmental Officer (EO) in other documents
I&AP	Interested and Affected Party
IEM	Integrated Environmental Management
NEMA	National Environmental Management Act
PPE	Personal Protective Equipment

1 INTRODUCTION

An Environmental Management Programme (EMPr) is an environmental management tool used to prescribe management mechanisms / methods for the prevention of undue or reasonably avoidable adverse environmental impacts and for the enhancement of the positive environmental benefits of a development. An EMPr could be based on the findings of the Basic Assessment (BA) or Environmental Impact Assessment (EIA) process and, in terms of the EIA Regulations of April 2017) promulgated under the National Environmental Management Act (Act No. 107 of 1998, ("NEMA") (as amended), is a requirement as part of the BA or EIA Report submitted in support of an application for environmental authorisation. Moreover, an EMPr also bestows a 'Duty of Care' on those who cause, have caused or may in future cause pollution or degradation of the environment, as per of Section 28(1) of NEMA.

Although an EMPr forms part of the BA report submitted for environmental authorisation, an EMPr is a stand-alone document that is used to guide and regulate environmental performance through all stages of development, including planning, design, construction, rehabilitation, operation and maintenance, and eventually decommissioning. The EMPr forms part of the approving authority decision making tools and upon authorisation becomes legally binding on the proponent and anyone acting on the proponent's behalf during construction and operational activities.

1.1 Project Description

The Employer (O.R. TAMBO DISTRICT MUNICIPALITY) as the Water Service Authority (WSA) has a constitutional responsibility of providing sustainable and viable water services to communities within its area of jurisdiction. The Employer has embarked on a programme of providing basic potable water to variously disadvantaged rural communities through Water Services Infrastructure Grant (WSIG) programme.

The community of Mthonjeni Village are supplied via an existing protected spring west of the village. The potable water traverses via an existing ND40mm gravity pipe to four (4) 5kL plastic tanks north-west of the village. The community then draws their potable water from nine (9) existing standpipes, of which only one (1) is operational.

The Works to be carried out by the Contractor under this Contract comprise mainly the following:

- Site Establishment and compliance with Contractual requirements;
- Clearing of areas where Infrastructure will be constructed (where necessary);
- Refurbishment of Spring Box NO-SP3;
- Connect Bulk Gravity Main to Mthonjeni Distribution Reservoir;
- Installation of the 1 360 m Bulk Gravity Main, complete with Couplings, Specials, and Fittings;
- Installation of 55 kL Distribution Reservoir, complete with Base Platform and Inlet- and Outlet Pipework;
- Installation of 9 485 m Reticulation Mains, complete with Couplings, Specials, and Fittings;
- Installation of 60 Communal Standpipes;
- Completion of Ancillary Works as per the Engineer's Instruction;
- Subcontracting a minimum of 5% of the value of work excluding manufacture of pipes, contingencies, and provisional sums to SMMEs as per the project specification;
- Dealing with community participation with regards to the construction;
- Environmental management of the area during and after the completion of construction; and
- Compliance with the requirements of the Occupational Health & Safety Act of 1993, Construction Regulations 2014 and COVID-19 requirements.

1.2 Purpose of the EMPr

The EMPr has been compiled to provide recommendations and guidelines for environmental monitoring throughout the construction phase of the project. This is done to ensure that all relevant factors are considered, and to ensure for environmentally responsible development.

This EMPr informs all relevant parties including the contractor, the Environmental Control Officer (ECO) and all other staff employed by the client at the site as to their duties in the fulfilment of the legal requirements for the proposed housing construction with particular reference to the prevention and mitigation of anticipated environmental impacts. All parties should note that obligations imposed by the EMPr are legally binding. The emphasis of this EMPr is:

- Avoiding impacts by not performing certain actions;
- Minimising impacts by limiting aspects of an action;
- Rectifying impacts through construction, restoration, etc. of the affected environment;
- Compensating for impacts by providing substitute resources or environments;
- Minimising impacts by optimising processes, structural elements and other design features; and
- Provide on-going monitoring and management of environmental impacts of a development and documenting of any digressions /good performances.

1.3 Objectives of the EMPr

The Environmental Management Programme (EMPr) has the following objectives:

- Identifying construction activities that might have detrimental impacts on the environment;
- Ensuring compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and/or international;
- To outline mitigation measures and environmental specifications which are required to be implemented for all phases of the project in order to minimise the extent of environmental impacts, and to manage environmental impacts associated with the proposed project;
- To identify measures that could enhance beneficial impacts;
- To establish a method of monitoring and auditing environmental management practices during all phases of development;
- Detail specific actions deemed necessary to assist in mitigating the environmental impact of the project;
- Propose mechanisms for monitoring compliance with the EMPr and reporting thereon; and
- Specify time periods within which the measures contemplated in the draft environmental management programme must be implemented, where appropriate.

1.4 Structure of the EMPr

This EMPr provides proposed mitigation and management measures for the **construction** and **operational** phases of the development, and associated civil work and open spaces for the project.

1.5 Form and Function of an EMPr

An EMPr is focussed on sound environmental management practices, which will be undertaken to minimise adverse impacts on the environment resulting from an activity. In addition, an EMPr identifies what measures should be in place or should be actioned to manage any incidents and emergencies that may occur during the activity. As such an EMPr provides specifications that must be adhered to, in order to minimise adverse environmental impacts associated with the activity.

The content of the EMPr is consistent with the requirements as set out in Appendix 4 of the EIA regulations (2014) stated below:

According to Appendix 4 of GN R 326 (as amended in 2017), an Environmental Management Programme (EMPr) must include:

- (a) The details of –
 - I. The EAP who prepared the EMPr; and
 - II. The expertise of that EAP to prepare an EMPr, including curriculum vitae
- (b) A detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;
- (c) A map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;
- (d) A description of the impact management **[objectives]**, outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including –
 - i. Planning and design;
 - ii. Pre-construction activities;
 - iii. Construction activities;
 - iv. Rehabilitation of the environment after construction and where applicable post and closure; and
 - v. Where relevant, operation activities;

- (e) A description and identification of impact management outcomes required for the aspects contemplated in paragraph (d) above;
- (f) A description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) and (e) will be achieved, and must, where applicable, include actions to –
 - i. Avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - ii. Comply with any prescribed environmental management standards or practices;
 - iii. Comply with any applicable provisions of the Act regarding closure, where applicable; and
 - iv. Comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;
- (g) The method of monitoring the implementation of the impact management actions contemplated in paragraph (f)
- (h) The frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f)
- (i) An indication of the persons who will be responsible for the implementation of the impact management actions;
- (j) The time periods within which the impact management actions contemplated in paragraph (f) must be implemented;
- (k) The mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f)
- (l) A programme for reporting on compliance, taking into account the requirements as prescribed by the Regulations;
- (m) An environmental awareness plan describing the manner in which –
 - i. The applicant intends to inform his or her employees of any environmental risks which may result from their work; and
 - ii. Risks must be dealt with in order to avoid pollution or the degradation of the environment; and
- (n) Any specific information that may be required by the competent authority.

2 LEGAL REQUIREMENTS

The following is a summary of the environmental legislation applicable to the proposed project.

Table 1: Legal requirements

Legislation	Sections	Relates To
The Constitution Republic of South Africa (Act No 108 of 1996)	Chapter 2	Bill of Rights.
	Section 24	Environmental Right & Save environment.
National Environmental Management Act (No 107 of 1998) as amended in 2004 and 2008	Chapter 2	Defines the strategic environmental management goals and objectives of the government. Applies throughout the Republic and to the actions of all organs of state that may significantly affect the environment.
	Chapter 5	Integrated Environmental Management
	Section 24(a) &(d) &24(5)	Listed activities and Regulations
	Chapter 7	Compliance Enforcement and Protection
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
National Environmental Management: Waste Act 59 of 2008	Section 2	General policy.
	Chapter 2	Defines the national waste management strategy, norms and standards. It emphasises the role of the provincial organ of the state in the implementation of the waste management. It also gives legal effect to the waste hierarchy implementation.
	Chapter 4	The developer or manufacture has a general duty to avoid generation of waste and if not avoided minimise and manage it accordingly.
	Section 16	It is the responsibility of the person/organisation generating the waste to ensure that the waste is treated and disposed of in an environmentally sound manner.

	Section 27	Provision of containers for waste management.
The Conservation of Agricultural Resources Act (No 43 of 1983)	Section 6	Implementation of control measures for alien and invasive plant species.
	Section 19	Prevention of littering by employees and sub-contractors during construction and the maintenance phases of the proposed project.
National Heritage Resources Act (No 25 of 1999)	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.
	Section 38	This section provides for Heritage Impact Assessments (HIAs), which are not already covered under the ECA. Where they are covered under the ECA the provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. The Heritage Impact Assessment (HIA) will be approved by the authorising body of the provincial directorate of environmental affairs, which is required to take the provincial heritage resources authorities' comments into account prior to making a decision on the HIA.
	Sections 26-27	Control of fuels.

National Environmental Management: Air Quality Act (No 39 of 2004)	Section 32	Control of dust.
	Section 34	Control of noise.
	Section 35	Control of odours.
National Water Act (36 of 1998)	Section 4	Provides Principles that govern the distribution, use and management of water resources in the Republic South Africa.
	Section 19	Prevention and remedying the effects of pollution.
	Section 20	Control of emergency incidents.
	Section 21	Control of Water Use
	Section 22	Permissible Water Use
Hazardous Substances Act (No 15 of 1973) and regulations		Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances
National Environmental Management: Biodiversity Act (10 of 2004)		Provides management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act 107 of 1998; the protection of species and ecosystems that warrant national protection and the sustainable use of indigenous biological resources.
National Road Traffic Act (No 93 of 1996)		Road safety
Minerals and Petroleum Development Act (28 of 2002)	Section 39	Environmental Management Programme for entering borrow pits.
	Section 41	Finalise provision for rehabilitation.
Occupational Health and Safety Act (No 85 of 1993)	Section 8	General duties of employers to their employees.
	Section 9	General duties of employers and self-employed persons to persons other than their employees.
Fertilisers, Farm Feeds, Agricultural Remedies and	Sections 3-10	Control of the use of registered pesticides, herbicides (weed killers) and fertilisers. Special precautions shall be taken to prevent workers from being exposed to chemical substances in this regard.

Stock Remedies Act (No 36 of 1947)		
Forestry management in the department of Agriculture, Forestry and Fisheries (DAFF)	Section 12 (1) (d)	List of protective tree species. The list of protected tree species was published in GN 734 of September 2011.
National Forests Act, Act 84 of 1988		Impacts of access roads on riparian vegetation and protected tree species.

3 DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

According to Appendix 4 of GN R 326 (amended in 2017, an Environmental Management Programme must include amongst others –

(a) Details of –

- i. The EAP who prepared the EMPr; and
- ii. The expertise of that EAP to prepare an EMPr, including a Curriculum Vitae

3.1 Environmental Consulting Firm

Earth Free Environmental Consultancy (Pty) Ltd

Lwando Runeyi

27 Ukhozi Street

Southernwood

Mthatha

5099

Tel: 047 531 0970

Email: info@efec.co.za Website:

www.efec.co.za

Earth Free Environmental Consultancy (Pty) Ltd (EFEC) is an environmental consulting firm that specializes in environmental management related work. Earth Free Environmental Consultancy is 100% black youth owned and Level 1 Broad Based Black Economic Empowerment (B-BBEE) company with offices in Mthatha and East London although work might be undertaken in the other seven provinces.

EFEC was founded in 2014 with the aim of ensuring that services are rendered according to the client's specifications with the highest level of professionalism to make every project a success. EFEC is made up of Environmental Scientists and technical specialist consultants from diversity of environmental fields and in conjunction with our range of local network partners who provide EFEC clients with an unprecedented body of knowledge and expertise in environmental management and nature conservation.

3.2 Project Team

As a Technical Director **Mr Lwando Runeyi** is a Registered Natural Scientist (Cert. Sci. Nat – 118719) with over ten (10) years working experience in the environmental management field. Lwando obtained a National Diploma in **Environmental Management** at the Cape Peninsula University of Technology in 2010 and has completed numerous short courses in Environmental Law, ISO 14001 Implementation and Geographical Information Systems (GIS). Lwando as the Technical Director and Senior Environmental Scientist has been responsible for the project (Technical, Financial and Quality) environmental management of a number of projects including those associated with large infrastructure, industrial, mixed land-use residential as well as urban road construction developments. Lwando specialises in Environmental Auditing, Integrated Waste Management, Mining Permit Applications, Environmental Impact Assessments (EIAs), Environmental Management Plans and Programmes.

He has compiled a number of Environmental Management Programmes (EMPr) and programmes including Basic Assessment Reports (BARs), within the various sectors and industries. A comprehensive illustration of his qualifications is included in the attached CV.

4 COMPLIANCE WITH THE EMPr

According to Appendix 4 of GN R 326, an Environmental Management Programme must include:

- (j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;
- (k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);

It should be noted that in terms of the National Environmental Management Act, Act No 107 of 1998

*Section 28) those responsible for environmental damage must pay the repair costs both to the environment and human health and the preventative measures to reduce or prevent further pollution and/or environmental damage (The polluter pays principle).

4.1 Non-compliance

The Contractor shall act immediately when notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. The ECO should be made aware of any complaints.

Any non-compliance with the agreed procedures of the EMPr is a transgression of the various statutes and laws that define the manner by which the environment is managed. Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as it deems fit.

The Contractor is deemed not to have complied with the EMPr if, *inter alia*:

- there is evidence of contravention of the EMPr specifications within the boundaries of the construction site, site extensions and roads;
- there is contravention of the EMPr specifications which relate to activities outside the boundaries of the construction site.
- environmental damage is caused due to negligence;
- construction activities take place outside the defined boundaries of the site; and/or
- the Contractor fails to comply with corrective or other instructions issued by the Engineer within a specific time period.

It is recommended that the Contractors institute penalties to employees for the following less serious violations and any others determined during the course of work as detailed below:

- Littering on site.
- Lighting of illegal fires on site.
- Persistent or un-repaired fuel and oil leaks.
- Any persons, vehicles or equipment related to the Contractor's operations found within the designated "no-go" areas.
- Excess dust or excess noise emanating from site.
- Possession or use of intoxicating substances on site.
- Any vehicles being driven in excess of designated speed limits.
- Removal and/or damage to fauna, flora or cultural or heritage objects on site.
- Urination and defecation anywhere except at designated facilities.

4.2 Emergency Preparedness

The Contractor shall compile and maintain Environmental Emergency Procedures (EEPs) to ensure that there will be an appropriate response to unexpected or accidental actions or incidents that will cause environmental impacts, throughout the construction period. Such activities may include, *inter alia*:

- Accidental discharges to water and land.
- Accidental exposure of employees to hazardous substances.
- Accidental fires.
- Accidental spillage of hazardous substances.
- Accidental toxic emissions into the air.
- Specific environmental and ecosystem effects from accidental releases or incidents.

These plans shall include:

- Emergency organisation (manpower) and responsibilities, accountability and liability.
- A list of key personnel and contact details.
- Details of emergency services available (e.g. the fire department, spill clean-up services, etc.).
- Internal and external communication plans, including prescribed reporting procedures where required by legislation.
- Actions to be taken in the event of different types of emergencies.
- Incident recording, progress reporting and remediation measures required to be implemented.
- Information on hazardous materials, including the potential impact associated with each, and measures to be taken in the event of accidental release.
- Training plans, testing exercises and schedules for effectiveness.

4.3 Incident Reporting and Remedy

If a leakage or spillage of hazardous substances occurs on site, the local emergency services must be immediately notified of the incident. The following information must be provided:

- the location;
- the nature of the load;
- the extent of the impact; and
- the status at the site of the accident itself (i.e. whether further leakage is still taking place, whether the vehicle or the load is on fire).

Written records must be kept on the corrective and remedial measures decided upon and the progress achieved therewith over time. Such progress reporting is important for monitoring and auditing purposes. The written reports may be used for training purposes in an effort to prevent similar future occurrences.

4.4 Penalties

Where environmental damage is caused or a pollution incident, and/or failure to comply with any of the environmental specifications contained in the EMP, the Contractor shall be liable.

The following violations, and any others determined during the course of work, should be penalised: Hazardous chemical/oil spill and/or dumping in non-approved sites.

- Damage to sensitive environments.
- Damage to cultural and historical sites.
- Unauthorised removal/damage to indigenous trees and other vegetation, particularly in identified sensitive areas.
- Uncontrolled/unmanaged erosion.

- Unauthorised blasting activities (if applicable).
- Pollution of water sources.
- Unnecessary removal or damage to trees.
- Unnecessary removal or damage to dune wetlands (dune slacks).

The following steps will be followed by the ECO on behalf of AW, when observing a transgression:

1. **Transgression observed:** Give a warning to the contractor, with the time to remedy the situation. Report transgression and agreed remedial action to O.R Tambo district Municipality.
2. **Transgression not remedied:** Report the contractor directly to O.R Tambo district Municipality and the Engineer's Representative and issue a financial penalty to the contractor with an agreed time period to remedy the situation with assistance of O.R Tambo district Municipality (if necessary)
3. **Failure to remediate:** Depending on the severity and impact significance of the transgression, which must be assessed and discussed with the applicant prior to reporting to the competent authority, the ECO may undertake to report directly to DEDEAT recommending that for:
 - HIGH Impact: DEDEAT to issue a notice to cease construction
 - Medium Impact: DEDEAT to issue a notice instructing O.R Tambo district Municipality to implement recommended remedial action
 - Low Impact: ECO to notify, but up to discretion of DEDEAT to apply sanction.

In all cases, however non-compliance with a condition must be reported to DEDEAT in the monthly audit reports. However, the ECO will also report on corrective actions proposed and implemented.

Transgression or resultant Environmental Damage	Min Fine	Max Fine
Failure to comply with prescriptions regarding ECO appointment and monitoring of EMPr	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding environmental awareness training	R 2000.00	R 10000.00
Failure to comply with prescriptions regarding method statements	R 2 000.00	R 10000.00
Failure to report environmental damage or EMPr transgressions to the ECO	R 1 000.00	R 2000.00
Failure to carry out instructions of the DEO/ECO regarding the environment of the EMPr	R 1000.00	R 2000.00
Failure to comply with prescriptions posting of emergency numbers	R 2000.00	R 10000.00
Failure to comply with prescriptions regarding information boards	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding a complaints register	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding site demarcation and enforcement of "nogo" areas	R 2000.00	R 10000.00
Failure to comply with prescriptions regarding site clearing	R 2000.00	R 10000.00

Failure to comply with prescriptions for the storage of imported materials within a designated Contractors yard	R 1000.00	R 2000.00
Failure to comply with prescribed administration, storage or handling of hazardous substances	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding equipment maintenance and storage	R 1000.00	R 2000.00
Failure to comply with fuel storage, refuelling, or clean-up prescriptions	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding procedures for emergencies (spillages and fires)	R 2000.00	R 10000.00
Failure to comply with prescriptions regarding construction camp	R 2000.00	R 10000.00
Failure to comply with prescriptions for the use of ablution facilities	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding water provision	R 1000.00	R 2000.00
Failure to comply with prescriptions for the use of designated eating areas, heating source for cooking or presence of fire extinguishers	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding fire control	R 2000.00	R 10000.00
Failure to comply with prescriptions for solid waste management	R 2000.00	R 10000.00
Failure to comply with prescriptions to prevent water pollution and sedimentation	R 2000.00	R 10000.00
Failure to comply with prescriptions to the protection of natural features, flora, fauna and archaeology	R 2000.00	R 10000.00
Failure to comply with prescriptions regarding speed limits	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding noise levels of construction activity	R 2000.00	R 10000.00
Failure to comply with prescriptions regarding working hours	R 2000.00	R 10000.00
Failure to comply with prescriptions regarding aesthetics	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding dust control	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding security and access onto private property	R 1000.00	R 2000.00
Failure to comply with prescriptions regarding cement and concrete batching	R 2000.00	R 10000.00

5 MANAGEMENT AND MONITORING PROCEDURES

5.1 Roles and responsibilities

Several professionals will form part of the project team and their responsibilities are outlined in Table 2 below:

Table 2: Roles and responsibilities

Roles	Responsibilities
Project Manager	The Project Manager is responsible for overall management of project and EMPr implementation. The following tasks will fall within his / her responsibilities: • Be familiar with the recommendations and mitigation measures of this EMPr, and implement these measures. • Monitor site activities on a daily basis for compliance. • Confine the construction site to the demarcated area. • Rectify transgressions through the implementation of corrective action.
Environmental Control Officer	The Environmental Control Officer (ECO) will: • Monitor the implementation of the EMPr during the construction phase of the project and shall remain employed until all rehabilitation measures after the construction phase are completed. • Conduct once-off training with the contractor on the EMPr and general environmental awareness. • Be familiar with the recommendations and mitigation measures of the associated EMPr for the project. • Monitor all site activities on a bi-monthly basis for compliance. • Conduct monthly audits of the site according to the EMPr, and report findings to the Project manager/Contractor/Client. • Recommend corrective action for any environmental non-compliance noted on site. • Compile a monthly report highlighting any non-compliance issues as well as progress and compliance with the EMPr prescriptions. It must be noted that the responsibility of the ECO is to monitor compliance and give advice on the implementation of the EMPr and not to enforce compliance. Ensuring compliance is the responsibility of the Environmental Site Agent appointed by the contractor/client.

Roles	Responsibilities
Contractor	The contractor is responsible for the overall execution of the activities envisioned in the construction phase including the implementation and compliance with recommendations and conditions of the EMPr. The contractor shall therefore ensure compliance with the EMPr at all times during construction activities and maintain an environmental register which keeps a record of all environmental incidents which occur on the site during construction of the roads. These incidents may include: • Public involvement / complaints; • Health and safety incidents; • Incidents involving Hazardous materials stored on site; and • Non-compliance incidents. The contractor is also responsible for the implementation of corrective actions issued by the ECO and Project Manager within a reasonable or agreed period of time.

Roles	Responsibilities
Environmental Site Agent	The Environmental Site Agent will: • Be fully conversant with the content of the Environmental Management Programme. • Be fully conversant with all relevant environmental legislation applicable to the project, and ensure compliance with them. • Compile Method Statements together with the contractor that will specify how potential environmental impacts in line with the requirements of the EMPr will be managed, and, where relevant environmental best practice and how they will practically ensure that the objectives of the EMPr are achieved. • Convey the contents of this EMPr to the construction site staff and discuss the contents in detail with the contractor. • Undertake regular and comprehensive inspection of the site and surrounding areas in order to monitor compliance with the EMPr. • Take appropriate action if the specifications contained in the EMPr are not followed. • Monitor and verify that environmental impacts are kept to a minimum, as far as possible. • Order the removal from the construction site of any person(s) and/or equipment in contravention of the specifications of the EMPr. • Ensuring that the list of transgressions issued by the ECO is available on request. The site agent must maintain the following documents on site: • EMPr; • Method Statements; • A site diary; • I&AP's complaints register; • Environmental incidents register; • Updated Material Safety Data Sheets (MSDS).

Roles	Responsibilities
Developer	The developer remains ultimately responsible for ensuring that the development is implemented according to the requirements of the EMPr and EA. Although the developer appoints specific role players to perform functions on his/her behalf, this responsibility is delegated. The developer is responsible for ensuring that sufficient resources (time, financial, human, equipment, etc.) are available to the other role players (e.g. the ECO, ESA and contractor) to efficiently perform their tasks in terms of the EMPr. The developer is liable for restoring the environment in the event of negligence leading to damage to the environment. The developer must ensure that the EMPr is included in the tender documentation so that the contractor and sub-contractors who is appointed is bound to the conditions of the EMPr. The developer must appoint an independent Environmental Control Officer (ECO) during the planning phase to oversee all the environmental aspects relating to the development.

5.2 Training and Environmental Awareness

It is important to ensure that the contractor has the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimisation of environmental harm. Training needs should be identified based on the available and existing capacity of site personnel (including the contractors and Sub-contractors) to undertake the required EMPr management actions and monitoring activities. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

The environmental training is aimed at:

- Promoting environmental awareness;
- Informing the contractor of all environmental procedures, policies and programmes applicable;
- Providing generic training on the implementation of environmental management specifications; and
- Providing job-specific environmental training in order to understand the key environmental features of the construction site and the surrounding environment.

The ECO shall be responsible for undertaking training in line with the above mentioned objectives and keep record of such training. The training shall be a once-off event; however, the contractor should make provision for weekly training or “Toolbox Talks” for the duration of the construction phase.

In addition to training, general environmental awareness must be fostered among the project's workforce to encourage the implementation of environmentally sound practices throughout its duration. This ensures that environmental accidents are minimised and environmental compliance maximized.

5.3 Monitoring

According to Appendix 4 of GN R 326, an environmental management programme must include:

- (g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);
- (h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);

A monitoring programme shall be put in place not only to ensure compliance with the EMPr through the contract/work instruction specifications, but also to monitor any environmental issues and impacts which have not been accounted for in the EMPr that are, or could result in significant environmental impacts for which corrective action is required.

The above mentioned monitoring programme shall include the following:

- Establishing a baseline through the taking of photographs of identified environmental aspects and potential impact sites prior to construction.
- Pre-construction monitoring during the first day of construction where after a post-construction audit will be conducted by the ECO to ensure compliance to the EMPr conditions, and where necessary make recommendations for corrective action. These audits can be conducted randomly and do not require prior arrangement with the Project Coordinator.
- Monthly site audits that will be conducted by an independent ECO for the duration of the construction phase;
- Compilation of a monthly audit report which will document findings and recommend corrective action to be taken. Subsequent reports will provide feedback on whether previous non-conformances raised have been resolved, thereby ensuring continual improvement of the site's environmental performance;
- Daily site visits will be conducted by the ESA to ensure daily implementation of the EMPr conditions and provide corrective actions;

- The ECO shall compile a post construction audit report for the development, the report must detail compliance as well as noted non-compliances with the conditions of the EA and the audit report must be submitted on completion of the construction phase.

5.4 Checking and Corrective Action

Checking and corrective action form part of the environmental management function and is aimed at ensuring that the necessary environmental management activities are being implemented and that the desired outcomes are achieved.

5.5 Contractor Management

During the procurement process, an environmental briefing is required that alerts the contractor to the environmental management expectation during the project. A copy of the EMPr must be provided.

5.6 Reporting Procedures

5.6.1 Documentation

The following documentation must be kept on site in order to record compliance with the EMPr:

- ☐ EMPr
- ☐ I&AP Complaints register;
- ☐ Environmental incidents register;
- ☐ Non-conformance Reports;
- ☐ Method Statements;
- ☐ Material Safety Data Sheets (MSDS);
- ☐ Written Corrective Action Instructions;
- ☐ Safe disposal certificate for all types of waste disposed of;
- ☐ Environmental Training Records; and
- ☐ Notification of Emergencies and Incidents.

5.6.2 Environmental Incidents Register

The ESA will put in place an Environmental Incidents Register. The ESA will ensure that the following information is recorded for all environmental incidents:

- ☐ Nature of incident;

- ☐ Causes of incident;
- ☐ Party/parties responsible for causing incident;
- ☐ Immediate actions undertaken to stop/reduce/contain the causes of the incident;
- ☐ Additional corrective or remedial action taken and/or to be taken to address and to prevent reoccurrence of the incident;
- ☐ Timeframes and the parties responsible for the implementation of the corrective or remedial actions; and
- ☐ Copies of all correspondence received regarding incidents

5.6.3 Interested and Affected Parties Complaints Register

The ESA shall further maintain an I&AP complaints register that will:

- Contain environmental complaints and correspondence received from the public to the contractor or the ECO.
- Nature of complaint;
- Cause of complaint;
- Party/parties responsible for complaint;
- Immediate actions undertaken to stop/reduce/contain the causes of the complaint;
- Additional corrective or remedial action taken and/or to be taken to address and to prevent reoccurrence of the complaint;
- Timeframes and the parties responsible for the implementation of the corrective or remedial actions.

The above records will form an integral part of the contractors' records. These records will be kept with the EMPr, and will be made available for scrutiny if so requested by the ECO.

5.7 EMPr

A copy of the EMPr shall be kept on site at all times during the construction period. The EMPr will be binding on all contractors operating on the site. It should be noted that in terms of the National Environmental Management Act No 107 of 1998 (Section 28) those responsible for environmental damage shall pay the repair costs both to the environment and human health and the preventative measures to reduce or prevent further pollution and/or environmental damage (The 'polluter pays' principle).

5.8 Layout the EMPr

The EMPr is divided into two phases of development. Each phase has specific issues unique to that period of the construction and operation of the roads and associated infrastructure. The impacts are identified and given a brief description. The two phases of the development are described as below:

- **Construction Phase**

This section of the EMPr provides management principles for the construction phase of the project. Environmental actions, procedures and responsibilities as required during the construction phase are specified. These specifications will form part of the contract documentation and therefore the contractor will be required to comply with these specifications to the satisfaction of the Project Manager and Environmental Control Officer.

- **Operational Phase**

This section of the EMPr provides management principles for the operational phase of the project. Environmental actions, procedures and responsibilities as required from O.R Tambo district municipality during the operational phase are specified.

5.9 Construction Material Requirements

No construction material is to be sourced from the site (i.e. borrow pits etc.) without prior consultation with the ECO. Consent from landowners must be accompanied by a permit/license for the specified activity i.e. water use, borrowing of material.

5.10 Method Statements

A method statement is a document that is compiled by the contractor in consultation with his/her ESA on request from the ECO or Engineer. Method statements document and provide specific instructions on how to perform a specific work related task. Method statements should at minimum include the following:

- A detailed description of **where** the activity will be undertaken;
- **What** the activity will entail;
- **What** material and machinery to be used;
- **Timeframe** of the activity; and
- By **whom** the activity will be performed.

The method statement must also detail which control measures will be implemented to ensure sound environmental management. The contractor must submit the method statement before any particular

construction activity is due to start. Work may not commence until the method statement has been approved by the ECO.

The following method statements should be submitted to the ECO on request. The method statements must be submitted to the ECO for approval prior to the commencement of the specific activity:

- Site establishment;
- Topsoil management;
- Stormwater management and anti-erosion measures;
- Waste management;
- Refuelling and servicing of vehicles and equipment;
- Rehabilitation of elements such as site camps, access routes, ablutions, storage areas (equipment, materials, diesel etc.), workshops, spoil sites, lay-down areas and stockpile areas;
- Revegetation and habitat rehabilitation plan;
- Transportation, handling, use and storage of hazardous substances;
- Protection of any environmentally sensitive areas (streams, rivers, pans, wetlands, dams etc.);
- Alien invasive management and where applicable removal.

**Method statements must be submitted to the ECO 14 days prior to the commencement of the specific work activity.*

6 ENVIRONMENTAL AWARENESS

According to Appendix 4 of GN E326 (amended in 2017), an environmental management programme must include:

(m) An environmental awareness plan describing the manner in which – awareness plan describing the manner in which –

- i. The applicant intends to inform his or her employees of any environmental risk which may result from their work; and
- ii. Risks must be dealt with in order to avoid pollution or degradation of the environment.

6.1 Environmental Awareness

The contractor shall ensure that adequate environmental training takes place. All employees shall be given an induction presentation on environmental awareness and the content of the EMPr. The

presentation needs to be conducted in the language of the employees to ensure it is understood. The environmental training shall as a minimum include the following:

- The importance of conformance with all environmental policies and legislation
- The environmental impacts, actual or potential, of their work activities
- The environmental benefits or improved personal performance
- The potential consequences of departure from a specified EMPr or EA's condition
- The mitigation measures required to be implemented when carrying out their work activities
- Environmental legal requirements and obligations
- Details regarding flora and fauna species of special concern and protected species and the procedures to be followed should these be encountered during construction activities.
- The importance of not littering
- The importance of using toilets supplied on site
- The importance of using water sparingly
- Details of and encouragement to minimise the production of waste and re-use, recover and recycle waste where possible
- Details regarding archaeological and/or historical sites which may be unearthed during construction and the procedures to be followed should these be encountered.

An Environmental Awareness Training Manual is attached as Appendix A of the EMPr.

7 PROJECT SCHEDULE

7.1 Site Establishment

The contractor shall establish his construction camps, offices, workshops and any other infrastructure as per an agreed site layout plan in a manner that does not adversely affect the environment. The contractor shall submit to the engineer for his approval, plans of the exact location, extent and construction details of these facilities and the impact mitigation measures the contractor proposes to put in place.

Site establishment shall take place in an organised manner and all required amenities shall be installed at camp sites before the main workforce move onto site. The construction camp shall have the necessary ablution facilities with chemical toilets at commencement of construction activities to the satisfaction of the Project Manager. The contractor shall inform all site staff to make use of supplied ablution facilities and under no circumstances shall indiscriminate sanitary activities be allowed other than in supplied facilities. The waste material generated from these facilities shall be serviced on a regular basis. The positioning of the chemical toilets shall be done in consultation with the engineer. The toilets shall also be placed outside areas susceptible to flooding. The contractor shall arrange for regular emptying of toilets

and shall be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the engineer.

Safe drinking water for human consumption shall be available at the site offices and at other convenient locations on site. All water used on site shall be taken from a legal source and comply with the recognized standards for potable and other uses. All effluent water from the camp / office sites shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect water sources (streams, rivers, pans dams etc.). Only domestic type wastewater shall be allowed to enter this drain.

The contractor shall provide adequate facilities for his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. No fires will be allowed outside of the construction camp. Activities which may pose a risk of fire shall be identified and suitable measures shall be put in place to prevent any possible damage by fire. Contractors shall inform the staff of the risk of fires and fire prevention and emergency procedures in the event of a fire. Firefighting equipment shall be supplied by the contractor at suitable locations.

The contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes. The contractor shall supply waste collection bins where such is not available and all solid waste collected shall be disposed of at a registered landfill site. A certificate of disposal shall be obtained by the contractor and kept on file. Where a registered waste site is not available close to the construction site, the contractor shall provide a method statement with regard to waste management. The disposal of waste shall be in accordance with the National Environmental Management: Waste Act 59 Of 2008. Under no circumstances may waste be burnt on site.

7.2 Site Clearance

The contractor shall submit a method statement for site clearance for approval by the Project Manager in consultation with the Environmental Site Agent (ESA). Site clearing shall take place in a phased manner, as and when required. Areas should only be cleared when construction at that point is required. The area to be cleared shall be clearly demarcated and this footprint strictly maintained. Spoil that is removed from the site shall be removed to an approved spoil site or municipal licensed landfill site. Silt fences and erosion control measures shall be implemented in areas where these risks are more prevalent. These include wetlands and steep areas. Topsoil shall be neatly stockpiled adjacent to the excavations ready for backfill when required.

The contractor shall ensure that all work is undertaken in a manner which minimises the impact on vegetation outside the immediate area of the works. No tree outside the area of the works shall be felled, topped, cut, burnt or pruned until it has been clearly marked for this purpose by the Project Manager. The method of marking will be specified by the Project Manager, and the contractor will be informed in

writing. The contractor shall be responsible for the re-establishment of grass within the road reserve boundaries for all areas disturbed during road construction.

8 IMPLEMENTATION OF THE EMPR

Impacts identified during the site audits conducted as part of the construction phase of the project thus far, as well as impacts generally associated with linear developments have been included in the EMPr tables below.

The tables below will be divided onto the following sections:

- Construction Phase; and
- Operational Phase.

These tables should be used as a checklist on site to monitor and guide construction processes.

8.1 Construction Phase

Table 3: Environmental Education and Training

IMPACT	ENVIRONMENTAL EDUCATION AND TRAINING (This section deals with the environmental training of employees)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR & ESA	MONTHLY
MITIGATION STATEMENT	<i>Environmental training</i> 1. The ESA must ensure that all site personnel have a basic level of environmental awareness training. Topics covered should include; • What is meant by “Environment” • Why the environment needs to be protected and conserved • How construction activities can impact on the environment • What can be done to mitigate against such impacts • Awareness of emergency and spills response provisions • Social responsibility during the construction of the road 2. Environmental Training should be provided to the staff members through toolbox talks. These should be relevant to a specific day’s work or activity. 3. Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitised to any potential hazards associated with their tasks. Proof of training to be kept on file. 4. The Environmental Site Agent must be conversant with all legislation pertaining to the environment applicable to this contract and must be appropriately trained in environmental management and must possess the skills necessary to impart environmental management skills to all personnel involved in the contract.		

Table 4: Site Camp

IMPACT	SITE CAMP (This section deals with the impacts relating to the site camp)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	WEEKLY
MITIGATION STATEMENT	1. Site camp locations must be approved by the ECO. 2. The location of the site camps must take into account location of local residents and / or ecologically sensitive areas, including flood zones and slip / unstable zones. 3. A site plan must be submitted to the ECO and project manager for approval. 4. The site camp may not be situated within the 1:20 year flood line or on slopes greater than 1:3. 5. If the contractor chooses to locate the camp site on private land, he must get prior permission from both the project manager and the landowner. 6. The contractor must attend to drainage of the camp site to avoid standing water and / or sheet erosion by installing diversion berms where needed. 7. Shade cloth must be used to conceal and minimise the visual impact of contractor camps, lay down and storage areas. 8. No development, or activity of any sort associated with the camp, is allowed below the 1:100 year flood line of any water system. <i>Storage of materials (including hazardous materials)</i> 9. Storage areas should be secure so as to minimize the risk of crime. They should also be safe from access by unauthorised persons. 10. Fire prevention facilities must be present at all storage facilities.		

IMPACT	SITE CAMP (This section deals with the impacts relating to the site camp)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
	11. Hazardous Material Storage facilities (diesel & oil) should be sited away from drainage lines and must have bund walls high enough to contain 110% of stored volume. 12. These storage facilities (including any tanks) must be on an impermeable surface that is protected from the ingress of storm water from surrounding areas in order to ensure that accidental spillage does not pollute local soil or water resources. 13. Clear signage must be placed at all storage areas containing hazardous substances / materials. 14. Staff dealing with these materials / substances must be aware of their potential impacts and follow the appropriate safety measures. 15. Oil spill kits must be kept at these storage facilities to treat and manage spills. <i>Drainage of construction camp</i> 16. Run-off from the site camp must NOT discharge into neighbours' properties or into adjacent wetlands, rivers or streams. <i>Batching Sites</i> 17. Should the use of an asphalt plant be considered on site, the contractor shall be responsible to obtain the necessary permit from the Provincial Department of Environmental Affairs. 18. Crushing plants and concrete batching plants, whether sited inside or outside of defined quarry or borrow pit areas, shall be subject to the requirements of the Department of Minerals and Energy legislation as well as the applicable industrial legislation that governs gas and dust emissions into the atmosphere.		

Table 5: Construction Traffic and Access

IMPACT	CONSTRUCTION TRAFFIC AND ACCESS (This section deals with the impacts on traffic and access roads)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ESA & ECO	DAILY
MITIGATION STATEMENT	1. Access of construction material delivery vehicles should be strictly controlled especially during wet weather to avoid compaction and damage to the topsoil structure 2. Planning of temporal access route to the site shall be discussed and agreed between the ECO, contractor and Project Manager. 3. The access routes on the private land shall be negotiated with the landowner in advance. 4. The condition of exiting access roads should be documented with photographs. 5. Temporary access roads that might be required shall be rehabilitated prior to the contractor leaving the site. 6. Strategic positioning of entry and exit points to ensure as little impact/ effect as possible on the traffic flow. 7. Unnecessary traversing of agricultural and natural open land is not permitted. 8. All speed limits shall be strictly adhered to at all times.		

Table 6: Soils

IMPACT	SOILS MANAGEMENT (This section deals with the impacts on soil)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY

MITIGATION STATEMENT	1. Topsoil shall be removed from all areas where physical disturbance of the surface will occur and shall be stored and adequately protected. 2. The areas to be cleared of topsoil shall include the storage areas. 3. All topsoil stockpiles and windrows shall be maintained throughout the contract period in a weed-free condition. 4. Weeds appearing on the stockpiled or windrowed topsoil shall be removed by hand. 5. The topsoil stockpiles shall be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself be eroded by the action of water. 6. Stockpiles of topsoil shall not exceed a height of 2m. 7. The contractor shall ensure that no topsoil is lost due to erosion – either by wind or water. 8. Areas to be top-soiled and grassed shall be done systematically to allow for quick cover and reduction in the chance of heavy topsoil losses due to unusual weather patterns. 9. The contractor's responsibility shall also extend to the clearing of drainage or water systems within and beyond the boundaries of the road reserve that may have been affected by such negligence. 10. The subsoil is the layer of soil immediately beneath the topsoil. It shall be removed, to a depth instructed by the engineer, and stored separately from the topsoil if not used for road building. This soil shall be replaced in the excavation in the original order it was removed for construction purposes. 11. Topsoil shall be reused where possible to rehabilitate disturbed areas. 12. Care shall be taken not to mix topsoil and subsoil during stripping. 13. Polluted topsoil shall be disposed of at a licensed landfill site.		

IMPACT	SOILS MANAGEMENT (This section deals with the impacts on soil)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
	Soil Stripping 14. No soil stripping shall take place on areas within the site that the contractor does not require for works, or on areas of retained vegetation. 15. Subsoil and overburden should be stockpiled separately to be returned for backfilling in the correct soil horizon order. 16. Construction vehicles shall only be allowed to utilise existing tracks or pre-planned access routes. Stockpiles 17. Stockpiles should not be situated such that they obstruct natural water pathways and drainage channels. 18. If stockpiles are exposed to windy conditions or heavy rain, they should be covered either by vegetation or cloth. 19. Stockpiles may further be protected by the construction of berms or low brick walls around their bases. 20. Stockpiles should be kept clear of weeds and alien vegetation growth by regular weeding. 21. Measures should be taken to prevent soil contamination with oil spillages and other form of soil pollution. 22. Where soil is contaminated, oil spill kits should be utilised to clean the contaminated site and be disposed of at a hazardous landfill site. 23. Topsoil and subsoil to be protected from contamination. 24. Fuel and material storage shall be away from stockpiles. Earthworks 25. Soils compacted during construction work should be deeply ripped to loosened compacted layers and re-graded to even		

IMPACT	SOILS MANAGEMENT (This section deals with the impacts on soil)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
	running levels and should be re-vegetated upon completion of construction activities. Erosion Control 26. Wind screening and stormwater control should be undertaken to prevent soil loss from the site by the installation of diversion berms, sandbags and silt traps. 27. Vegetation clearance should be phased to ensure that the minimum area of soil is exposed to potential erosion at any one time. 28. Re-vegetation of disturbed surfaces should occur immediately after the construction activities are completed. 29. No impediment to the natural water flow other than approved erosion control works is permitted.		

Table 7: Air Quality

IMPACT	AIR POLLUTION (This section deals with the impacts on air pollution)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR ,ECO & ESA	DAILY
MITIGATION STATEMENT	<i>Dust control</i> 1. The use of dust fall standards as contained in the National Dust Control Regulations R 827 of 1 November 2013 must be considered. 2. Damping down of un-surfaced access roads, road shoulders and un-vegetated areas during dusty periods is required. 3. The contractor shall be responsible for dust control on site to ensure no nuisance is caused to the Landowner or neighbouring Communities. 4. A speed limit of 40 km/h shall not be exceeded on dirt roads 5. Any complaints or claims emanating from the lack of dust control shall be attended to immediately by the contractor. <i>Emissions control</i> 6. Regular servicing of vehicles and machinery in order to limit gaseous emissions (to be done off-site). <i>Rehabilitation</i> 7. The contractor should commence with rehabilitation of exposed soil surfaces as soon as practical after completion of earthworks. <i>Fire Prevention</i> 8. The contractor shall have operational fire-fighting equipment available on site at all times. The level of firefighting equipment shall be assessed and evaluated thorough a typical risk assessment process. It may be required to increase the level of protection, especially during the winter months.		

	9. No open fires shall be allowed on site under any circumstance. No fires shall be allowed at active construction areas and stop and go stations.		

Table 8: Ground and Surface Water Pollution

IMPACT	GROUNDWATER AND SURFACE WATER POLLUTION (This section deals with the impacts on ground and surface water pollution)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	Sanitation 1. Chemical toilet facilities shall be regularly serviced to reduce the risk of surface or groundwater pollution. Hazardous materials 2. Use and /or storage of materials, fuels and chemicals which could potentially leak into the ground shall be controlled in a manner that prevents such occurrences. 3. All storage tanks containing hazardous materials shall be placed in bunded containment areas with sealed surfaces. 4. Any hazardous substances shall be stored at least 100m from any water bodies in proximity to the site. 5. The bund wall shall be high enough to contain 110% of the total volume of the stored hazardous material with an additional allocation for potential stormwater events. 6. Contaminated wastewater shall be managed by the contractor to ensure existing water resources on the site are not contaminated. 7. All wastewater from general activities in the camp shall be collected and removed from the site for appropriate disposal at a licensed commercial facility. 8. Temporary cut-off drains and berms may be required to capture storm water and promote infiltration. 9. Used oil must either be collected by a registered oil collector or disposed of to a registered processing facility. Receipts must be kept on file. Cement mixing		

IMPACT	GROUNDWATER AND SURFACE WATER POLLUTION (This section deals with the impacts on ground and surface water pollution)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
	10. Cement contaminated water shall not be allowed to enter the water system as this disturbs the natural acidity of the soil and affects plant growth. Public Areas 11. The contractor should take steps to ensure that littering by workers does not occur and no washing or servicing of vehicles on site. 12. Should the need arise to wash machinery on site, a suitable area must be established and approved by the ECO. Water resources 13. Municipal water should instead be used for activities such as washing of equipment and dust suppression measures. 14. Any accidental spillages that occur on site or entering the water body must be reported to the ESA for remediation. 15. Repair and servicing of equipment should be performed 50 m from the water body to prevent contamination of soil and run-off. 16. Stormwater runoff should be channelled through natural grass and sedges surrounding.		

Table 9: Flora

IMPACT	FLORA (This section deals with the impacts on flora)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	1. All plants not interfering with the construction activities shall be left undisturbed. 2. Large geophytes and bulbous plants in affected areas should be removed and replanted in suitable habitat. 3. All alien vegetation should be removed on site. 4. No dumping of any materials in undeveloped open areas and neighbouring properties. 5. Collection of firewood and traditional medicinal plants is strictly prohibited. 6. Vegetation clearance shall be limited within sensitive areas. 7. No damage to vegetation outside the road servitude. Rehabilitation of Vegetation 8. Disturbed areas of natural vegetation as well as cut and fills shall be rehabilitated immediately to prevent soil erosion. 9. Where necessary a suitable mixture of grass seed shall be used to re-seed damaged areas. Badly damaged areas shall be fenced in to enhance construction.		

Table 10: Fauna

IMPACT	FAUNA (This section deals with the impacts on fauna)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /

PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	1. Close site supervision shall be maintained during construction. 2. Workers shall be limited to areas under construction and access to the undeveloped areas. 3. No animals should be intentionally killed or destroyed. Poaching and hunting is not permitted on the site.		

Table 11: Noise

IMPACT	NOISE (This section deals with the impacts on noise)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	1. The construction activities shall aim to adhere to the relevant noise regulations and limit noise to within standard working hours in order to reduce disturbance of residential areas in close proximity to the development. 2. Noise levels shall be kept within acceptable limits. 3. All noise and sounds generated shall adhere to SABS 0103 specifications for maximum allowable noise levels for residential areas. 4. No pure tone sirens or hooters may be utilised except where required in terms of SABS standards or in emergencies. 5. Noisy activities to take place during allocated hours which are 07H00-17H00.		

Table 12: Waste Management

IMPACT	WASTE (This section deals with the impacts on waste)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	Rubble 1. Rubble shall be disposed of in pre-agreed, demarcated spoil dumps that have been approved by the local Municipality. Litter management 2. Sufficient waste bins shall be provided on site for different types of waste disposal and for recycling purposes. 3. Refuse bins shall be placed at strategic positions to ensure that litter does not accumulate on site. 4. All waste shall be removed from the site and transported to a landfill site as approved by the Department of Economic Development, Environmental Affairs and Mhlontlo Local Municipality. 5. Littering by the employees of the contractor shall not be allowed under any circumstances. Hazardous waste 6. All hazardous waste materials shall either be stored in a bunded or lined area or then disposed of at a licensed landfill site. Hazardous waste may not be stored on site in excess of a 90 calendar day period. 7. Contaminants are to be stored safely to avoid spillage. 8. Machinery shall be properly maintained to keep oil leaks in check.	Mhlontlo Local Municipality	

IMPACT	WASTE (This section deals with the impacts on waste)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
	9. Labelled containers shall be provided to store used oils, as well as hazardous waste containers for oily rags; oil filters etc. and shall be disposed of at a licensed hazardous waste disposal site. Sanitation 10. The contractor shall install mobile chemical toilets on the site. 11. Staff shall be sensitised to the fact that they should use these facilities at all times. 12. Ablution facilities shall be within 100 m from workplaces but not closer than 100m from any natural water bodies. 13. Toilets shall be serviced regularly and the ESA shall inspect toilets regularly. Remedial actions 14. Depending on the nature and extent of the spill, contaminated soil shall be either excavated or treated on-site. 15. Spillages on site should be contained immediately. 16. Excavation of contaminated soil shall involve careful removal of soil using appropriate tools/machinery to storage containers until treated or disposed of at a licensed hazardous landfill site. 17. The ESA shall determine the precise method of treatment of polluted soil. This could involve the application of soil absorbent materials or oil-digestive powders to the contaminated soil. 18. If a spill occurs on an impermeable surface such as cement or concrete, the surface spill shall be contained using oil absorbent materials.		

Table 13: Health and Safety

IMPACT	HEALTH AND SAFETY (This section deals with the impacts on health and safety)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	Worker safety 1. Implementation of safety measures, work procedures and first aid shall be implemented on site. 2. A health and safety plan in terms of the Occupational Health and Safety Act (Act No. 85 of 1993) shall be drawn up to ensure worker safety. 3. Contractors shall ensure that all equipment is maintained in a safe operating condition. 4. A record of health and safety incidents shall be kept on site. 5. Any health and safety incidents shall be reported to the project manager immediately. 6. First aid facilities shall be available on site at all times. 7. Workers have the right to refuse work in unsafe conditions. 8. Material stockpiles or stacks shall be stable and well secured to avoid collapse and possible injury to site workers. Protective gear 9. Personal Protective Equipment (PPE) shall be made available to all workers and the wearing and use of PPE shall be compulsory. 10. Hard hats and safety shoes shall be worn at all times and other PPE worn where necessary i.e. dust masks, ear plugs, hard hat, safety boots and overalls etc. Site safety 11. The site shall remain fenced all the time.		

IMPACT	HEALTH AND SAFETY (This section deals with the impacts on health and safety)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
	12. Potentially hazardous areas such as trenches are to be demarcated and clearly marked. 13. Adequate warning signs of hazardous working areas shall be erected in suitable locations. 14. Uncovered manholes and excavations shall be clearly demarcated. 15. Firefighting equipment shall be placed in prominent positions across the site where it is easily accessible. This includes fire extinguishers, a fire blanket as well as a water tank. 16. All flammable substances shall be stored in dry areas which do not pose an ignition risk to the said substances. 17. Smoking may only be conducted in demarcated areas as agreed upon by the ESA and the contractor.		

Table 14: Social Environment

IMPACT	SOCIAL ENVIRONMENT (This section deals with the impacts on social environment)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	1. All contact with affected parties shall be courteous at all times. The rights of the affected parties shall be respected at all times. 2. A complaints register should be kept on site. Details of complaints should be incorporated into the audits as part of the monitoring process. 3. This complaints register is to be tabled during monthly site meetings. 4. No interruptions other than those negotiated shall be allowed to any essential services.		

	5. Damage to infrastructure shall not be tolerated and any damage shall be rectified immediately by the contractor. 6. A record of all damage and remedial actions shall be kept on site.		

Table 15: Cultural and Heritage Artefacts

IMPACT	SOCIAL ENVIRONMENT (This section deals with the impacts on cultural and heritage artefacts)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	1. Should any heritage artefacts be exposed during construction activities, the activities: • Shall cease immediately and the Environmental Control Officer shall be notified as soon as possible; • All discoveries shall be reported immediately to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made. • Acting upon advice from these specialists, the Environmental Control Officer will advise the necessary actions to be taken; • Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site. 2. It is recommended that temporary conservation measures should be taken to ensure that there is no accidental impact on heritage sites situated in proximity to development. i.e. fencing of cemeteries and structural ruins in close proximity to proposed works. 3. Professional archaeologist should inspect construction areas during the removal of topsoil or excavation		

Table 16: Rehabilitation

IMPACT	REHABILITATION (This section deals with the rehabilitation of construction sites)	RESPONSIBILITY	FREQUENCY MONITORING REQUIREMENTS /
PHASE	CONSTRUCTION	CONTRACTOR, ECO & ESA	DAILY
MITIGATION STATEMENT	1. After the completion of construction activities all construction material must be removed by hand. 2. Topsoil that has been stockpiled during construction must be applied on the affected areas to undergo rehabilitation. 3. The exposed ground should be seeded with stabilising grass mix, suited to the conditions. 4. Watering is to be done in a manner which ensures that no erosion of the topsoil and seed mix takes place. 5. Slope stabilisation measures may be necessary in places where grass has not been able to establish and where there is erosion risk.		

Table 17: Decommissioning

IMPACT	DECOMMISSIONING IMPACTS (This section deals with the impacts post construction activities)	RESPONSIBILITY	FREQUENCY / MONITORING REQUIREMENTS
PHASE	DECOMMISSIONING PHASE	CONTRACTOR PROONENT	& DAILY
MITIGATION STATEMENT	Removal of equipment The construction camp is to be checked for spills of substances such as oil, paint, etc., and these shall be cleaned up. Temporary services The contractor must arrange the cancellation of all temporary services, e.g. chemical toilets. A copy of all waste disposal certificates is to be presented to the ECO. Temporary roads must be closed and access across these, blocked. All areas where temporary services were installed are to be rehabilitated to the satisfaction of the ECO. Associated infrastructure Surfaces are to be checked for waste products from activities such as concreting or asphaltting and cleared in a manner approved by the SANRAL/ Department of Roads and PublicWorks. All surfaces hardened due to construction activities are to be ripped and imported material thereon removed. All rubble is to be removed from the site to an approved disposal site as approved by the ECO. The site is to be cleared of all litter. Fences, barriers and demarcations associated with the construction are to be removed from the site.		

8.2 Operational Phase

ASPECT/IMPACT	MITIGATION MEASURES	RESPONSIBILITY	FREQUENCY / MONITORING REQUIREMENTS
To determine the effects of the operational phase on surface water	There needs to be minimal usage of machinery and disturbances in the area where the pipeline crosses the drainage lines.	Project Manager	
Rehabilitation / Re-vegetation	- All disturbed areas must be successfully rehabilitated upon completion of the contract. - Rehabilitation efforts must ensure that no visible erosion scars remain. - Disturbed areas of natural vegetation as well as cuts and fills must be rehabilitated immediately to prevent soil erosion. - A suitably qualified specialist should be employed to assist with re-vegetation and rehabilitation.	Project Manager	

APPENDIX D: PHS OHS Specs

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Abbreviations	
Chief Executive Officer	CEO
Construction Regulations	CR
Hazardous Chemical Substances	HCS
Material Safety Data Sheet	MSDS
Approved Inspection Authority	AIA
Health and Safety Plan	H & SP

Definitions

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

"Principle contractor" means the contractor with control over the construction phase of a project involving more than one contractor who is appointed by the client in writing;

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

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

"Construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"Construction site" means a work place where construction work is being performed;

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

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

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

"Contractor" means an employer who performs construction work;

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

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

Additional Documents to be consulted along with Health and Safety Specification	
Occupational Health and Safety Act 85 of 1993 (OHS Act)	
Construction Regulations, 2014	
Basic Conditions of Employment Act (Act 75 of 1997)	
Compensation for Occupational Injuries and Diseases (COID) Act No. 130 of 1993	
SABS codes referred to by the OHS Act	

1. Introduction Health and Safety Ethics

The client is required to ensure a working environment which, as far as reasonably practicable, is safe and without risk to the health and Safety of persons on the site. This requires the development of a Health and Safety plan which aligns with the **Occupational Health and Safety Act 85 of 1993** and its regulations, which emphasis the responsibilities of all parties involved in activities which may pose risk to people's safety and health. This should be achieved by, but not limited to;

- Mitigation/elimination of injuries or illnesses during the project life cycle
- All health and safety procedures should be incorporated into the projects day to day working procedures.
- All potential risk/aspect to health, safety, environment, property are identified and appropriate mitigation measures are employed.
- Preparation and display of an organisations health and safety commitment should be prepared and displayed.

1.1 Occupational Health and Safety Act Section 37(2) agreements

The Principal Contractor must sign 5(1) k agreement between the agent and the principle contractor before the commencement of work, and as such, all contractors under the employment of the principle contractor must sign 37(2) agreement before commencement of their particular work.

1.2 Notification of Construction Work (Occupational health and safety Act 85 of 1993- Regulation 4 of the Construction Regulations, 2014)

The provincial director of the Department of Labour must be notified of construction work prior to the commencement of the project. A signed notification of construction letter is required and must be available in the Construction Health and safety file. A Copy of such notification should be emailed to the Clients Agent and Health and safety representative.

1.3 Compensation for Occupational Injuries and Diseases Compensation for occupational injuries and diseases act 130 of 1993 section 89

A copy of a valid letter of good standing, valid for the duration of the project and should be included in the construction health and safety file on site. No contractor will be permitted to enter site or perform work without a valid letter of good standing.

1.4 The H&SP must also address the following matters

- ✓ Systems for recording and reporting of incidents both internal and external to the Department of Labour
- ✓ Undertaking and procedure to stop any work which endangers the safety or health of any person.
- ✓ Copy of the Act and its Regulations to be kept on the site and to be readily available to employees.
- ✓ Incident registers to be kept on the site.
- ✓ Attendance by all contractors of monthly site health and safety meetings.
- ✓ If construction work is going to be undertaken while the building is still occupied, methods of limiting the impact upon occupants with noise, dust and other nuisance factors.

The following documents must be provided in the health and safety plan

- Health and Safety Policy signed by the Chief Executive Officer (C.E.O) or Managing Director stating their commitment to ensuring the protection and wellbeing of their employees, visitors and surrounding community.
- Letter of Good Standing from the compensation Commissioner.
- Health and Safety Organogram detailing the Health and Safety Team.
- The competency of each member of the Health and Safety Team must be provided and should include, training, experience and qualifications specific to the appointment.

1.5 Company organogram

The principle contractor shall provide company structure detailing individual roles and responsibilities in the Construction health and safety file and shall be displayed on site. All contractors shall provide company organogram in the construction health and safety plan.

1.6 Legal Appointments

The following competent persons, **where applicable**, shall be appointed in writing by the Principal Contractor, prior to any work being carried out, and shall adhere to the requirements of the specific sub-regulations.

APPOINTMENT	OSHA ACT REGULATION/ REFERENCES
Section 16.2 appointment	Section 16.2
HSE Representative (if necessary)	Section 17(1)
Incident Investigator	GAR 9(2)
First Aiders	GSR 3(4)
Fire Fighters	ER 9 & CR 29

Table 1: Health and Safety Team

APPOINTMENT	OHS-ACT / REGULATION REFERENCE
Construction Manager	CR 8 (1)
Assistant Construction Manager	CR 8 (2)
Construction Supervisor	CR 8 (7)
Construction Assistant Supervisor	CR 8(8)
Risk assessor	CR 9(1)
Fall Protection Competent Person	CR 10 (1)
Temporary works competent person	CR12 (2)
Excavation Work Supervisor	CR 13 (1)(a)
Demolition Work Competent Person	CR 14 (1)
Competent Person (Use of Explosives for Demolition Work)	CR14(11)
Scaffolding Erector/ Team Leader/ Inspector	CR 16 (1)
Suspended platform Competent Person	CR 17(1)
Rope Access Work Competent Person	CR 18 (1) (a)
Material Hoist Competent Person	CR 19(8)(a)
Bulk Mixing Plant Competent Person	CR 20 (1)
Explosive Powered Tools Competent Person	CR 21(2)(b)
Construction Vehicle and Mobile Plant Competent Person	CR23 (1)(d)
Electrical Machinery Competent Person	CR 24 (c)
Stacking and Storage Supervisor	CR 28 (a)
Fire Equipment Inspector	CR 29(h)

Table 2: Construction Management Team

2. Duties of the Principle Contractor

The principal contractor will be responsible for co-operation between all contractors to ensure compliance to the OHS –Act and Regulations on site.

- To ensure the above, the Principal Contractor must carry out the following and provide proof of such in his H&SP:
 - Proof that Contractors H&SP has been approved, implemented and maintained.
 - Proof that Contractors are registered with the Compensation Commissioner or similar insurer.
 - A comprehensive & updated list of all contractors on site, also indicating the type of work being done.
 - Each contractor will ensure they comply with site rules and any reasonable instructions formulated by the Principle Contractor and or the professional team with current relevant health and safety legislation.
 - As per Construction Regulation 7 the Principal Contractor will ensure;
 - ✓ All contractors will be provided with the Health and safety Specifications.
 - ✓ Evaluate health and safety costing as well as health and safety competences
 - ✓ Appoint contractors in writing as stipulated by CR 7(1) (c) (v).
 - ✓ Complete 37(2) mandatory with contractors detailing the arrangements made between parties to ensure compliance with OHS Act and regulations.
 - ✓ Ensure all contractors are in possession of a valid letter of good standing.
 - ✓ Maintain a list of all contractors on site detailing the type of work being conducted.
 - ✓ Evaluate and approve all contractors health and safety plans
 - ✓ Ensure all contractors maintain a health and safety file on site.
 - ✓ Include contractor's site management in health and safety committee meetings.

3. Project specific safety management system

As part of the Health and Safety management system, the initial assessment of all risks and hazards as part of the risk assessment are required to ensure a holistic mitigation of all possible risks and hazards people may be exposed to. This assessment of site specific risks and hazards will influence the type of training and awareness programs conducted on site.

3.1 Induction training

The Principle Contractor will be responsible for site health and safety induction trainings for all employees, contractors, professional team members and visitors. The health and safety induction training has to be performed prior employees and contractors begin work on site or before visitors enter the site. Proof of induction must be carried by all persons on site and a copy of the proof must be kept in the construction health and safety file.

3.2 Awareness and Training

The principle contractor will be responsible for health and safety awareness and training and will be administered through daily toolbox talks. Record off these trainings will form part of the Construction Health and Safety file.

3.3 health and safety site inspections

Monthly health and safety site visit will be conducted by the site agent's health and safety representative and will be accompanies where possible by the, project manager and

contractor manager to identify risk and non-compliances. The frequency of site inspections may be increased to address issues of non-conformance on site.

3.4 Risk Assessment (CR 9)

A written risk assessment must form part of the site Health and safety plan and must contain at the least the following;

- a. 9. (1) A contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site, and must include-
 - b. (a) the identification of the risks and hazards to which persons may be exposed to;
 - c. (b) an analysis and evaluation of the risks and hazards identified based on a documented method;
 - d. (c) a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
 - e. (d) a monitoring plan; and
 - f. (e) A review plan.
- g. (2) A contractor must ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in a risk assessment.
- h. (3) A contractor must ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and or control measures before any work commences, and thereafter at the times
 - i. Determined in the risk assessment monitoring and review plan of the relevant site.
- j. (4) A principal contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment before any work commences, and thereafter at the times that may be determined in the risk assessment monitoring and review plan of the relevant site.
- k. (5) A contractor must consult with the health and safety committee or, if no health and safety committee exists, with a representative trade union or representative group of employees, on the monitoring and review of the risk assessments of the relevant site.
- l. (6) A contractor must ensure that copies of the risk assessments of the relevant site are available on site for inspection by an inspector, the client, the client's agent, any contractor, any employee, a representative trade union, a health and safety representative or any member of the health and safety committee.
- m. (7) A contractor must review the relevant risk assessment-
 - n. (a) Where changes are effected to the design and or construction that result in a change to the risk profile; or (b) when an incident has occurred.

4. Working at Height (Fall Protection Plan)

The preparation of a fall protection plan for people/contractors working at height will be consolidated by on CR 10. The fall protection plan will include but not limited to;

- A fall arrest risk assessment will be conducted for work performed at an elevated position. This risk assessment will focus on;
- Working on tressels
- Working adjacent to public roads and pedestrian roads
- Movement of workers and plant equipment around excavated openings
- Fall arrest harnesses
- Crain
- Scaffolds
- Ladders
- Guard rails
- Use of Fall Restraint and Fall Arrest Systems
- Storage and Maintenance
- Drop Zone
- Medicals

4.1 Fall Protection Planner

The fall protection plan must be developmental by a competent person appointed in writing and must be available on site for inspection and reference purposes. The Principle contractor must ensure all subcontractors working at height must develop a project fall protection plan and the principle contractor will be responsible for assessing, approving and enforcing the content of the contractors fall protection plans.

4.1.1 Ladders

The principle contractor will ensure all ladders will be used inspected and maintained according to the **General safety Regulation 13A**.

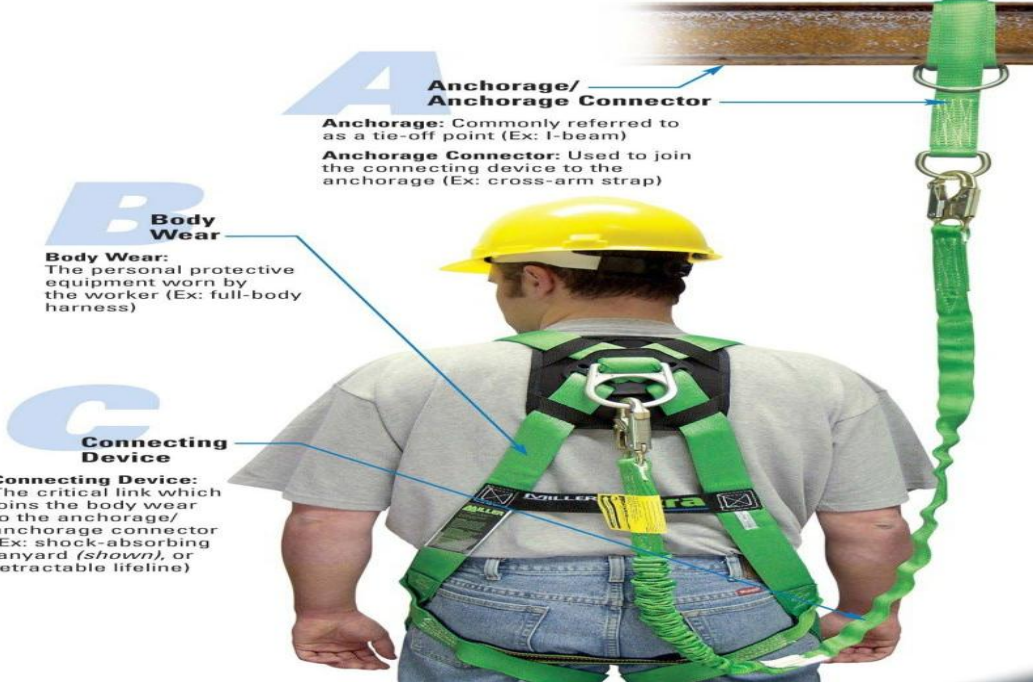
The ladders must be in good working condition, secured or held up when in use, be the correct height for the intended task. Records of ladder inspection must be kept in a register on site.

4.1.2 Scaffold

As legally required by **Construction Regulation 16** a contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.

4.1.3 Fall arrest harnesses

OSHA regulations require employers to provide workers with fall protection personal protective equipment (PPE) in settings where they work or walk on elevated surfaces. The image below illustrate a few fall arrest harnesses.

	
1. Full body harness	2. Full body harness
	
3. Shock absorbing lanyard	4. Horizontal Self-retracting Lifelines
 A Anchorage/ Anchorage Connector Anchorage: Commonly referred to as a tie-off point (Ex: I-beam) Anchorage Connector: Used to join the connecting device to the anchorage (Ex: cross-arm strap) B Body Wear Body Wear: The personal protective equipment worn by the worker (Ex: full-body harness) C Connecting Device Connecting Device: The critical link which joins the body wear to the anchorage/ anchorage connector (Ex: shock-absorbing lanyard (shown), or retractable lifeline)	
5. Anchorage and body wear	

4.1.4 Guardrails

Only guardrails made from steel, wood, and wire rope will be acceptable. All guardrail systems will comply with the current Department of Labour OSHA standards (These guardrails will be placed in the following areas if necessary or feasible based on job location or requirements:

- On all open sided floors elevated areas.
- Around all open excavations or pits.
- On leading edges of roofs or mezzanines.

6. Construction Vehicles and Mobile Plant

All construction vehicles will adhere to CR 23. All construction vehicles and plants will be inspected and records of those inspection will be kept in the construction health and safety file on site. The principle contractor will ensure all operators are competent in the operation of the various vehicles and mobile plants on site.

Machine guarding must be placed on all exposed moving parts to mitigate against any possible safety risks which may arise. The use of Flag man will be required to help manage the traffic within the construction site. Where applicable load test certificates, road worthy certificates and inspection registers must be placed in the construction health and safety file on site.

6.1 Hired plant and machinery

All hired plant and machinery must be of good working condition. Where applicable load test certificates, road worthy certificates and inspection registers must be placed in the construction health and safety file on site.

7. Traffic Control

The movement of construction vehicles and mobile plants on and off the site must be strictly controlled with significant emphasis on site access and exit points. Traffic routes and pedestrian routes must be clearly marked. A set agreed upon speed limit must be set for all area within and around the site.

8. Electrical Installations and equipment

The principle contractor must ensure all work pertaining to temporary electrical installation and the use of all portable electrical equipment complies with CR24, the electrical machinery regulation and the electrical installation regulation.

A competent person must conduct temporary electrical installation inspections weekly.

9. Stacking and storage

The principle contractor will ensure a competent stacking and storage supervisor is appointed in writing, who will be responsible for the stacking and storing of equipment and material in a safe manner. Stacking structures and storage areas must be inspected on a weekly basis and the register must form part of the construction health and safety file.

10. Public safety

The Principle Contractor must ensure all persons on site, visiting the site as well as the general public, are made aware of the dangers likely to arise from the site activities and the precautions which will be used to prevent those activities from happening.

Site visitors must attend the induction training and sign the site register. Visitors will be accompanied on site at all times.

11. Barricades and fencing

It is the principle contractor's responsibility to ensure do not hinder or pose a potential risk to the general public and thus the closing off of the site area is required. All barricades installed must be able to withstand the wind speeds of the area.

12. Security

The principle contractor site must be 24 hour access controlled with the exception of signed in visitors.

13. Occupational health and safety signage

Appropriate health and safety signage must be displayed in and around the site.

- No Unauthorised Entry
 - Direction to site
 - Visitors report to site office
 - Lifting operations overhead
 - Noise Zone
 - First Aid Point
 - Fire Aid point
 - All relevant PPE pictograms (Hard Hat, Safety Boots, Goggles, Earplugs, Dust Mask etc.)
- Signage will be posted up entrance of the site office, strategic points along the route.
(190mm X 190mm SABA approved photo luminescent signage).

14. Medical certificates of fitness

Medical certificates of fitness must be available in the construction health and safety file for all personnel on site. The certificate of fitness will indicate the activities and trade that the person has been asked for. Only medical certificates of fitness issued by a registered Occupational Health Practitioner will be accepted.

15. Personal protective equipment

The principle contractor is responsible in ensuring all personal on site are wearing appropriate P.P.E. the type of P.P.E will be issued based on a task based analysis to ensure the required P.P.E is used. The P.P.E will be issued to employees free of charge and replaced when necessary. The P.P.E will be inspected to ensure it is in good working condition.

16. Hazardous chemical substances

All chemicals which will be used on site must be recorded. The Material Safety data Sheet (MSDS) of all chemical products which will be on site will be recorded. All personal who will be in contact with the hazardous chemical substances will be trained and a HCS register with chemicals and MSDS information kept on site in the HCS storage area. The MSDS register will also form part of the construction health and safety file. All storage of HCS will be the responsibility of the site storage supervisor.

17. Flammable substances

All flammable substances are to be stored in a manner which will ensure adequate ventilation is available and flashpoint aspects be considered in the location of flammable substances in the store room.

It is recommended that the maximum quantities that may be stored in cabinets and bins are no more than 50 litres for extremely, highly flammable and those flammable liquids with a flashpoint below the maximum ambient temperature of the workroom/working area and no more than 250 litres for other flammable liquids.

Access to the store room must be strictly controlled with the store room supervisor being responsible for the room. The room must be kept under lock at all times. The use of safety signs such as warning signs must be displayed to prevent possible ignition sources which may arise within and around the storage area.

Flammable substances will be stored in containers which are designed for the task and thus the recycling of other storage containers will not be excepted as factors of corrosiveness of flammable substances might have a negative effect on the integrity of the storage area. The strategic placement of drip trays within the storage room are recommended to mitigate against possible spills which can result in explosions and or fires.

18. Emergency procedure

The principle contractor must be developed an emergency preparedness procedure to ensure appropriate interventions are taken in a speedy fashion to mitigate against emergencies on site.

The plan must be communicated and a record of the communication must be available in the construction health and safety file on site. The emergency procedure must have the following;

- List of contact information of emergency personnel on site
- Contact details of emergency services
- Action to be taken in the event of an emergency
- All personnel on site have the duty to report any emergency

- The principle contractor is responsible for ensuring all contractors and personal on site are trained in the emergency procedure.
- The emergency procedure must be displayed on strategic points on site.
- All emergencies must be reported to Principal Contractor within reasonable time.

19. First aid

A first aid box will be available on site at all times. The principle contractor will employ a first aider on site as the proposed number of employees will be 16 people, and there after employ a first aider at a ratio of 20 employees to 1 first aider. As per regulation 7 GSR, the first aid box must contain equipment which will be appropriate to injuries which may arise from specific work performed. The location of first aid boxes should be located in strategic points to ensure all personal requiring first aid assistance receive the services in a prompt manner.

The first aid box must be inspected on a weekly basis to ensure all required equipment is available in the box. A register for the content of the first aid box will be made available inside the first aid box.

20. Accident/incident reporting and investigation

The principle contractor must develop an accident/incident reporting procedure, which must be communicated on site. The procedure must list the reporting protocol on site;

- All personal must report to the immediate supervisor on site/or first aider
- The site safety officer/site manager must be informed
- As per GAR 9 incident must be investigated and the department of labour must be informed in writing within 7 days using the Annexure 1 form of the General Administrative Regulations.
- W.CL.2 form submitted to the department of labour in the event of an accident.

All accidents/incidents must be reported to the Agent, and agents health and safety representative and a report prepared post event.

21. Fire prevention, detection and fighting

Principle contractor must implement the following requirements;

- **Fire prevention**
 - ✓ Principal contractor must implement a policy of 'no fires on site.'
- **Firefight measures by providing the following measures**
 - ✓ Fire risk identification
 - ✓ Action plan
 - ✓ Reviewed as conditions change

Firefighting equipment such as fire extinguishers must be visible on site with signage leading to their locations. The extinguishers must be serviced and certificates valid for an annual period.

22. Health and safety Representative

As per the OHS Act when the principle contractor has 20 or more employees on site, a health and safety representative will be trained and made available on site (and thereafter at a ratio of 20 employees per 1 health and safety representative.)

A health and safety committee will be established when required and will necessitate the inclusion of the construction supervisor in the committee.

23. Housekeeping

Good housekeeping and stacking practices are imperative as the uncontrolled accumulation of waste material and equipment can cause serious accidents by obstructing access on and around the site.

The principle contractor will ensure housekeeping rules on site are enforced by;

- Placing site rules on a visible notice board or sign by entrance of site and/or reception office.

24. Occupational Health

The principle contractor as best as possible ensure the site environment is one which is hygienic and ensure that adequate, clean and safe hygiene services are available. It will be the responsibility of all members on site to ensure these services are kept in a clean and hygienic manner and this will be enforced by the principle contractor by;

- Ensuring that adequate health and hygiene measures are in place to prevent exposure to chemical or contaminated material.
- Provide one chemical toilet for every 15 people on site, or one flushing toilet for every 30 people, with hand washing facilities, soap, toilet paper, hand drying material and a disposable bin.
- Adequate and clean drinking water must be made available and eating areas must be free of potential hazards and nuisances.

25. Alcohol and other drugs

No alcohol and other drugs will be allowed on site. No person can be allowed on site while under the influence of alcohol and recreational drugs. Where possible measures to ensure persons entering the site are monitored to ensure the enforcement of this rule must be implemented to ensure holistic protection of health and safety of all member on and around the site.

26. Smoking

Smoking will be restricted to a designated smoking area. The smoking area will be ventilated and cigarette butts will be disposed of in a sand filled non-consumable container.

27. Auditing

Frequency of auditing by Principal Contractor health and safety representative will be conducted as per agreed upon with the Principle contractor but at least 1 audit per month. Not all audits will be announced. Audit report will be prepared and submitted to the principle contractor and Principal Contractor.

APPENDIX E: HIV/AIDS AWARENESS EDUCATION SPECIFICATION

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SANS 1921-6:2004

Edition 1

SOUTH AFRICAN NATIONAL STANDARD

Construction and management requirements for works contracts

Part 6: HIV/AIDS awareness

SANS 1921-6:2004

Edition 1

Table of changes

Change No.	Date	Scope

Acknowledgement

The SABS Standards Division wishes to acknowledge that this part of SANS 1921 is based on documentation prepared by the Construction Industry Development Board.

Foreword

This South African standard was approved by National Committee SABS TC 59, *Construction standards*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document is referenced in the Construction Industry Development Board Act, 2000 (Act No. 38, 2000).

SANS 1921 consists of the following parts, under the general title *Construction and management requirements for works contracts*:

Part 1: General engineering and construction works.

Part 2: Accommodation of traffic on public roads occupied by the contractor.

Part 3: Structural steelwork.

Part 4: Third-party management support in works contracts.

Part 5: Earthworks activities which are to be performed by hand.

Part 6: HIV/AIDS awareness.

Other parts: To be confirmed.

Annexes A and C form an integral part of this part of SANS 1921. Annex B is for information only.

**Reaffirmed and reprinted in December 2011.
This standard will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

Introduction

Research indicates that the South African construction industry has the third highest incidence of HIV/AIDS in South Africa. The construction sector has a predominantly migratory labour force, making it a prime contributor towards the spread of HIV/AIDS. Labour camps are a breeding ground for the spread of HIV/AIDS and sexually transmitted diseases (STDs). This situation is compounded where migrant workers on contract generally disregard, or are ignorant of, the consequences of casual sexual relationships.

The prevalence of subcontracting, the emergence of many small contractors and the tendency toward labour-only subcontracting increases the complexity of developing an effective HIV/AIDS strategy that targets the full spectrum of those employed in construction. This level of complexity places a special responsibility on clients, the professions and industry leaders.

The construction sector has the potential to play an important role in the country's inter-sectoral approach to coping with the epidemic. This sector also provides entry-level local jobs, which can be crucial to the survival of youth-headed households and extended families in areas hard hit by the epidemic. Construction sites can accordingly provide a convenient location for HIV/AIDS programmes to be presented to both construction workers and rural communities.

This part of SANS 1921 makes provision for the following four strategies to be implemented in engineering and construction works contracts:

1. Raising awareness of HIV/AIDS.
2. Ensuring that construction workers have access to condoms.
3. HIV/AIDS counselling, testing and referral services.
4. Sexually transmitted infection (STI) diagnosis and treatment.

These strategies are designed to build an HIV/AIDS resilient workforce as well as HIV/AIDS resilient communities associated with the workforce, i.e. communities that are able to draw on their own capacity to prevent further transmission of HIV/AIDS, minimize the impact of the HIV/AIDS epidemic, and talk about HIV/AIDS.

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Edition 1

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Construction and management requirements for works contracts

Part 6: **HIV/AIDS awareness**

1 Scope

This part of SANS 1921 contains requirements applicable to the reduction of the risk of transfer of HIV between and among construction workers and the local community through the following four strategies:

- a) raising awareness of HIV/AIDS;
- b) providing construction workers with access to condoms;
- c) HIV/AIDS counselling, testing and referral services; and
- d) sexually transmitted infection (STI) diagnosis and treatment.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of SANS 1921. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this part of SANS 1921 are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards can be obtained from Standards South Africa.

SANS 4074/ISO 4074, *Natural latex rubber condoms – Requirements and test methods*.

SANS 10403, *Formatting and compilation of construction procurement documents*.

3 Definitions and abbreviations

For the purposes of this part of SANS 1921, the definitions given in SANS 10403 and the following definitions and abbreviations apply:

3.1 Definitions

3.1.1

construction worker

person in the employ of the contractor or any of the subcontractors contracted by the contractor

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3.1.2

local community

community, local to the site, which is most likely to have contact with the construction workers and, in particular, sex workers in that community

3.1.3

service provider

natural or juristic person or partnership conducting HIV/AIDS awareness programmes

3.1.4

specification data

data, provisions and variations that make this part of SANS 1921 applicable to a particular contract (see annex A)

3.2 Abbreviations

AIDS – Acquired Immune Deficiency Syndrome

HIV – Human Immunodeficiency Virus

STD – sexually transmitted disease

STI – sexually transmitted infection

4 Requirements

4.1 General requirements

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

- a) 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;
- b) either placing and maintaining HIV/AIDS awareness posters of size not less than A1 in areas which are highly trafficked by construction workers, or providing construction workers with a pamphlet, in the languages largely understood by the construction workers, which reinforces the outcomes of the HIV/AIDS awareness programme stated in 4.2.3;
- c) encouraging voluntary HIV/STI testing;
- d) providing information concerning counselling, support and care of those that are infected; and
- e) complying with the requirements of 4.2.

NOTE Annex B provides guidance on how the pricing data may be formulated to remunerate contractors for complying with the aforementioned requirements.

4.2 HIV/AIDS awareness programme

4.2.1 The contractor shall

- a) engage a qualified service provider as described in the specification data (see annex A) to conduct an HIV/AIDS awareness programme which is structured to achieve the outcomes stated in 4.2.3 for contract workers as soon as a construction workers' camp is established and populated or, where no such camp is established, within two weeks of the commencement of a significant portion of the works and at subsequent intervals, if any, provided for in the specification data; and
- b) arrange for, provide a suitable venue, and instruct all construction workers to attend the HIV/AIDS awareness programme and notify the employer of the date, time and venue whenever a session with construction workers is conducted.

4.2.2 The contractor shall do nothing to dissuade construction workers from attending such an HIV/AIDS awareness programme and shall take all reasonable steps to ensure that a minimum of 90 % of construction workers engaged in the works attend such a programme, when it is conducted.

4.2.3 The outcomes of the HIV/AIDS awareness programme shall, as a minimum, result in contract workers exposed to such a programme being able to

- a) communicate the existence of the problem of HIV/AIDS and be able to outline the consequences of transmission of HIV to or from the local community; and
- b) recall and communicate the modes of HIV transmission and preventative measures including the proper use of the condom.

4.3 Reporting

4.3.1 The contractor shall prepare and attach to his claims for payment a compliance report which outlines how the actions taken by the contractor in the period for which payment is claimed comply with the requirements, and a schedule which lists the names, identity numbers, trade/occupation and the name of the employer of all the construction workers exposed to the programme (see annex C).

4.3.2 The employer shall certify the report and schedule described in 4.3.1 whenever a claim for payment is issued to the employer.

NOTE In the event that the contractor fails to comply with the requirements of 4.3, the employer may apply any of the sanctions provided for in the contract. Sanctions may include the application of a financial penalty.

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Annex A
(normative)

**Preparation of specification data associated
with this part of SANS 1921 for inclusion in the scope of work**

Specification data form an essential part of this part of SANS 1921; without such data, the requirements are incomplete.

The format for the specification data has been developed to be compatible with the requirements in table D.1 of SANS 10403:2003. The specification data shall be incorporated in the scope of work as shown in table A.1.

**Table A.1 — Incorporating this part of SANS 1921 in the
scope of work associated with a project**

1	2	3				
TOPIC	ASPECT	COMMENTARY				
DESCRIPTION OF THE WORKS						
MANAGEMENT						
Management of the works	Applicable part(s) of SANS 1921	The following parts of SANS 1921 and associated specification data are applicable: 1) SANS 1921..... 2) SANS 1921..... The associated specification data are as follows: <table><tr><td rowspan="3">Specification data pertaining to SANS 1921...</td><td>Essential data: The requirements for are The requirements for are</td></tr><tr><td>Variations: 1)..... 2).....</td></tr><tr><td>Additional clauses: 1).....</td></tr></table>	Specification data pertaining to SANS 1921...	Essential data: The requirements for are The requirements for are	Variations: 1)..... 2).....	Additional clauses: 1).....
	Specification data pertaining to SANS 1921...	Essential data: The requirements for are The requirements for are				
Variations: 1)..... 2).....						
Additional clauses: 1).....						
Particular/Generic specifications						

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Develop the specification data based on the contents of table A.2.

Table A.2 — Specification data associated with this part of SANS 1921

1	2	3
Specification data associated with this part of SANS 1921	Guidance notes	
	Clause number	Consideration
Essential data		
A qualified service provider is a service provider that is accredited by / appears on the list of recognized service providers published by The contact particulars of qualified service providers are as follows: <u>Name</u> <u>Tel.</u> <u>Fax</u> <u>Email</u>	4.2.1(a)	Establish what constitutes a qualified service provider, e.g. recognition by the South African Department of Health as a specialist.
The HIV/AIDS awareness programme is to be repeated at four-month intervals throughout the duration of the contract. (Four times in total, including the initial one at the start of the contract.)	4.2.1(a)	State the intervals at which the HIV/AIDS awareness programme is to be conducted.
Variations		
The HIV/AIDS awareness programme described in 4.2 shall, in addition, be conducted for the benefit of the local community on two occasions in the community centre. The contractor shall be responsible for inviting identifiable community-based institutions and organizations, churches and schools to participate in the programme.		State variations, if any. Consider extending the HIV/AIDS awareness programme to the local community.
Additional clauses		
1 2		State additional requirements.

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Annex B
(informative)

The formulation of pricing data

The HIV/AIDS awareness requirements contained in this part of SANS 1921 can be priced in a number of ways. They can be deemed to be included in the sum tendered for contractual requirements and not be separately identified. Alternatively, they can be identified as a separate item/activity and be included in the bills of quantities or in activity schedules as a single item or a group of items as shown in table B.1.

Table B.1 — Sample bill of quantities

1	2	3	4	5
Item	Description	Unit	Rate	Amount
1	Conduct HIV/AIDS Awareness Programme on site for not less than 90 % of the workers inclusive of all direct and indirect costs	number		
2	Provide and maintain condom dispenser	number/sum		
3	Provide and maintain HIV/AIDS awareness posters	number		
4	Provide information regarding the voluntary testing of construction workers, and counselling, support and care	sum		

Some sponsors require that a percentage of the contract price be spent on activities relating to HIV/AIDS awareness. In such cases, it is recommended that a provisional sum be provided in the bill of quantities.

Annex C
(normative)

Compliance report

Contract number:

Payment claim number:

Period covered by payment claim:

1 Distribution of condoms (briefly describe where and how condoms are distributed)			
2 Posters/pamphlets (briefly describe where posters are placed/how pamphlets are distributed)			
3 Voluntary HIV/STI testing (briefly describe the actions taken/information provided to promote testing)			
4 Counselling, support and care (summarize information provided)			
5 HIV/AIDS awareness programme (briefly describe action)			
6 Schedule of construction workers exposed to the HIV/AIDS awareness programme			
Name	Identity number	Trade/occupation	Name of employer
I hereby declare the above to be a true reflection of the actions taken to ensure compliance with SANS 1921-6			
Contractor: Name: Signature: Date:		Employer: Name: Signature: Date:	

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The SABS continuously strives to improve the quality of its products and services and would therefore be grateful if anyone finding an inaccuracy or ambiguity while using this standard would inform the secretary of the technical committee responsible, the identity of which can be found in the foreword.

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Details and advice can be obtained from the Senior Manager.

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APPENDIX F: BASELINE RISK ASSESSMENT

BASELINE RISK ASSESSMENT AND MANAGEMENT

1.0 PURPOSE

- To identify, assess, record, control and review hazards and risks in the workplace to protect employees and other persons, e.g. customers, sub-contractors and the general public, who may be affected by an unsafe working environment.
- To ensure consultation with employees takes place during the Risk Assessment and Management process.
- To minimize the risk of injury or illness, or damage to property.
- To promote the guidelines set forth in this Procedure as a means of achieving continuous improvement in overall OHS performance.
- To meet or exceed regulatory authority requirements throughout the main contractor operations.

2.0 DEFINITIONS

- **Hazard:** A situation that has the potential to cause harm to people and/or damage to property and/or harm to the environment. Hazards may be associated with substances, machines, processes, methods of work or the work environment itself.
- **Risk:** The probability and consequence of a hazard resulting in injury, illness or damage. In other words, the result of being exposed to the hazard (i.e. the dog is the hazard, when being exposed to the dog the risk will be to sustain a wound as a result of a dog bite).

The level of risk increases with the **severity** of the hazard and the **duration** and **frequency** of exposure to the hazard.

- **Risk Assessment and Management Process:** A **five step** process for evaluating the degree of risk to people, property, and environment from work activities:
 1. **Identify** the hazard
 2. **Assess** the risk associated with the hazard
 3. **Control** the risk
 4. **Record** findings and **implement** them, and
 5. **Review** the process
- **Risk Assessment:** The process of evaluating the probability and consequence of injury, illness or damage arising from exposure to an identified hazard or hazards.
- **Risk Control:** The means or process to eliminate or minimize the risks.
- **Safety:** A state in which the risk of harm to people or damage is limited to an acceptable level.
- **Likelihood (chance per unit time (usually per year) – history):**
 - exposure - how often and how long employees are exposed to a hazard
 - probability – the chance that a certain event will occur resulting in harm, damage or injury (consider the past history over the last 5 years).
- **Consequence/severity:** the results provided if the potential for loss is realized.
- **Reasonably practicable includes:**
 - The severity and scope of the hazard or risk concerned
 - The state of knowledge reasonably available concerning the hazard or risk and of any means of removing or mitigating that hazard or risk
 - The availability and suitability of means to remove or mitigate that hazard or risk
 - The cost of removing or mitigating that hazard or risk in relation to the benefits derived there from.

3.0 RESPONSIBILITIES

3.1 OHS Manager

- Assist managing directors, contracts managers and supervisors with implementation of Risk Assessment and Management procedures.
- Provide education, training and advice as required for employees involved in carrying out Risk Assessment and Management.

3.2 Senior Managers (i.e. Contracts Manager,)

- To minimize the risk of injuries and incidents in the workplace by promoting a sense of ownership and involvement in the safety system by all employees and contractors.
- Introduce Risk Assessment and Management procedures that will ensure that all workplace hazards and risks have been properly:
 - identified and recorded
 - assessed
 - controlled
 - record and implement
 - reviewed
- Ensure that managers and supervisors are trained in Risk Assessment and Management procedures and how to apply the process. Ensure that contractors and subcontractors carrying out work for or on behalf of The main contractor will utilize the Risk Assessment methodology and controls to the same standard as described in this procedure.

3.3 Managers and Supervisors

- Demonstrate commitment to the Risk Assessment and Management process.
- Implement and communicate Risk Assessment and Management procedures in their areas of responsibility.
- Ensure employees are involved in the Risk Assessment and Management process.

3.4 Employees

- To always work safely and report existing or potential hazards immediately to their managers and supervisors.
- Provide input to hazard identification, risk assessment and control procedures as required.
- To comply and adhere to the final actions plans as communicated by managers and supervisors.

4.0 STEPS OF RISK ASSESSMENT AND MANAGEMENT

Risk Assessment and Management is a systematic process for evaluating the degree of risk to people, property and the environment while conducting work activities. The steps are as follows (in this order):

4.1 Hazard Identification

This involves identifying potential hazards through analysis of the workplace with regards to policies, procedures, incidents and near hit records, a review of hazard registration documents, equipment used, periodic inspections and checks, benchmarking, and a review of applicable national and local regulatory standards. The method for conducting Hazard Identification can be found in Section 5.

4.2 Risk Assessment

This step involves assessing and prioritizing the risks identified in the hazard identification process. The approach for conducting risk assessment is discussed in Section 6.

4.3 Risk Control

When determining methods for controlling risk, there is a hierarchy of measures to control OHS hazards. This hierarchy is based on the principle that greater long-term benefits are gained from controlling hazards at their source. Risk Control methods are defined in Section 7.

4.4 Recording and implementation of Risk findings

This entails the documented proof that the process have been successfully finalized and incorporated in all areas of the business. These documents are very important and could be used in Labour Court cases in future if needed. Keep records on file to be accessible to all managers, supervisors, employees and auditors for future reference. Details of recording and implementation of Risk findings are available in Section 8.

4.5 Communication to all employees

The top hazards and related preventative measures (action plans) must be summarized and communicated to all employees this can be done in the format of a toolbox talk (see Toolbox talk – Risk Assessment and Management).

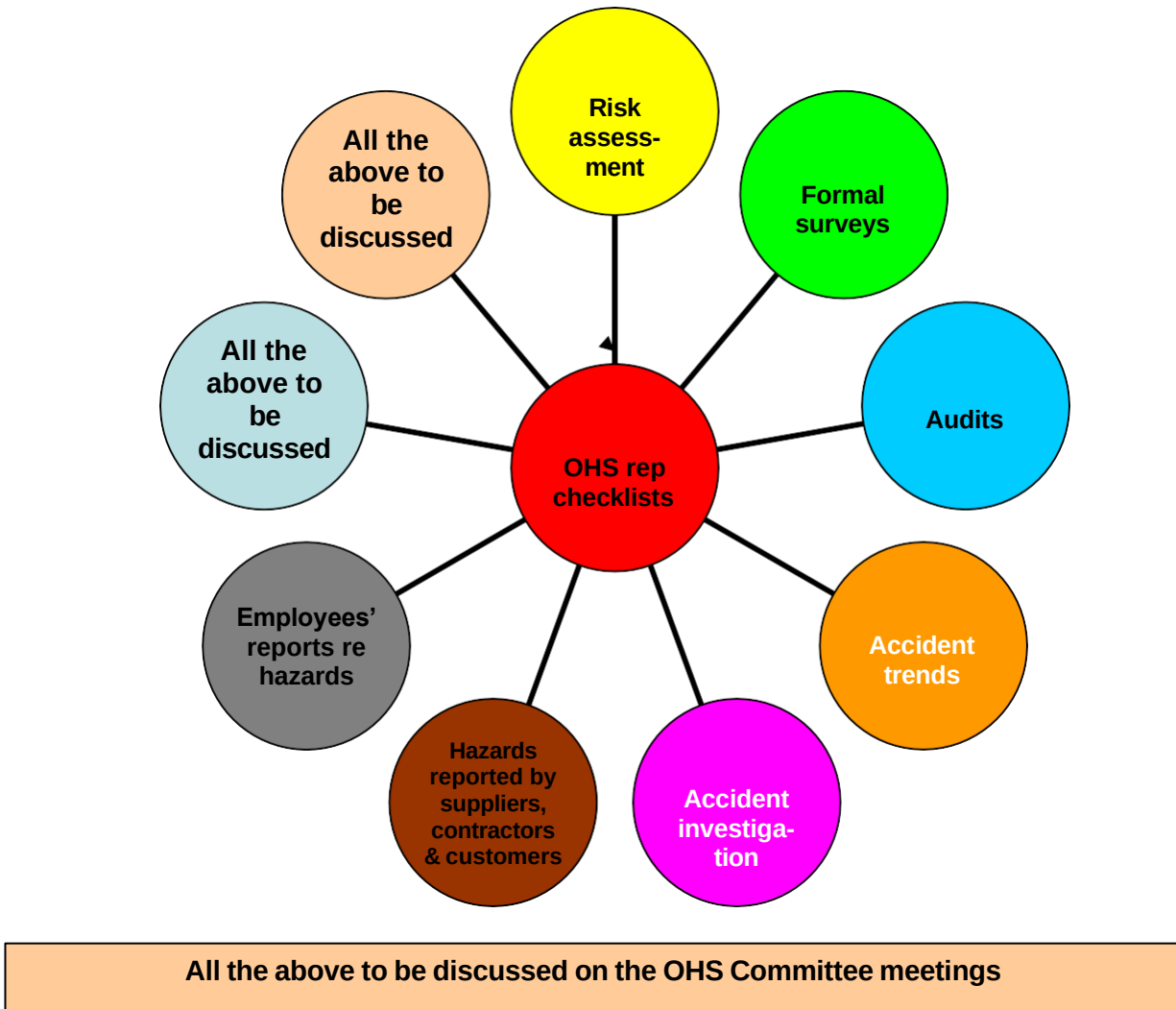
4.6 Risk Management Review

This ensures that hazard management procedures, which have been implemented, are effectively controlling workplace risks. Risk Review methods can be found in Section 9.

5.0 REQUIREMENTS FOR IDENTIFYING HAZARDS

5.1 The different methods of hazard identification. See details demonstrated in Figure 1 below.

Figure 1. Different methods of hazard Identification.



5.1.1 Assemble all information needed over the last financial year, documentation requirements include for example:

- Legislation requirements,
- Accident trends
- Near hits
- Policies and Procedures
- Tasks
- OHS representatives checklists (hazards/non-compliances identified)
- Audit reports (relevant and recent i.e. last 3 months)
- Management self-audits

- External surveys
- Job safety analysis
- Material Safety Data Sheets (MSDS's),

5.1.2 List all equipment used in the area on a separate page.

- List all tasks performed using the identified equipment
- List all the hazards related to each task, i.e. physical, equipment, chemical substances and reaction, ergonomic aspects, environmental aspects, biological aspects and psychological aspects (Stressors).
- There can be several hazards posed by one task.

5.2 Methods for Identifying Hazards

- *Analysis of workplace incident and near hit records:* Workplace incident/injury/illness and workers compensation records should be examined to identify where and in what jobs and areas injuries have occurred. These statistics can be analyzed to alert the business to the presence of hazards.

Indicators to consider include:

- area of workplace where the incident occurred
 - occupation or job/task of the injured person
 - part of the body injured, e.g. back, neck, leg, etc.
 - nature of injury/illness, e.g. strain, laceration, fracture, chemical exposure
 - type of incident, e.g. slip/trip/fall, motor vehicle accident, shooting accident, dog bites, etc.
 - analysis of frequency and severity of incidents including cost for the organization
- *Analyse Policies and Procedures:* and identify all the related hazards and risks for each policy/procedure taking in consideration the newly developed ones.
 - *Consultation with employees:* this is a legal requirement. In many jurisdictions this is a legal requirement and feedback from employees can often provide valuable information about hazards, because employees have hands-on experience in their work area and are likely to be aware of the hazards of injuries associated with their jobs.

Employees may be able to indicate tasks, movements or associated activities, which are particularly dangerous, fatiguing, strenuous or present exposure to contaminants, noise or other extreme conditions.

- *Direct observation or inspection of the task or work area:* The direct observation of work areas and tasks being performed will assist in identifying hazards relevant to the specific business and industry, e.g.:
 - occupation or job/task of the injured person
 - workplace safety inspections
 - audits
 - walk-through surveys
 - Checklists can be an asset in the identification of hazards and can be used for all these observation and audit activities. Examples include but are not limited to OHS representative checks, Site Safety Inspection checklists, ladder checks, portable electrical equipment/hand tools checks, vehicles checks, generator checks, etc. See Attachment 2, for an example of a Hazard Identification Checklist.
 - Near hit reports can be used by employees to record hazards that they identify relating to safety, the environment or potential damage. These reports can also be used to make recommendations for corrective actions.
- *Reviewing other documents:* For example, Material Safety Data Sheets (MSDS) or chemical container labels for listed hazards.

- **Benchmarking:** Review of hazards identified at similar workplaces inside or outside of the business.
- **Review Standards:** Check Acts, Regulations, Codes of Practice, National Standards, Hazard Alerts, recommended Standards for requirements and methods to identify and control hazards, etc.

5.3 Recording Hazards

All identified hazards and related risks must be identified and recorded. Use the OHS - Job Safety Analysis Worksheet to record the information in the first 3 columns. This form can also be used as a Hazard Register and should be reviewed and updated regularly to ensure the information remains current.

Remember, one hazard can have more than one risks. Always start to list the different hazards and related risks of work policies and procedures and accident trends then follow the routes as mentioned in sections 5.1.1 and 5.1.2.

6.0 REQUIREMENTS OF RISK ASSESSMENT

6.1 Evaluation and Assessment

- This process is about gathering information and making decisions regarding hazards and risks that has been identified and recorded as discussed in section 5.3.
- It is important to consult with a cross section of employees, most importantly from those who will be affected by the decisions, about controlling the risk. It is also a legal requirement in many jurisdictions.
- Factors that should be considered during the risk assessment process can be found in the Risk Assessment.
- When assessing a risk, the worst-case scenario should always be taken into account. Don't ever say it cannot happen. Worst-case scenario refers also to "within reasonable limits".

6.2 Process Management & Review

To enable supervisors and employees to effectively manage the risk assessment process a basic Risk Assessment Process Checklist has been prepared. Using this checklist will help to ensure that all steps are considered and that relevant people who will be involved in risk assessment are identified and trained. Regular review of the risk assessment process should take place during audits.

6.3 Calculating and recording Risk Assessments

- **The Risk Assessment Matrix (Attachment 3):** This is a model that considers likelihood/probability and consequence/severity of the risk. The rating of the risk is determined from the point where these two factors meet in the matrix.

Measure each hazards and related risk against Attachment 3 by asking the following questions:

Did the risk happen in the past year? If yes, then ask how often? Consult the accident trends over the last year. Use the likelihood/probability legend (section 1) to determine the answer on Attachment 3 (p1 of 2). If it never happened, still choose A.

If it happens, what was the outcome of the risk or what could have been the outcome (worst case scenario)? Use the consequence/severity legend - section 2 on the Risk Assessment Matrix (1) form to determine the answer (Attachment 3 page 1 of 2).

Proceed to page 2 of 2 of Attachment 3 and plot the answers. Where the blocks come together, is the rating of the risk. Record this value on the OHS - Job Safety Analysis Worksheet (Attachment 4) under the Risk Rating column next to the relevant risk. For example, if the answer in the first question was **B** and in the second question was **3**, your answer in the Risk Assessment Matrix (2) form (Attachment 3 page 2 of 2) will be 17 – that is where the **B** and **3** meets.

- Complete the Risk Ratings for **all** the risks before you proceed to complete the Priority rating sections. The risk with the highest Risk Rating will be rated as 1 in the Priority rating column and the values will be rated down in sequence. Risks with the same values will have the same rating. Hazards with the highest priority rating will need urgent attention. As discussed under the first bullet of section 6.3, priorities are determined based on consideration of:

- the likelihood that the risk will cause injury or damage,
 - the consequences of the injury or damage, and
 - the degree of exposure to the risk.
- **Job Safety Analysis:** The Job Safety Analysis process assists with the identification, assessment and control of risk. The employees who will be carrying out the task(s) should be consulted and is best done as a team exercise. See the OHS - Job Safety Analysis Worksheet (Attachment 4). Page 1 of 14 explains this process in detail and pages 2 & 3 of 14 must be used as the master copies to do your Risk Assessment and Management exercise. You can use page 3 to generate enough copies for your needs. The exercise must be done electronically.

7.0 REQUIREMENTS OF RISK CONTROL MEASURES

There is a hierarchy of measures to control OHS hazards, which is based on the principle that greater long-term benefits are gained from controlling hazards at their source.

The aim of any risk control is to preferably eliminate or reduce the risk of exposure of employees to hazards in the workplace. If elimination is not possible, then reduction of the risk to an acceptable level is the alternative. In many situations the best result will be achieved by the application of several measures or controls, not just one.

The hierarchy includes the following methods of control, with preference being given in order from the top down:

- Elimination (1st)
- Substitution (2nd)
- Engineering (3rd)
- Administration (4th)
- Personal Protective Equipment (PPE) (last)

7.1 **Elimination**

Elimination of the hazard at the source should always be given first consideration. Should it be found that elimination is not possible, substitution is the next option. The following are examples of elimination controls used to reduce risk of exposure to hazards:

- Asbestos brake linings are no longer used in the majority of motor vehicles.
- Technical – mount equipment lower where practical and possible to avoid working at heights.
- Operations – keep out of no-go or high risk areas as identified with initial assessment.
- OHS implications of materials, new machines or processes are considered prior to purchase and a decision made not to proceed if the OHS risks are determined to be too high and would need high cost control measures at a later stage.

7.2 **Substitution**

If a hazard cannot be eliminated, a less harmful alternative should be sought. This can be done through substitution of a material, substance or a process.

Some examples of substitution are as follows:

- In the case of a chemical, a less or non-toxic equivalent should be used (i.e. lead solder replaced with lead-free solder).
- Receipt and dispatch of raw materials can be simplified by arranging bulk supply or by repackaging to make transport easier and safer (i.e. lighter packages reduce ergonomic impact when carried/transported).
- An alternative method of collecting waste materials from the process.
- Vacuuming instead of sweeping creates less dust.
- Introducing non-flammable solvents in place of flammable.
- Chemicals in pellet or paste form instead of dusty powders.

- Replacing a 4-branch base typists chair with a more stable 5-branch base.

7.3 Segregation / Isolation

If a substitution cannot be accomplished, an attempt to segregate or isolate the hazard should be made. Segregation, also known as isolation, ensures that employees are removed from areas of exposure whenever possible. This can be achieved by:

- enclosing the process, i.e. placing noisy equipment in an acoustic enclosure,
- Close area being painted from the rest of the building to protect other employees from paint fumes (while ensuring the paint area still well ventilated).

7.4 Engineering

If the hazard cannot be eliminated at the design stage the next best method is to control the risk through engineering controls. Some examples of engineering controls are as follows:

- modification of tools and equipment as prescribed by manufacturers and within legal limits,
- automation,
- machine guarding,
- extraction ventilation to remove fumes or dusts, i.e. spray painting in workshops,
- installation of trolleys, hoists, mobile cranes, or gantry cranes to eliminate material handling.

7.5 Administrative

Introduction of work practices that reduce risk is another method of control, known as administrative control. Some examples are as follows:

- reducing the number employees exposed
- limit exposure time
- provision of Standard Operating Procedures and/or Safe Working Procedures
- awareness and training of employees
- monitoring the work environment
- OHS representative inspections
- Checklists (i.e. ladders, vehicles, generators, hand tools & equipment, generators, etc.)
- audits
- health surveillance
- job rotation
- permits to work where required (i.e. hot work; confined space entry)
- maintenance
- housekeeping
- safe stacking and storage
- safe disposal as per legal requirement
- environmental monitoring

7.6 Personal Protection

Controlling exposures through the use of personal protective equipment (PPE) should be used as a last resort.

PPE and clothing should only be used for short-term Risk Assessment and Management or emergency procedures or additional protection when other risk control measures do not provide sufficient exposure control.

Where this strategy has to be adopted the following should apply. Ensure that the PPE or equivalent is issued under these conditions:

- appropriate for the job
- complies with Standards issued by local Standards Institutes (i.e. SABS/SANS – South African Bureau of Standards)
- fits the operator correctly
- training is provided in its need and use
- equipment is clean and maintained

Once the assessment process has been concluded and the appropriate control measures implemented the effectiveness of the controls needs to be monitored and reviewed.

7.7 Documentation

The risk control measures for each risk must be recorded under the Risk Control Measure column of the OHS - Job Safety Analysis Worksheet (Attachment 4). The recommended controls must be effective and current and do not cause a secondary risk. Regular review is needed to ensure risk controls are implemented as indicated by the responsible person at the due date.

8.0 REQUIREMENTS OF RECORDING AND IMPLEMENTATION OF RISK FINDINGS

- The implementation of the results of your risk assessment and relevant control measures into practice will benefit your employees and your business, by reducing the risk of injury to our employees and damage to the environment and property.
- Record the results of your risk assessment, and share them with your employees. Keep it simple, for example:
 - 'Tripping over rubbish: bins provided, staff trained, weekly housekeeping checks
- A risk assessment must be suitable and sufficient. You need to be able to show that:
 - a proper check was made;
 - you asked who might be affected;
 - you dealt with all the significant hazards, taking into account the number of people who could be involved;
 - the precautions are reasonable, and the remaining risk is low; and
 - staff or their representatives were involved in the process.
- Complete the form as follows:
 - Due date will be based on the time lines of the Risk Scores for Action (See Attachment 3, Risk Assessment Matrix, section 3).
- Compile a plan of action to deal with the top 10-15 priorities first taking in consideration the proposed risk control measures. A good plan of action often includes a mixture of different things such as:
 - easy and practical improvements that can be done quickly, perhaps as a temporary solution until more liable controls are in place;
 - long-term solutions to those risks most likely to cause accidents or ill health;
 - long-term solutions to those risks with the worst potential consequences;
 - arrangements for training employees on the main risks that remain and how they are to be controlled;
 - regular checks to make sure that the control measures stay in place; and
 - clear responsibilities – who will lead on what action, and by when.
- Remember, prioritise and address the most important hazards first.
- The top 10-15 hazards and risks with their relevant risk control measures must be communicated (i.e. tool box talks, meetings, etc.) to all employees by the managers and supervisors. Written proof (i.e. training records **with** employee signatures, tool box talks, etc.) of communications must be kept on file.

9.0 REQUIREMENTS OF RISK MANAGEMENT REVIEW

The following factors should be considered during a risk management review:

- Changes in legislation or national standards.
- Accident trends.
- Input from employees, environment, OHS committees and OHS personnel are sought.
- Hygiene monitoring reports are ordered where required to ensure controls are maintaining workplace exposures below legislated exposure standards (i.e. surveys on lighting, ventilation, noise, ergonomics, etc.).
- Relevant reports from health surveillance are checked to ensure there are no indications of adverse health effects from workplace exposures.
- Site safety inspections, OHS representative inspections reports, audit reports, minutes of OHS committee meetings are reviewed to identify reported non-conformances.
- Regulatory requirements are checked to identify changes to exposure standards or new/amended Acts/Regulations/Codes of Practice that impose different compliance standards.
- Organizational changes are assessed to consider the impact on hazard management responsibilities and possible training needs, e.g. different skill or knowledge levels.
- Work environment due to new facilities, new contracts or relocations.
- The impact of new job methods, job processes, job conditions, products, services, equipment, processes, systems, work practices and materials/substances is assessed to ensure that appropriate controls were implemented at the time of introduction to the workplace.

10.0 SUMMARY OF RISK ASSESSMENT AND MANAGEMENT PROCESS

A Risk Assessment and Management process should be carried out on all work activities or tasks where a potential risk to the safety and health of employees has been identified and/or where there is a potential for causing property or environmental damage.

Work Team:

Regular reviews should take place to monitor compliance with the risk controls measures documented in the Risk Assessment and Management document.

The role of OHS personnel in the Risk Assessment and Management process is in a training or advisory capacity.

Generally, a Risk Assessment and Management process should be carried out by involving the employee/s who carries out the task. The reason for employee input into this process is to utilize their job knowledge and experience and to gain commitment to follow the risk control measures through their involvement.

10.1 Guideline in the Risk Assessment and Management process

- *Step 1 – Assemble relevant information.* Assemble all information needed over the last financial year (accident and near hit trends, procedures and tasks, OHS representative reports on hazards/non-compliances identified, audits, management self-audits, external surveys, etc.) as discussed in section 5.
- *Step 2 - Break the job down into separate tasks or steps.* Record the title each task, procedure, equipment, chemical used, exposures, etc. and the steps that are hazardous in column 1 of the OHS – Job Safety Analysis Worksheet. No safety procedures are recorded at this stage.
- *Step 3 - Identify the hazards.* Once each hazardous step of the job has been identified consider the hazards for each step. There may be more than one hazard for each step so all must be listed in column 2 of the OHS – Job Safety Analysis Worksheet.

- *Step 4 – Identify the risks.* List the related risks for each hazard in column 3. Each hazard might have more than one risk.
- *Step 5 - Risk Rating.* Do the probability/likelihood and consequence/severity rating and use the Risk Assessment Matrix 1 and 2 (Attachment 3) as described in section 6.3. The risk score is entered in column 4 of the OHS – Job Safety Analysis Worksheet (see Attachment 4). It should be stressed that this column is used to assess the risks **BEFORE** the controls have been selected.
- *Step 6 – Priority Rating.* Do the priority rating only after **all** the hazards and risks have been rated (as above). The Risk Rating with the highest Risk Rating will be rated as 1 in the Priority Rating column 5 (of OHS – Job Safety Analysis Worksheet) and the values will be rated down in sequence. Risk Ratings with the same values will have the same rating. Hazards with the highest priority rating will need urgent attention.
- *Step 7 - Risk Control Measures.* After completing the Risk Rating, suitable controls should be selected for each hazard to reduce the risk of injury or damage. Consideration must be given to the hierarchy of controls so that the highest level of protection is made available wherever possible as described in section 7. The controls are entered in column 6 of the OHS – Job Safety Analysis Worksheet (see Attachment 4 for examples).
- *Step 8 – Delegate duty.* Indicate in column 7 of the OHS – Job Safety Analysis Worksheet (see Attachment 4 for examples) who the responsible person/s is.
- *Step 9 – Indicate frequency/due date.* The Due date will be based on the time lines as indicated on the Risk Assessment Matrix (1) section 3: Risk Scores for Action (See Attachment 3). Record the Due Date in the last column of the OHS – Job Safety Analysis Worksheet (Attachment 4).
- *Step 10 – Identify the top 10-15 risks.* OHS – Job Safety Analysis Worksheet (see Attachment 4 for examples) who the responsible person/s is.
- *Step 11 – Communication.* The top 10-15 hazards/risks and relevant Risk Control Measures must be communicate to all staff. See section 10.4 for more information. Communicate and train the supervisors in order for them to communicate and train the employees. Induction of new employees into each department should also include the top hazards and risks with the relevant risk control measures.
- *Step 12 – Review.* The Risk Assessment and Management process must be formally reviewed. In the interim the OHS – Job Safety Analysis Worksheet must be update on changes of relevance. See section 9 for more information.

10.2 Documentation

- *OHS – Job Safety Analysis Worksheet.* This is the document that must be used to records the Risk Assessment and Management process (Attachment 4).
- *Acknowledgement Sheet.* See Attachment 6. The Sheet is used to record the names and signatures of all the people who will be working with the OHS – Job Safety Analysis Worksheet on the job. They acknowledge that they have read and understood the hazards and related risks and those they will comply with the controls listed. All contractors who might be required to work with The main contractor on the job are also required to sign.
- *Storage.* Copies of the OHS - Job Safety Analysis Worksheet should be kept at:
 - job location for reference (for the duration of the job)
 - project/site office
 - vehicles
 - with other OHS related information in a central file held at the business location.

10.3 Potential Problems to consider

It is important to note there are several significant pitfalls in developing a OHS - Job Safety Analysis Worksheet that can prevent the process from being as effective as it might otherwise be. They are:

- not listing all the steps of the task
- not identifying all the hazards of each step
- not accurately assessing all the risks of the hazards identified

- not making reference to the hierarchy of controls when making the selection of controls for all the hazards
- over-reliance on administrative controls (i.e. procedures to be followed, training, job rotation, etc.) or PPE to manage risk
- omitting to select appropriate controls for all the hazards identified hence achieving very little reduction in risk
- omitting to review the OHS - Job Safety Analysis Worksheet for residual risk or new risks
- not monitoring compliance with the Risk Controls Measures on the job

10.4 *Communication*

Effective development and application of Risk Assessment and Management process is dependant on good communication. The following situations provide opportunities for communication:

- Prior to the commencement of work on new jobs, projects or processes, a safety planning meeting shall be held with all employee's involved in the job/project/process to discuss the top hazards/risks and relevant risk control measures required for the job.
- During induction of new employees into the job/project/process, they shall be inducted into the top hazards/risks and relevant risk control measures required for the process and sign off to acknowledge understanding of the safety requirements.
- When OHS - Job Safety Analysis Worksheet is revised or additional ones developed for new hazards, communication sessions must be held with all employees and contractors working on the job so they understand the revised requirements.

11.0 **REFERENCE DOCUMENTS**

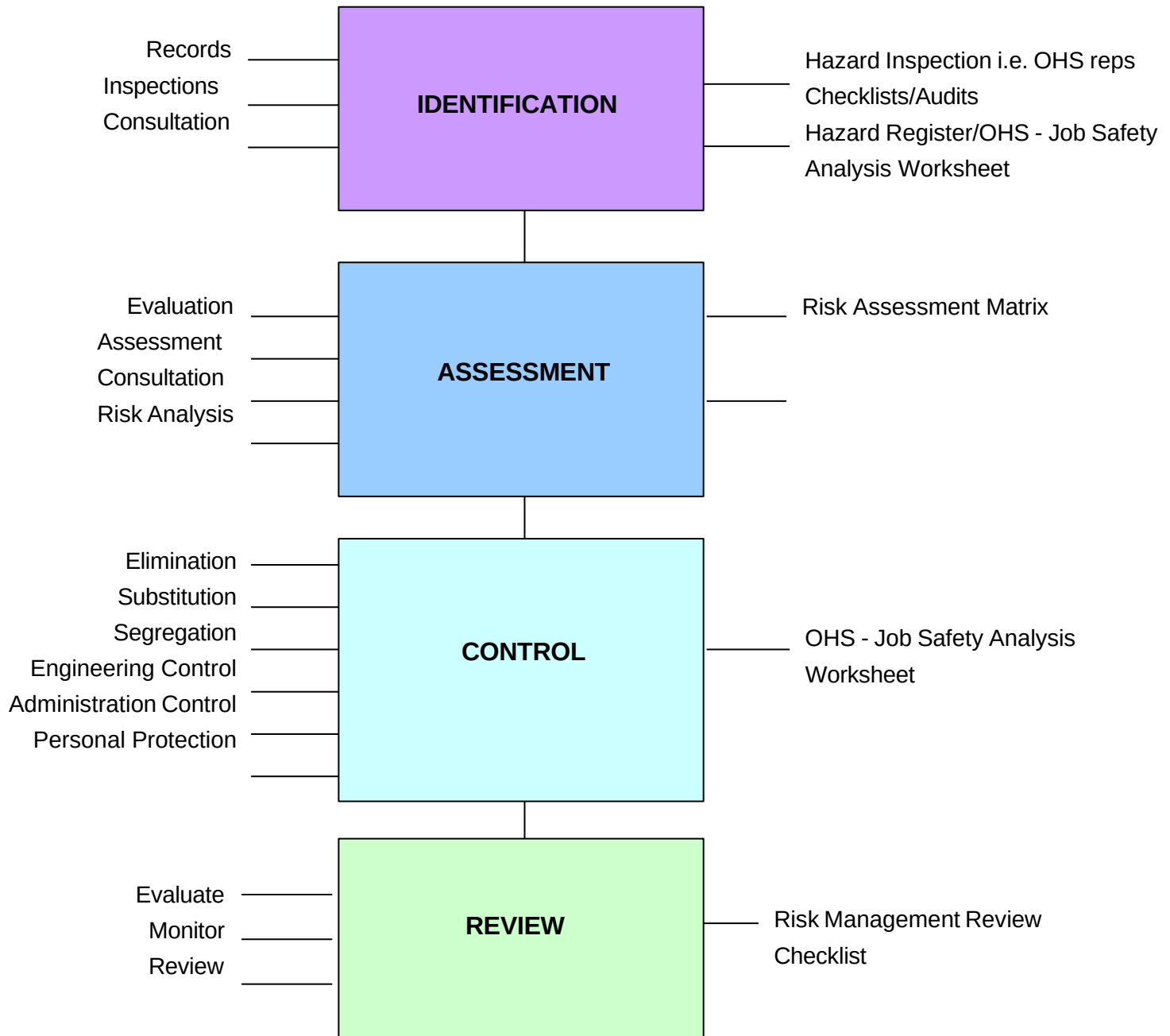
Document Title
Occupational Health and Safety Act, no 85 of 1993 and related regulations.
Toolbox talk - Risk Assessment and Management.

12.0 **RECORDS/FORM**

RISK ASSESSMENT AND MANAGEMENT FLOW CHART

Methodology

Documentation



RISK ASSESSMENT PROCESS CHECK LIST			
Work Area:	OR TAMBO DISTRICT MUNICIPALITY		
Date Prepared:	26 MAY 2025		
Person/s Responsible:	EMPLOYER AGENT (CHSA)		
Action Taken	Yes	No	
A competent person at an appropriate management level has been appointed to take overall responsibility for the risk assessment process	Yes		
Employees are involved in the risk assessment process	Yes		
Where necessary specialist assistance is involved e.g. Regional H&S Managers	Yes		
People who will carry out risk assessment activities have been trained to the required level of competence	Yes		
Appropriate risk assessment models have been selected given the businesses' needs, available resources, types of hazards, client requirements and degree of risk involved	Yes		
All relevant information (such as hazard identification documentation) has been considered in undertaking risk assessments	Yes		
The likelihood of injury, harm or damage occurring as a result of every hazard identified has been evaluated	Yes		
The severity of potential injury, harm or damage from every hazard has been evaluated	Yes		
The degree of exposure has been considered e.g. the number of people exposed; the frequency and duration of exposure	Yes		
Priorities (risk ratings) for risk control have been assigned, based on the likelihood and severity (and exposure if the Risk Assessment Calculator is used) conclusions	Yes		
Appropriate controls have been selected taking into account the risk rating and the hierarchy of controls	Yes		
Based on the priorities (risk ratings), time scales have been outlined within which risk controls must be implemented	Yes		
Deadlines have been set for review of individual risk assessments	Yes		
All relevant risk assessment documentation has been recorded and appropriately filed (e.g. risk assessment models; assessors; relevant tests)	Yes		
Appropriate information on the results of the risk assessment process has been communicated internally to employees and contractors	Yes		
Information has been communicated externally where necessary (e.g. clients; emergency services)	Yes		

HAZARD IDENTIFICATION CHECKLIST IN PREPARATION FOR RISK ASSESSMENT AND MANAGEMENT		
Work Area:	OR TAMBO DISTRICT MUNICIPALITY	
Date Prepared:	26 MAY 2025	
Person Responsible:	EMPLOYER AGENT (CHSA)	
Included in Risk assessment?	YES	NO
1. Incident/Accident & near hit reports have been reviewed to identify trends Comments: considerations regarding trends were made not only with reference to previous stats but also to employee observations of deviations observed on previous projects.	Yes	
2. Working environment has been assessed e.g. confined spaces; restricted space to work; trip hazards from hazardous housekeeping; traffic/pedestrians in the area; presence of asbestos Comments: General topics like housekeeping, traffic etc. have been included but the risk assessor on site will be required to update the RA once other hazards have been identified.	Yes	
3. Physical hazards have been considered e.g. heat; cold; noise; vibration Comments: Most of the general Physical Hazards have been identified and corrective measures implemented. However it will be the site appointed Risk Assessors responsibility to update and adjust the RA accordingly	Yes	
4. Chemical hazards have been considered e.g. solvents; acids; diesel fuel; fumes Comments: Potential spillages and exposure have been addressed.	Yes	
5. Ergonomic hazards have been considered e.g. lifting; working above shoulder height; height of bench Comments: Training will be conducted on good manual handling practices and Task observations will be carried out and ergonomic deviations will be addressed.	Yes	
6. Energy sources have been considered e.g. electricity; hydraulics; compressed air; compressed gases Comments: Electricity has been considered and corrective measures implemented.	Yes	
7. Radiation sources have been considered e.g. UV; microwaves; lasers Comments: We will not be carrying out any welding activities and the exposure generated by other people welding is very minimal.	Yes	
8. Working arrangements have been considered e.g. working alone; shift work; fatigue; time constraints Comments: No person working at height or in a confined space is allowed to work alone. If the confined space is too confined for more than one person a life line must be attached to the persons in the confined space.	Yes	
9. Biological hazards have been considered e.g. blood and body fluids, Legionella bacteria, etc. Comments: Biological hazards have been addressed, training will be conducted	Yes	
10. Tools, equipment & machinery have been considered e.g. unguarded moving parts; hazardous condition & maintenance; incorrect tool/equipment Comments: Tools and equipment requirements will be assessed prior to the commencement of the project. Regular inspections as dictated in the OHS plan will be carried out.	Yes	

HAZARD IDENTIFICATION CHECKLIST – CONTINUED		
Included in Risk assessment?	YES	NO
11. Working at height has been considered e.g. working from ladders, scaffolding, elevated work platforms; in roof spaces; on roofs Comments: Only work from ladders and occasional work from scaffolding will be performed.	Yes	
12. Safe operating procedures are available & they are being followed e.g. JSAs/risk assessments carried out; procedures documented Comments: SOP/SWP will be issued for all high priority tasks identified in the RA and for issues determined on site.	Yes	
13. PPE is available, is being worn and is being regularly maintained. Comments: An issuance register will be signed by all employees and regular inspections on the condition of the PPE will be conducted.	Yes	
14. Relevant employees and their supervisors have been consulted on health and safety issues related to the hazards of their work. Comments: Prior to the project starting a “kick-off” meeting will be held and all project/ task specific Hazards will be communicated. A register will be signed and a copy will be kept in the file.	Yes	
15. Outcomes from site safety inspections, OHS representative inspections, audits, hygiene surveys, OHS committee minutes etc. have been reviewed to check for hazards reported. Comments: all deviations found to be important and/ or where it can be established that a trend has been identified will be communicated to all site employees as well as management.	Yes	
RECOMMENDED ACTIONS:	WHO	WHEN
INSPECTION TEAM MEMBERS:		
NAMES:	SIGNATURES:	

RISK MANAGEMENT REVIEW CHECKLIST					
Project:	MTHONJENI / eNGXANGXASINI WATER SUPPLY	Location:	OR TAMBO DISTRICT MUNICIPALITY		
Facilitated by:	EMPLOYER AGENT (CHSA)	Review Date:	26/05/2025		
Review Item	Action Required	Person Responsible	Action Date	Completion Date	
1. All hazards from the Hazard Register have been reviewed?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
2. Have additional hazards been identified since last reviewed?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
3. Additional hazards have been added to the Register?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
4. New hazards have had risk assessments carried out?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
5. Controls have been identified for new hazards & entered into the Hazard Register?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
6. Employee input has been sought?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
7. Workplace hygiene monitoring reports have been reviewed?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
8. Health surveillance reports have been reviewed?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
9. Audit reports & site safety inspections have been reviewed?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
10. OHS committee minutes have been reviewed?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
11. Statutory requirements have been reviewed for changes?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	
12. Changes to workplace activities & structure have been reviewed to check impact?	Yes. No action required.	Samantha Maila	26 May 2025	26 May 2025	

RISK ASSESSMENT MATRIX (1)

DEFINITIONS

SECTION 1 Likelihood/Probability

Almost Certain	A	likely to occur daily or several times a week
Probable/Likely	B	likely to occur weekly or up to 4 times a month
Occasional	C	likely to occur monthly or up to 12 times a year
Unlikely	D	could occur once a year, not more than 5 times in 5 years
Rare	E	not likely to occur but could happen once every 5 years

SECTION 2 Consequence/Severity

Level	Description	<i>Example / Detail / Description</i>
1	Minor injury	First Aid treatment; minimal financial loss < R10 000; minor environmental non conformance
2	Medical treatment	Medical treatment; medium financial loss R10 001- R100 000; minor environmental impact
3	Lost Time Injury	Lost time injury; moderate financial loss R100 001 - R500 000; moderate environmental impact
4	Permanent Disability	Extensive injuries resulting in permanent impairment; significant financial loss R500 001 – R5M; major environmental impact
5	Fatality	Fatality; huge financial loss >R5M; environmental catastrophe

RISK ASSESSMENT MATRIX (2)

LIKELIHOOD/PROBABILITY	Almost Certain (Daily or less)	A	11	16	20	23	25
	Likely (Weekly, not >4 times per month)	B	7	12	17	21	24
	Occasional (Monthly not > 12 times per year)	C	4	8	13	18	22
	Unlikely (Annual not > 5 times in 5 years)	D	2	5	9	14	19
	Rare (Once per 5 years or never before)	E	1	3	6	10	15
			1	2	3	4	5
			Minor injury <R10,000 Minor Non-Conformance	Medical treatment R10 001 - R100 000 Minor Impact	Lost Time Injury R100 001 - R500 000 Moderate Impact	Permanent Disability R500 000 - R5M Major Impact	Fatality > R5M Catastrophe
			CONSEQUENCE/SEVERITY				

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RISK ASSESSMENT

JSA Title: Risk assessment and management						Revision: 001		
Prepared By: EMPLOYER AGENT (CHSA)						Date: 26/05/2025		
Facilitated by: EMPLOYER AGENT (CHSA)				Project: MTHONJENI / eNGXANGXASINI WATER SUPPLY - CONTRACT 2				
Authorized and signed by Contracts Manager:								
<u>Job/Task</u>	<u>Hazard/s</u>	<u>Risk/s</u>	<u>Risk Score</u>		<u>Risk Control Measure</u>	<u>Responsible Person/s</u>	<u>Risk Score</u>	<u>Priority rating</u>
Signing of a Section 37(2) Agreement.	37(2) mandatory agreement	The MAIN CONTRACTOR not signing of a 37(2) mandatory agreement resulting in Non-compliance to Section 37 of the Occupational Health and Safety Act, 85 of 1993. [OHS Act: Section 8(1)(c); & Section 37(2)]	18		Establish THE MAIN CONTRACTOR Procedure for the Management of Contractors to ensure compliance with Section 37(2) of the Act. The 37(2) Mandatory Agreements will be signed by both parties before any work on behalf of THE MAIN CONTRACTOR commences.	Assistant to the CEO 16(2)/ Project Manager	6	8
		THE MAIN CONTRACTOR will be solely responsible for all activities of their contractors.	13		Ensuring that a 37(2) agreement is signed between THE MAIN CONTRACTOR and the contractor will indemnify THE MAIN CONTRACTOR of the contractor's non-compliance. THE MAIN CONTRACTOR is commits to ensuring that there subcontractors comply with the requirements of the OHS Act where applicable.	Assistant to the CEO 16(2)/ Project Manager	6	8

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		The contractor has no written obligation to comply with the OHS Act whilst working for THE MAIN CONTRACTOR without THE MAIN CONTRACTOR Supervision.	13		By the contractor signing the 37(2) with THE MAIN CONTRACTOR the contractor acknowledges and commits to comply with the OHS Act and the THE MAIN CONTRACTOR standards/ procedures. Should they not comply THE MAIN CONTRACTOR has recursive action as the contractor is in contravention of the agreement.	Assistant to the CEO 16(2)/ Project Manager	6	8
<u>Registering with the Compensation Commissioner (letter of good standing)</u>	Letter of good standing	Invalid/ no letter of good standing resulting in Non-compliance with the COIDA Act, 130 of 1993 Section 89 and the Occupational Health and Safety Act 85 of 1993 Section 8(1)(b); CR 4(d).	18		No contractor will be appointed without a valid letter of good standing nor will the contractor be allowed to access the site on which the work will be performed prior to submitting a valid copy of the letter of good standing to ADT.	Assistant to the CEO 16(2)/ Project Manager	10	4
		THE MAIN CONTRACTOR will be held liable for any contractor according to Section 89 of COIDA Act. If that contractor is not registered and in possession of a valid letter of good standing	18		To prevent THE MAIN CONTRACTOR from being held liable for the medical expenses incurred as a result of an injury or disease, every contractor will register their own company and be responsible for cost incurred in the event of an injury and/ or disease in respect of Section 89 of COIDA Act.	Assistant to the CEO 16(2)/ Project Manager	10	4
		Letter of good standing expiring during the term of the project resulting in employees not being covered by workman's compensation causing the company to cover all medical expenses in the event of an injury.	14		The letter of good standing will be valid for the expected duration of the project, in the event of this not being possible a new request will be submitted to the compensation commissioner at least 4 weeks prior to the expiration date of the current letter of good standing.	Assistant to the CEO 16(2)/ Project Manager	10	7
<u>Compiling/ submitting Environmental, Health and Safety Plan and File</u>	OHS plan and file	Inadequate or absent Environmental, Health and Safety Plan and File resulting in: Non-compliance to OHS Act: Section 8(1) & CR 5(1)	14		Prior to the commencement of any project an OHS plan/ file will be compiled in respect of the client's requirements and the requirements of the OHS Act. This file must be submitted to the client for approval.	Assistant to the CEO 16(2)/ Project Manager/ OHS officer	10	7

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		Inadequate or absent Environmental, Health and Safety Plan and File resulting in: The work being stopped by the Department of Labour.	14		To ensure compliance with the OHS Act and to prevent prohibition by the Department of labour on the project, there will be a comprehensive safety file conforming to all relevant project requirements and all relevant requirements of the OHS Act. This file will be kept on site.	Assistant to the CEO 16(2)/ Project Manager/ OHS officer	10	7
		Inadequate or absent Environmental, Health and Safety Plan and File resulting in: The work being stopped by the Client.	14		To ensure compliance with the OHS Act and to prevent prohibition by the Client on the project, there will be a comprehensive safety file conforming to all relevant project requirements and all relevant requirements of the OHS Act. Prior to the commencement of the project the file will be submitted to the client for approval. This file will be kept on site.	Assistant to the CEO 16(2)/ Project Manager/ OHS officer	10	7
		Inadequate or no OHS planning resulting in injuries and/ or property damage	14		A safety plan and file will be compiled for each project to ensure compliance to all relevant requirements and this file will be maintained to ensure that the safety system is being implemented and managed.	Assistant to the CEO 16(2)/ Project Manager/ OHS officer/ Supervisor	10	7
<u>Conducting and communicating the Risk Assessment</u>	Risk assessment	Inadequate or absent risk assessment resulting in: Non-compliance to OHS Act: Section 8(2)(d); MHIR 5; ER 4(4)(f); AR 7; LR 6; HCSR 5; NIHLR 6 & CR 7[1]	18		Project specific risk assessment must be done and presented to the client with the safety file for approval. The risk assessment must cover all activities that will be performed and high risk areas identified.	Assistant to the CEO 16(2)/project manager/ OHS officer/ risk assessor	10	4
		Person conducting the risk assessment is not competent to do risk assessment resulting in inadequate identification of hazards/ risks causing injuries and/ or property damage.	14		Only competent persons with proof of training (from a certified institution) may conduct risk assessments. The qualified risk assessor must be appointed in writing. Proof of training will be attached to the appointment letter and will be kept in the safety file on site.	Assistant to the CEO 16(2)/project manager/ OHS officer/ risk assessor	10	7

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		Persons exposed to unidentified hazards/ risks resulting in injuries.	18		THE MAIN CONTRACTOR will compile a comprehensive risk assessment which will be reviewed and revised by the appointed risk assessor when required. In the event of new hazards and risks being noted on site, the risk assessment will be adjusted and communication of the newly identified hazards/ risks will be done. A register to prove communication will be signed by all site employees and proof thereof will be kept on site.	Assistant to the CEO 16(2)/project manager/ OHS officer/ risk assessor	10	4
		No method or procedures in place to reduce or control the hazards resulting in injuries	18		All risks will be mitigated as far as is reasonably practicable, SWP/SOP will be created for high risk tasks where the residual risk after corrective measures is still high. Task specific risk assessments will also be conducted for "High priority" rated elements/ activities.	Assistant to the CEO 16(2)/project manager/ OHS officer/ risk assessor/ Supervisor	10	4
		Persons issued with inadequate PPE as a result of poor identification of PPE requirements in the risk assessment procedure resulting in injuries.	14		A comprehensive study of PPE requirements will be carried out and PPE identified as a project requirement will be issued and record thereof will be kept on site.	Assistant to the CEO 16(2)/project manager/ OHS officer/ risk assessor/ Supervisor	10	7
		Inadequate conveyance of hazards/ risks and task specific hazards/ risks to employees resulting in injury and non-compliance to the OHS Act.	18		All hazards and risks identified must be communicated to all persons intending to work on the site, proof of communication must be signed and dated by all persons and record thereof will be kept on site. Ensure all task specific risks and hazards are communicated and that all involved understand	Assistant to the CEO 16(2)/project manager/ Supervisor/ OHS officer/ risk assessor	10	4
<u>Clearing and Grubbing</u>	Heavy Machinery	Unauthorized/ incompetent operator, operating machinery may result in severe injuries and damage to property	14		All operators shall be competent and have a valid license before appointed in writing.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor	10	4

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		Persons may be struck by trees and/or branches when machinery does not meet the safety requirements which may result in injuries.	17	Daily checklists shall be conducted. Any faulty items e.g. broken windows, cracked windscreen shall be fixed and replaced before work commence.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor	9	4
	Snakes	Unawareness may result in severe injury, possible fatality	22	Snake induction/ awareness shall be implemented.	Project Manager/ OHS officer/ supervisor SHE Representative	15	4
<u>Establishing competency of employees</u>	Employee	Untrained/ incompetent persons being used to perform work that requires a level of skill/competency that they do not meet, resulting in injuries.	18	All persons employed to perform specific tasks must be deemed competent by their superior (provided the superior is able to test the technical competency as a result of his competency proven by means of qualifications and experience). This competency must be declared in the form of a competency letter signed by the assessor and the 16(2) or 16(1) of the company. Any certificates to reiterate the person's competency must be attached to the competency certificate. Planned task observations will be conducted on employees and the recorded findings will be communicated to all relevant parties. In the event of the person performing work that can only be conducted by a person that has received formal (accredited) training, proof of training must be provided.	Assistant to the CEO 16(2) Project manager/ supervisor/ OHS officer	14	4
<u>Induction training</u>	Induction training	Persons receiving inadequate or no induction training, resulting in: Non-compliance to OHS Act: Section 8(1); & CR 7(9)(a)	14	Induction training will be conducted and proof thereof will be kept on site.	Project manager/ supervisor/ OHS Department	10	7

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		Persons not aware of applicable legislation and standards resulting in injuries	14	All persons working on the site will be made aware of all applicable legislation and standards. Record of communication will be kept on site. the induction will be conducted by the safety department	Project manager/ supervisor/ OHS Department	10	7
		Persons not aware of company policies, procedures, safe work procedures (SWP), Safe operating procedures (SOP) and site specific rules.	14	All persons working on the site will be made aware of all applicable company policies, procedures, and SOP/SWP as well as site specific rules. Record of communication will be kept on site. The induction will be conducted by the safety department.	Project manager/ supervisor/ OHS Department	10	7
		Persons not aware of risks attached to their work and the specific site resulting in injuries and/ or property damage.	14	All persons will be made aware of their work specific hazards/ risks as well as the site hazards/ risks that have been identified for the specific site that they will be working on.	Project manager/ supervisor/ OHS Department	10	7
Emergency Planning	Emergency plan	Inadequate/ no emergency plan, or one that does not correspond to the client's emergency procedure causing severe confusion in a crisis/emergency situation resulting in injuries and/ or property damage. Non-compliance with OHS Act: Section 8(1); & ERW 9(1).	17	The Client's emergency plan and evacuation routes will be adhered to and combined with the THE MAIN CONTRACTOR emergency plan once approved by the Client. This combined plan will be communicated to all persons working on the site and at least one drill will be conducted within 3 months of the start of the project.	Project manager/supervisor/OHS officer/ emergency evacuation supervisor	9	5
		Personnel will not know how to respond to an emergency on site and this may result in injuries and/or property damage.	17	All persons entering the site will be made aware of the emergency plan and emergency evacuation routes. The emergency team members will also be identified to all.	Project manager/supervisor/OHS officer/ emergency evacuation supervisor	9	5
		Persons being injured as a result of no procedure for emergencies on site.	21	An emergency evacuation supervisor will be appointed in writing [CR 11(1)] to coordinate persons on the site in the event of an emergency. The emergency evacuation supervisor will	Project manager/supervisor/OHS officer/ emergency evacuation supervisor	10	2

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		Emergency numbers not available on site resulting in injuries.	14	Contact details of all emergency services in the area of the site/project must be available on site and easily accessible. Copies of such contact details will be kept in the site file and a list of all emergency team member names, contact details, and roles will be posted at the site office for ease of access.	Project manager/supervisor/OHS officer/emergency evacuation supervisor	10	7
		No first aid kit available for First aid to be administered resulting in the inability to administer first aid.	14	A first aid kit will be available on site; the kit will contain the minimum requirements with reference to the OHS Act and added equipment in respect of the project requirements. The contents of the kit will be maintained. Inspections on the contents will be done once per month or as required. Records of inspections will be kept on site.	Project manager/supervisor/OHS officer/emergency evacuation supervisor/first aider	10	7
		No emergency equipment on site resulting in injuries.	21	All necessary emergency equipment will be available on site; the necessity of equipment will be established by all persons working on site and will comply with project and OHS Act requirements. Emergency equipment will be maintained and kept in a safe to use condition.	Project manager/supervisor/OHS officer/emergency evacuation supervisor/first aider/ all persons on site	10	2
		No person trained for emergencies resulting in injuries	18	Trained/ competent persons will be appointed for all activities related to emergencies as far as is required by the OHS Act or the project requirements. These persons will be equipped with all the necessary tools to be able to carry out their duties effectively.	Project manager/supervisor/OHS officer/emergency evacuation supervisor/first aider	10	4
<u>Undergoing entry and exit medicals</u>	Medical monitoring	Persons not undergoing entry and exit medicals may result in undetected Occupational injuries and/or diseases, which would possibly deter the treatment and detection of the injury and/or disease.	13	Medical examinations will be carried out by an Occupational Medicine Practitioner where required. Medicals certificates will be kept on site.	Project manager/supervisor/OHS officer/ Occupational Medicine Practitioner	6	8

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		Person not fit for their appointed task resulting in injuries.	13	Persons must be declared fit for the type of work they are to perform. Proof of fitness will be kept on site. In the event of a person failing their medical that person will not be allowed to work on the site/ project.	Project manager/supervisor/OHS officer/ Occupational Medicine Practitioner	6	8
		Person could have a medical condition of which the employer does not have any knowledge resulting in injuries	13	Persons will undergo medical to establish if there are any undeclared or unknown condition of which a person may suffer. Project management and supervisors must be informed of any medical conditions and they will establish (provided the person passed the medical) if there is perhaps a position for the employee that will not aggravate their condition. If not the persons will not be allowed onto site.	Project manager/supervisor/OHS officer/ Occupational Medicine Practitioner	6	8
		No proof of medical fitness.	13	If proof of medical fitness can be provided it will be assumed that the person is not medically fit to conduct the required work, and will hence not be allowed on site until proof can be provided.	Project manager/supervisor/OHS officer/ Occupational Medicine Practitioner	6	8
Site Establishment	Offloading of Containers	Trucks are placed on un-even surfaces. Uneven placing of loads can cause trucks to overturn resulting in severe injuries and damage to property	14	Pre-inspection of site and site establishment. A competent person should oversee whilst offloading	Project Manager/ Supervisor/ OHS officer	9	7
	Unqualified operators are used to off-load containers	Untrained operators will cause injuries to themselves and to others, and damage to property.	14	Only licensed operators are allowed to operate machinery and will be allowed on site	Project Manager/ Supervisor/ OHS officer/ Safety Representative	9	7
	Fencing	Incorrect / poor fencing erected will lead to theft and property loss or damage	13	Fencing should be erected around site with lockable gates	Project Manager/ OHS officer	9	8
	Erecting of bulletin/ Safety notice board	Failure to erect or incorrect placement can lead to confusion, poor communication and time loss	13	Clear notice boards should be erected identifying contractor site, and safety requirements	Project Manager/ Supervisor/ OHS officer	9	8

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	Ablution facilities	Inappropriate ablution facilities provided will cause hygiene problems and health risks to the employees	5		Proper facilities to be provided and maintained on a weekly basis	Project Manager/ Supervisor/ OHS officer/ Safety Representative	3	14
	Insufficient facilities	Ablution facilities should cater for both male & female	5		Ablution facilities should cater for both male & female and be located separately	Project Manager/ Supervisor/ OHS officer/ Safety Representative	3	14
	Lack of drinking water	Shortage of drinking water on site will cause dehydration and will lead to an incident/ accident	5		Drinking water should be available on site and notice boards should be erected, showing where drinking water points are	Project Manager/ Supervisor/ OHS officer/ Safety Representative	3	14
	Unhygienic water	Dirty water will cause an unhealthy workforce	5		Clean, clear drinking water shall be provided by Principle Contractor. Water points to be indicated	Project Manager/ Supervisor/ OHS officer/ Safety Representative	3	14
	Lack of eating facilities	No proper eating facilities will create unhygienic conditions and could cause incident/ accidents as workers will eat on site	5		A proper eating area shall be provided by Principle Contractor before any work commence	Project Manager/ Supervisor/ OHS officer/ Safety Representative	3	14
Public Safety	Notices and signs to be erected	No unauthorized/ No entry signs/ No Entry at own risk signage displayed at site camp may cause confusion and unauthorized entry by person/s resulting in possible injuries; damage to property and/ or even lead to theft	13		Site Supervisor to ensure all safety notice boards and relevant signs are erected before commence of work, to indicate to all visitors and non-employees where to report when entering site camp	Project Manager/ Supervisor/ OHS Officer	9	8

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		Failure to post notices and signage for overhead work and other hazardous activities might cause injuries to person/s/ or even possible fatalities and damage to property	13		Site Supervisor to ensure all safety notice boards and relevant signs are erected before commence of work, to indicate to all visitors and non-employees where to report when entering site camp	Project Manager/ Supervisor/ OHS Officer	9	8
	Security Measures	Failure to make use of security patrols after hours and over weekend might cause damage to property and/ or even lead to theft	13		Security to be available after hours and will be provided with proper shelter	Project Manager/ Supervisor/ OHS Officer	9	8
		Insufficient lighting after dark might cause injuries to person/s; damage to property and/ or even lead to theft	13		Sufficient lighting to be available on site after hours for security and safety reasons	Project Manager/ Supervisor/ OHS Officer	9	8
		Guard has no telephone or other means of emergency communication might lead to injuries; damage to property and even theft	13		Security Company to ensure security guards has a way of communicating to relevant person/s. Telephone or even a two way radio will be accepted	Project Manager/ Supervisor/ OHS Officer/ Security Company	9	8
	Emergency preparedness	Emergency telephone numbers not available in a case of emergency will cause severe injuries; damage to property and/ or even lead to theft	9		Principle contractor to ensure emergency contact numbers are displayed	Project Manager/ Supervisor/ OHS Officer	5	10
		Emergency Evacuation Procedure not communicated to employees will cause injuries to person/s and damage to property	9		Emergency Evacuation procedure to be communicated to all personnel whilst attending site induction	Project Manager/ Supervisor/ OHS Officer/ Safety Representative	5	10
		Emergency Alarm not audible to all aspect of the site which may cause injuries to person/s and damage to property	9		Emergency alarm to be available and easy accessible at all times	Project Manager/ Supervisor/ OHS Officer/ SHE Representative	5	10

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	Emergency Drill and evacuation	Emergency Plan not available and not communicated to employees which may cause some confusion and result in injuries to person/s and damage to property	9		Emergency Plan to be available and communicated to all employees. Emergency evacuation drill to be done every three (3) months	Project Manager/ Supervisor/ OHS Officer/ Safety Representative	5	10
		Inadequate number of employees not trained to use fire equipment in case of an emergency may cause damage to property and/ or severe injuries to person/s if not possible fatality	9		Safety Representative to be trained and appointed in writing	Project Manager/ Supervisor/ OHS Officer/ Safety Representative	5	10
<u>Working next to the road/ Traffic</u>	Road safety Signs	No safety signs available whilst working (Men at work; road arrow; road narrow and speed limit) may cause some confusion of vehicles and pedestrians resulting in an accident. Severe Injuries, possible fatalities and damage to property	14		Supervisor to ensure road safety signs are available and placed correctly	Supervisor/ OHS Officer/ Safety Representative/ Road Safety Sign Inspector	13	7
		Insufficient road safety signs may cause severe injuries, possible fatality and damage to property	14		Supervisor to ensure there is enough road signage before commence of work.	Supervisor/ OHS Officer/ Safety Representative/ Road Safety Sign Inspector	13	7
		Damaged road signs used may cause confusion resulting in an accident. Severe Injuries, possible fatalities and damage to property	13		All damage signs to be reported and replaced with visible signage	Supervisor/ OHS Officer/ Safety Representative/ Road Safety Sign Inspector	13	8
	Cones	Incorrect placing of cones may cause confusion of vehicles and pedestrians resulting in an accident. Severe Injuries, possible fatalities and damage to property	13		Supervisor to ensure cones are used and placed correctly	Supervisor/ OHS Officer/ Safety Representative/ Road Safety Sign Inspector	13	8

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		No reflective marker on top of cone may cause distraction resulting in an accident. Severe Injuries, possible fatalities and damage to property	9		Cones to be visible by reflective markers	Supervisor/ OHS Officer/ Safety Representati ve/ Road Safety Sign Inspector	5	10
	Concrete Barricading	No barricading in place may cause vehicles and pedestrians to fall into excavations resulting in severe injuries and damage to property	9		Supervisor to ensure there are sufficient concrete barricading	Supervisor/ OHS Officer/ Safety Representati ve/ Road Safety Sign Inspector	5	10
	Barricading Netting	Barricading netting not visible at night may cause confusion of vehicles and pedestrians resulting in an accident. Severe Injuries, possible fatalities and damage to property	14		Supervisor to ensure barricading netting is maintained at all times	Supervisor/ OHS Officer/ Safety Representati ve/ Road Safety Sign Inspector	13	7
		No signage displayed (No Entry Signs) may cause unauthorized entry by pedestrians resulting in severe injuries and possible fatalities	14		No Entry signs to be displayed and visible for the public	Supervisor/ OHS Officer/ Safety Representati ve/ Road Safety Sign Inspector	13	7
	Traffic Controller	Incompetent person appointed may cause severe injuries to person/s and damage to property	14		Competent person to be appointed in writing. Supervisor to oversee activity	Supervisor/ OHS Officer/ Safety Representati ve/ Traffic Controller	13	7
	Personal Protective Equipment	No reflective vest worn by person/s may cause invisibility resulting in severe injuries, possible fatalities and damage to property	13		All personnel will be issued with reflective vests. Supervisor to ensure all employees wear required PPE before leaving for site	Supervisor/ OHS Officer/ Safety Representati ve	9	8
<u>Working Under/Next to power lines</u>	Plant & Machinery	Plant, machinery, objects and/ or equipment stored, stacked or kept under power lines may cause severe injuries, possible fatalities and damage to property	14		No plant, machinery, objects and/ or equipment will be stored, stacked or kept under a power line. Competent person to oversee all activities when working next to power lines	Supervisor/ OHS officer/ Safety Representati ve	13	7

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		Supervisor allowing work to proceed with no presence of a safety observer which may cause severe injuries, possible fatalities and damage to property	14		Supervisor to ensure safety is involved when performing any activity under and/ or next to a power line	Supervisor/ OHS officer/ Safety Representative	13	7
		Lack of knowledge of the exact height of the equipment may cause parts to touch power line resulting in possible electrocution and damage to property	14		Supervisor to have adequate knowledge of all plant, machinery, objects and/ or equipment used on site	Supervisor/ OHS officer/ Safety Representative/ First Aider	13	7
		Objects, plant. Machinery and/ or equipment come in contact with the overhead power line may cause severe injuries, possible electrocution and damage to property	14		Do not allow anyone to touch or approach any part of the plant or any fallen wires. Simply being too close will kill. Emergency to be contacted immediately	Supervisor/ OHS officer/ Safety Representative/ First aider	13	7
	Barricades & Signage	No barricades set up may cause severe injuries, possible fatalities and damage to property	13		Supervisor to ensure barricades are set up to prevent people from entering the restricted area	Supervisor/ OHS officer/ Safety Representative	9	8
		Insufficient signage available may cause confusion to the public resulting in severe injuries, possible fatalities and damage to property	13		Sufficient signage to be displayed to prevent any incidents or accidents	Supervisor/ OHS officer/ Safety Representative	9	8
<u>Maintaining the contents of the first aid kit.</u>	First aid equipment	Inadequate or no first aid equipment resulting in Non-compliance with the OHS Act: Section 8(1); & GSR 3(1)(2)	17		A first aid kit will be accessible on site where necessary, the contents will be maintained. In the event of their only being a small crew of persons working on the site (5 or fewer) a complete first aid box will be present on site or as project requirements dictate. As good practise where less than 9 persons are working, a person may be trained as first aider or as per project requirements. Where more than 10 - 50 employees are working at a site at least one certified first aider will be available to administer first aid, this person will be site bound.	Project manager/ first aider/ OHS officer/ Supervisor	9	5

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		Person's inability to treat wounds as a result of insufficient first aid equipment.	17		First aid kit content will be evaluated to determine contents appropriate to specific project/ site and the OHS Act requirements will be provided. The first aid kit will be inspected monthly or as per requirements, deviations from the accepted standard will be rectified. Records of such inspections will be kept on site.	Project manager/ first aider/ OHS officer/ Supervisor	9	5
<u>First aid treatment</u>	Blood and bodily fluids	Persons being exposed to blood and/ or bodily fluids while administering first aid	18		Persons to use equipment provided to protect against blood or fluid transfer; safety glasses, latex gloves, CPR mouth piece etc. A qualified first aider to be available for first aid treatments where possible (guidelines for the appointment of a first aider to be adhered to from the OHS Act). THE MAIN CONTRACTOR to develop procedure on immediate action after exposure to blood and body fluids, train all employees on procedure, ensure first aid kit contains equipment to wash eyes, wounds etc. implement a kit to handle blood and body fluid spills, ensure all employees attend HIV/AIDS awareness training, use Intranet for informal education on HIV/AIDS if needed (HIV AIDS Awareness campaign).	Supervisor/ OHS officer/ appointed first aider (where applicable)	10	4

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	Employee	Person treated by incompetent/ untrained first aider resulting in injuries	17	In the event of the injury being serious i.e. broken bones, deep lacerations, severe burns etc. only a certified first aider is to administer first aid prior to the person being taken to the hospital. If the first aider feels that the injury is too severe for their level of competency the injured person must be taken directly to the hospital if possible, or the ambulance must be called. For minor injuries on a site where a first aider is not available as a result of too few employees, first aid can be administered by the site supervisor if he wishes to do so or by the injured employee himself. The appointed first aider must be in possession of a valid certificate which proves training at an accredited institution; this certificate will be attached to the appointment letter of the first aider.	Supervisor/ OHS officer/ First aider	9	5
		Persons administering first aid in an unsafe environment resulting in injuries	17	The person whom will be administering first aid is required to ensure their own safety first, the persons is to assess the area in which they will be administering first aid to determine whether it is safe to do so or not. If the area is not safe it must be made safe if possible, if it is not possible to make the area safe, the injured person can move to an area where they can be treated. If the injured person is not conscious or unable to move or to be moved and the area is not safe to enter the appropriate emergency rescue personnel must be contacted.	Supervisor/ OHS officer/ First aider	9	5
<u>Fire extinguisher operation and maintenance.</u>	Fire extinguishers	Improper use and maintenance of Fire extinguishers resulting in: Non-compliance with OHS Act: Section 8;CR 27(h)	18	The appointed firefighting team will receive training in the correct use and selection of fire extinguishers. All fire extinguishers will be inspected and maintained in a safe to use condition.	Project manager/ Supervisor/ OHS officer	10	4

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		No equipment to fight possible fires on site resulting in injuries and/or property damage.	13	In the event of the fire extinguishers not being provided by the client THE MAIN CONTRACTOR will assess the project regarding the scope of work and provide its employees with sufficient fire extinguishers for the site/ project. This must be managed by the site supervisor with input from the appointed firefighting team members.	Supervisor/ OHS officer/ Firefighting team	9	8
		Fire extinguisher not serviced disabling persons from extinguishing a fire resulting in injuries and/ or property damage	13	All fire extinguishers will be inspected monthly by the appointed fire extinguisher inspector; extinguishers rendered to be inadequate will be removed from site. Deviations from the accepted standards will be rectified. All fire extinguishers will be serviced annually by a competent person. Copies of such inspections will be kept on site in the OHS site file .All appointed fire team members will receive training in firefighting.	Supervisor/ Fire extinguisher inspector/ OHS officer	9	8
		Container damaged or rusted, disabling persons from extinguishing a fire resulting in injuries and/ or property damage	13	Fire extinguishers deemed to be in a poor condition will not be used or allowed on site. Only fire extinguishers that are in a good working condition will be used.	Supervisor/ Fire extinguisher inspector/ OHS officer	9	8
		Gauge needle not positioned in the green zone meaning the extinguisher is not charged disabling persons from extinguishing a fire resulting in injuries and/ or property damage	13	All fire extinguishers sent to site will be in good working, fully charged condition. Any fire extinguishers found on site that are not sufficiently charged will be replaced and the fire extinguisher that was removed will be sent for servicing.	Supervisor/ Fire extinguisher inspector/ OHS officer	9	8
		Persons attempting to operate a fire extinguisher on which the nozzle is damaged or missing ensuing in the inability to extinguish a fire resulting in injuries and/ or property damage	13	Only extinguishers that have been inspected and found to be in a safe condition will be allowed on site. Any extinguisher that may become damaged on site will be removed at the time it is noted that the extinguisher is damaged. All employees are responsible to take note of the condition of extinguishers on site and to report any deviations to the site supervisor and fire extinguisher inspector.	Supervisor/ Fire extinguisher inspector/ OHS officer/ work crew	9	8

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		Incorrect type of fire extinguisher resulting in the fire spreading potentially causing injuries and/ or property damage	13	An assessment will be conducted to determine what type of fire extinguishers would best suit the project based on the scope of work being performed and fire extinguishers best suited to that specific environment will be issued. If the scope of work or environment change and the extinguisher is no longer suitable it will be exchanged with a suitable replacement.	Supervisor/ Fire extinguisher inspector/ OHS officer/ Firefighting team	9	8
	Employee	Untrained operator resulting in person not being able to extinguish the fire leading to injuries and/ or property damage.	13	All fire team members will be trained in the correct use/ operation of the fire extinguisher. Each site (where necessary) will have an appointed trained fire fighter. This persons proof of training will be attached to their appointment letter a copy of which will be kept on site.	Supervisor/ Fire extinguisher inspector/ OHS officer/ Firefighting team	9	8
<u>Personal Protective Equipment (PPE) use and issuance</u>	PPE	Non-compliance with OHS Act: Section 8[1];GSR 2	13	PPE will be issued to all persons that require it as per the project requirements and the OHS Act. PPE will be issued against a signature and record thereof will be kept on site.	Assistant to the CEO 16(2)/ Project manager/ Supervisor/ OHS officer	6	8
		Improper use or negating re-issuing of PPE resulting in injuries	13	PPE will be issued against a signature and replaced annually or as needed, provided that the wear and tear is not as a result of neglect or improper use. If it is determined through an investigation that the PPE is in a bad condition as a result of neglect or improper use the employee may be required to replace the PPE if needs replacing within the first year of issue. All employees will be equipped with the required PPE.	Assistant to the CEO 16(2)/ Project manager/ Supervisor/ OHS officer	6	8
		Persons wearing substandard PPE resulting in injuries	13	Only PPE approved by the SABS and is marked as such will be bought and issued. This will be a minimum standard.	Assistant to the CEO 16(2)/ Project manager/ Supervisor/ OHS officer	6	8

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		The requirements of specific PPE not assessed resulting in injuries	13		The site environment and all activities to be performed on the site will be assessed to establish the PPE requirements. This will be done over and above the clients recommended requirements PPE will be issued accordingly.	Assistant to the CEO 16(2)/ Project manager/ Supervisor/ OHS officer	6	8
		Limitations of PPE not communicated resulting in injuries	18		Employees will be informed of the limitations of the PPE as to educate them on the restrictions of the PPE. It must be understood that PPE alone will not prevent incidents and/ or accidents.	Project manager/ Supervisor/ OHS officer	14	4
		PPE in bad state of repair resulting in injuries.	13		Persons will be trained on the correct use and care instructions for each piece of PPE. PPE will be inspected monthly and copies of issue and inspection will be kept on site. if the PPE is found to be in a poor condition due to wear and tear it will be replaced.	Project manager/ Supervisor/ OHS officer	6	8
	Employee	Persons not wearing issued PPE resulting in injuries.	13		All required PPE will be worn by all persons on the site. If the person is found not to be wearing the PPE issued for the specific task or site, that person will be taken off site immediately. Once he has the appropriate PPE he will be allowed to recommence work.	Project manager/ Supervisor/ OHS officer	6	8

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<u>Legal appointments</u>	Appointments	Inadequate/no legal appointments resulting in: Non-compliance with the OHS Act but not limited to: Sections 8(2) (i); 16(2); 17(1) & 19(3) & GSR 3(4); 8(1)(a) & 13A. & GAR 9(2) & CR 4(1)(c); 5(3)(b); 6(1); 6(2); 7(1); 8(1)(a); 11(1); 21(1)(j); 26(a) & 27(h)	9	Competent persons will be appointed as follows as required, but not limited to: • Section 16(2) Assistant to the CEO. • Section 8 Project manager appointed under General Duties of Employers • General Safety Regulations GSR 3(4) First Aider Designation. • General Administrative Regulations 9(2) Incident Investigator. • General Safety Regulations GSR 13A. Ladder Inspector Designation • Construction Regulations CR 4(1)(c), Principal Contractor appointment. • Construction Regulations CR 5(3)(b), Contractor appointment. • Construction Regulations CR 6(1) Construction Site Supervisor Appointment. • Construction Regulations CR 6(2) Assistant Construction Site Supervisor Appointment (as required). • Construction Regulations CR 6(6), Construction Site OHS officer. • Construction Regulations CR 7(1) Risk Assessor Appointment. • Construction Regulations CR 11(1) Excavation Supervisor Appointment. • Construction Regulations CR 21(1)(j) Construction Vehicle and Mobile Plant Inspector Appointment. • Construction Regulations CR 26(a) Construction Site Stacking and Storage Supervisor (as required). • Construction Regulations CR 27(h) Construction Site Fire Extinguisher Inspector Appointment.	Assistant to the CEO 16(2)/Project manager/ OHS Officer	6	10

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<u>Working in extreme/ inclement weather/ rainy conditions</u>	Thunder storms	Persons being struck by lightning resulting in injuries	15		The weather must be assessed before any work commence. Under no circumstances will any ADT Employee or subcontractors outwait a thunderstorm on site under a tree or similar structure. If the weather is not favourable for work to be conducted, the work should be postponed. This must be managed by the supervisor. Prompt first aid will be available on site at all times.	Supervisor/ OHS officer/ first aider	15	6
	Extreme heat	Person suffering from Heat stroke and/or dehydration	14		When working in sever heat, planned water breaks must be taken in a shaded area provided by THE MAIN CONTRACTOR or the Client. Fresh water will also be provided by THE MAIN CONTRACTOR or the Client. The weather must be assessed before any work commence. If the weather is not favourable for work to be conducted, the work should be postponed. Personnel must be declared, "Fit to work" in conditions equal to or above 30°C. Workers must be informed that at least 600ml of water must be taken every hour in hot conditions. Prompt first aid will be available on site at all times.	Supervisor/ OHS officer/ first aider	10	7
	Inclement weather/ rain	Person's working on ladders/ scaffolds during inclement weather/ rain resulting in injuries.	14		No work will be performed on ladders/ scaffold during inclement weather/ rain, in an open air environment. Only once it is determined safe to continue work, by the site supervisor, the OHS officer and the ladder inspector/ scaffold inspector can work continue. This must be managed by the site supervisor.	Supervisor/ OHS officer/ Ladder inspector	10	7
		Persons operating portable electric equipment in rainy conditions.	13		Under no circumstances are portable electrical tools to be used in open air during inclement weather/ rain. Supervisor to monitor.	Supervisor/ OHS officer	9	8

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<u>Environmental conservation</u>	Cleaning chemicals	Lost time - Occupational reactions: respiratoire (inhale fumes), skin (contact), allergies, gastro-intestinal (ingestion).	13	Obtain material safety data Sheet (MSDS) for every chemical used from the supplier. Select the list hazards and management measures and record on a chemical register/list, educate employees working with chemical re the hazards and relevant measures before they use it, all MSDS must be accessible to all employees at all times, chemicals must be clearly marked. Follow the MSDS recommendation for storage, disposal, etc.	Supervisor/ OHS officer	6	
		Improper disposal of chemicals resulting in Environmental degradation	18	Train and ensure compliance with the MSDS recommendation for storage, disposal, etc. Keep training/toolbox talks records	Supervisor/ OHS officer	10	4
	Paper, cardboard - mass storage cause an increase in combustibles and pollution.	Fire, fatalities	18	Start to recycle paper and cardboard (can use a reputable recycling company, i.e. Mondi). Ensure regular removal of paper and card boards to reduce risks for fire, dust bins must be emptied regularly.	Supervisor/ OHS officer	10	4
	Batteries - Acid cause burn injuries to employees	Lost time injuries	13	Store safely till disposal to prevent exposure or leakage of acid. Use reputable waste company to remove to an approved land fill site.	Supervisor/ OHS officer	6	8
<u>Housekeeping</u>	Material/ equipment	Persons injured as a result of poor housekeeping	17	All work areas must be kept clean and tidy at all times. Employees have a duty to keep their immediate work area as clean as possible.	Supervisor/ OHS officer	9	5
		Persons injured as a result poor stacking and storage	17	The stacking of goods must be done so that the risk of items falling is minimized. Material must not be stacked except where absolutely necessary. In such cases stacked material must not be higher than 4 x the width of the base.	Supervisor/ OHS officer/ Stacking and storage supervisor	9	5
	Falling objects	Persons struck by falling objects resulting in injury	17	Articles must not be placed at a height in a location, where if they fall, they can strike persons below.	Supervisor/ OHS officer	9	5

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	Spillage	Persons coming into contact with spills resulting in injuries	17		All spillages in the work area must be cleaned/ contained immediately. In the event of it being a HCS, it must be cleaned in the manner directed in the MSDS supplied by the manufacture / supplier. It must then also be disposed of in the manner referred to in the MSDS. HCS spills must be cleaned up only when it is safe to do so and cleanup must be monitored by a competent person. All appropriate PPE must be worn.	Supervisor/ OHS officer	9	5
	Lighting	Persons working in a poorly lit area resulting in injuries	13		All workplace must be adequately lit. Defects in lighting fixtures must be reported to the Site supervisor and the OHS officer. Task specific lighting must be provided in areas where there is insufficient lighting. Head lamps may also be provided to employees as an extra precautionary measure.	Supervisor/ OHS officer	9	8
	Site establishment	Persons being injured as a result of unsafe site establishment.	9		All defective: walkways, flooring, hand rails on edges, stair handrails, stairs and general site establishment must be reported the site supervisor and OHS officer.	Supervisor/ OHS officer	6	10
		Persons being injured and/ or property damage due to obstruction in access ways.	13		All pedestrian and vehicle routes must be kept clear from obstructions.	Supervisor/ OHS officer	9	8
		Persons being exposed to poor ergonomic environment resulting in injuries.	14		Equipment must be arranged within the workplace so that there is sufficient room for persons to move about the workplace safely. Work are must be barricaded as far as is reasonably practicable.	Supervisor/ OHS officer	10	7
	Vermin	Persons being exposed to vermin resulting in injuries and/ or diseases.	13		All signs of vermin should be reported at once to the site supervisor and the OHS officer. Under no circumstances are persons to attempt to catch, taunt, feed, or corner vermin. It must be dealt with by professional pest control measures where it is reasonably possible for this to be done.	Supervisor/ OHS officer	9	8

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	Electricity/ electrical wires	Persons making contact with live electrical wires resulting in injuries.	17	All electrical wiring in the workplace must be neatly tied off so as not to present a trip hazard. Where such wiring must run across floors it must be protected by ramps, conduit or armoring. This is especial important in situations where extension leads are in use. No person is permitted to insulate live cables, the power must be cut and once it can be proven that the wire is dead, persons can insulate the wire, and these persons must be under the direct supervision of a competent person (electrician). To be monitored by the site supervisor.	Supervisor/ OHS officer	9	5
	Combustibles	Poor storage of combustibles resulting in injuries and/ or property damage.	18	Combustible materials must not be allowed to build up in the work area, especially in areas where there is a potential for the generation of ignition sources. Only one day's materials should be kept on site.	Supervisor/ OHS officer	10	4
		Access and egress obstructed by combustible containers/substances resulting in injuries.	14	Articles that may pose an increased risk under fire or other emergency conditions (e.g. compressed gas cylinders) must not be stored on exit routes or in areas where they may pose a threat to employee safety.	Supervisor/ OHS officer	10	7
	Waste	Poor waste management resulting in environmental pollution and/ or injuries	14	Sufficient refuse bins must be provided and should be emptied on a regular basis. Different bins should be allocated and marked for different material i.e. General waste, metal, wood, etc. All refuse must be properly stored prior to disposal. Generally the client provides such facilities in the event of there being no waste facilities they must be provided by ADT.	Supervisor/ OHS officer	10	7
	Employees	Employees negating housekeeping responsibility resulting in injuries and/ or property damage.	13	All employees are reminded that under current legislation that they have a statutory obligation not to endanger the safety of themselves or their co-workers whilst at work through any act or omission that they may make, including poor workplace housekeeping.	Supervisor/ OHS officer	9	8

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	Dust	Persons exposed to excessive dust resulting in injuries	18		High dust areas are to be cleaned up as far as possible and the remaining dust area is to be wet to prevent the dust from rising. Persons working in high dust environments will be issued with dust masks in accordance with the prescribed recommendations by the supplier.	Supervisor/ OHS officer	10	4
	Noise	When working in area of > 85dBA for more than 8 hours/day, every day resulting in injuries.	18		Supervisor to monitor over exposure to excessive noise and rotate persons to lessen exposure to each. Enforce PPE (i.e. ear plugs and/or ear muffs)	Supervisor/ OHS officer	10	4
<u>Travel to site by vehicle/ Truck</u>	Vehicle/ Truck	Persons driving an unlicensed vehicle/ Truck which is not roadworthy causing an accident resulting in injuries.	22		No unlicensed/ un-roadworthy vehicles/ Trucks will be allowed to be used for the transportation of persons or equipment under any circumstances.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor	15	1
		Poor maintenance of the vehicle/ Truck resulting in accidents and/or injuries	22		Inspections to be carried out by appointed driver. Checklist to be completed prior to taking the company vehicle/ truck out of the yard, failure to do so will result in disciplinary action. Vehicle must be serviced regularly and a maintenance schedule must be implemented	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor	15	1
		Persons whom are victims of a hi-jacking/robbery may sustain injuries	9		Armed escorts should be arranged for dangerous sites where reasonably practicable. Drivers to be trained in defensive driving and remember that no vehicle/ Truck or equipment is worth your life.	Project manager/ Supervisor/ OHS officer/ appointed driver	6	10

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	Passengers	Vehicle/ Truck not equipped to carry passengers in the back and it is still done resulting in injuries and/or property damage.	17		Under no circumstances are passengers to be transported in the back of a vehicle/ Truck without adequate protection overhead (canopy) and sufficient seating free from tools/equipment and obstructions.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor	9	5
	Tools and equipment	Persons may be struck by unsecured tools and/or equipment resulting in injuries.	17		Tool and equipment must be secured in a safe manner that will prevent them from causing injury to persons or damage to other objects. This must be checked by the appointed driver of the vehicle/ Truck.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor/ stacking and storage supervisor	6	5
	Load	Persons may be struck by an unsecured load resulting in injuries.	17		Ensure that all loads are secured by means of tie-down straps or netting.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor/ stacking and storage supervisor	9	5
	Driver	Incompetent/ unlicensed driver causing accidents resulting in injuries and/or property damage.	18		Only a licensed competent driver is permitted to transport people and/or equipment to site. The driver must be appointed in writing and proof of his valid driver's license must be provided.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor	10	4

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		Collision with other vehicles or pedestrians resulting in injuries	14		Maximum speed 20Km/p/h. Adhere to all road signs. Give way to large construction / articulated vehicles. Head light are to be put on when entering a construction site to enhance visibility.	Supervisor/ OHS officer/ appointed driver	10	7
		Intoxicated driver resulting in injuries and/ or property damage.	14		No drivers under the influence of any intoxicants will be permitted to drive. Any drivers found to be under the influence will be dealt with severely.	Project manager/ Appointed vehicle inspector/ vehicle driver/ OHS officer/ supervisor	10	7
		Driver speeding resulting in Fatality/Major Injury/Disability	15		Drivers to always adhere to the rules of the road and under no circumstances deviate from the prescribed speed limits and road signs. Defensive driving training to all THE MAIN CONTRACTOR employees who use company vehicles. Inspections to be carried out by appointed driver. Seat belt policy must be adhered to.	Appointed driver/ Supervisor/ OHS officer	15	6
Manual handling: Loading and offloading of material manually	Sharp and/ or protruding edges	Persons making contact with sharp/protruding edges resulting in injuries.	13		Ensure all materials are free of any sharp edges or protruding snags. Ensure appropriate PPE is worn - Safety Gloves, safety glasses, safety shoes, heavy industry garment.	Supervisor/ OHS officer	6	8
	Foundations, bearers or Pallets	Person may be struck by/ caught in/ trip on pallets/ unstable foundation resulting in injuries.	13		Level area and all load bearing equipment in satisfactory condition, this must be inspected regularly	Supervisor/ OHS officer/ appointed stacking and storage inspector	6	8
	PPE	PPE not worn during offloading resulting in injury	13		All applicable PPE must be worn when loading or offloading material.	Supervisor/ OHS officer	6	8
	Material	Persons struck by unstable load resulting in injuries	13		Ropes, straps or tie downs to be used to secure a load. Overloading is not permitted and will be governed by the THE MAIN CONTRACTOR standards.	Supervisor/ OHS officer/ appointed stacking and storage inspector	6	8

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		Poor stacking and storage causing persons to be struck by falling load resulting in injuries	13		Good stacking and storage practices must be maintained, training must be given to employees when required.	Supervisor/ OHS officer/ appointed stacking and storage inspector	6	8
		Persons being stuck by/ caught on scattered or protruding objects resulting in injuries	13		Lay down area to be barricaded and material to be packed and stored according to specified requirements. This is to be managed by the stacking and storage supervisor.	Supervisor/ OHS officer/ appointed stacking and storage inspector	6	8
	Material grip/ hand holds	Persons struck by material resulting in injuries and/ or property damage	13		All material that must be handled must have adequate place to grip the material. In the event of there not being adequate hand holds a device must be attached to the equipment to make provision for hand holds so that it can be handled more easily. Supervisor to monitor.	Supervisor/ OHS officer	6	8
	Employee	Lifting of heavy equipment without help resulting in injuries	14		Employees to be taught good manual handling/lifting practices. Planned task observations to be conducted to better the practices.	Supervisor/ OHS officer	10	7
		Incorrect posture when lifting heavy material resulting in injury	14		Good lifting practices must be followed when lifting. Training must be given to all applicable persons. No person is to attempt to lift any material exceeding 25kg on their own.	Supervisor/ OHS officer	10	7
		Persons exposed to multiple counts of material handling resulting in injuries	14		Supervisor to plan task properly to avoid multiple unnecessary trips. However multiple trips must be made in the event of heavy / a lot of material that must be transported, if this is the case the supervisor is to find a way to transport the material so that it lessens the employees manual handling exposure, by means of a trolley etc. the employee	Supervisor/ OHS officer	10	7

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	Nip points	Persons exposed to nip points on equipment resulting in injuries	13	All potential nip points must be identified to all persons exposed to and/ or operating equipment. Nip points must be guarded as far as is reasonably practicable. All persons operating equipment must be issued with safety gloves, and loose clothing must be put away or covered by a heavy industry garment. Supervisor to monitor.	Supervisor/ OHS officer	6	8
	Access and egress	Persons slipping/ tripping/ falling resulting in injuries and/ or property damage	13	All walkways must be clear and free of obstructions prior to persons manually transporting equipment. If the walkway is not free of obstructions it must be cleared. Supervisor to monitor.	Supervisor/ OHS officer	6	8
<u>Storing/ placing/ moving material in/ to the laydown/ work area.</u>	Material	Persons poor manual handling resulting in injuries	14	Awareness and training of correct posture during manual handling and use of lifting/transport i.e. trolleys to transport goods/boxes, where stacking. Ensure heavy articles are at the bottom and light articles are at the top, arrange manual handling training for employees who carry a lot of equipment and articles on a daily basis. Supervisor to manage.	Supervisor/ OHS officer	10	7
	Falling objects	Persons being struck by falling objects resulting in injuries.	13	Training and Awareness. PPE to be issued and worn. Supervisor to monitor. PPE issue records/ registers will be kept on site, and must be signed and dated by each employee.	Supervisor/ OHS officer	6	8
	Container Store	Persons poorly stacking materials and/ or flammable materials resulting in injuries and/ or property damage	13	Keep store neatly packed and flammables in the correct area. Adhere to all stacking and storage guidelines and standards.	Supervisor/ OHS officer/ Stacking and storage supervisor	6	8

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<u>Working at heights</u>	Falling objects	Persons working below struck by falling objects resulting in injuries	13	No gear, debris or other material shall be dropped from heights. Tool lanyards must be attached to all tools. Hand tool inspector to ensure that this is done and that lanyards are in good working condition. All material and equipment must be lowered or chuted to lower levels. Barricading, where available must be put up in an area where work will be performed in the vicinity of other workers to prevent them from walking below men working at height. Signage must also be used to make persons aware of men working above (where available). Hard hats to be issued to all employees. Supervisor to monitor.	Appointed hand tool inspector/ Supervisor/ OHS office	6	8
	Opening in floor	Openings in floors may cause persons/ equipment to fall resulting in injuries and property damage.	13	Demarcate, barricade and cover all openings to avoid unnecessary incidents. Put kickboards on scaffold to prevent items falling off scaffolds. Supervisor to control.	Supervisor/ OHS officer	6	8
	Sides and edges	Persons falling off sides/edges resulting in injury	13	Sides and edges must be fitted with guardrails: place handrails around all edges (use scaffolding or 8 gauge galvanized wire). The supervisor must ensure the area is safe before any work commences. Induct employees on safe work procedures. All employees working on edge to wear safety harnesses and tie onto structure or guard rail provided it can hold 10x the person's weight; this must be monitored by the supervisor.	Supervisor/ OHS officer	6	8
	Debris	Persons may trip and fall due to bad housekeeping resulting in injuries.	13	Elevated work areas to be kept clear and clean. Ensure good standard of housekeeping. Supervisor to ensure work area is safe and clean to work.	Supervisor/ OHS office	6	8
	Employee	Persons not fit to work at height i.e. vertigo, epilepsy Severe injury and/ or even death	22	Entry medicals will be conducted on all employees who will be required to work at height and only once it has been proved that the employee is fit to work at height will he be allowed to.	Supervisor/ OHS officer/ Occupational Medicine Practitioner	15	1

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	Ladders	Persons may fall from ladders resulting in injury	22		Only undamaged ladders to be used. Ensure ladders are safe for use: Pre-use checklist must be completed daily by the appointed ladder inspector prior to using the ladder and records must be kept on site. All ladders must be numbered and a register of all ladders and their conditions must be completed monthly, inspections must be carried out by the appointed inspector. Induct employees on correct use of ladders. Ladders that are found to be unsafe for use must be marked "unsafe for use" and must be taken off site.	Supervisor/ OHS officer/ Appointed ladder inspector	15	1
		Person being moved after a fall from height resulting in even more agitation of injuries	22		In the event of a person falling from height the person who fell may not be moved by a fellow employee unless that employee is a certified first aider. In the event of there being no certified first aider a supervisor or manager must be called to arrange paramedics. If the client has certified first aiders they may assist.	Supervisor/ OHS officer/ appointed First aider/ all employees	15	1
		Persons using ladders that are not long enough may result in injuries and/or property damage	13		Ladders must extend at least 1m above a working platform. Ensure ladder is long enough. Secure the ladder at the top and bottom. Constant Supervision by the supervisor.	Supervisor/ OHS officer/ Appointed ladder inspector	9	8
		Persons standing on the top 3 rungs of the ladder may cause it to tip resulting in injuries.	22		Persons are never permitted to stand on the top three rungs of the ladder. Supervisor to ensure the right ladder is used for the job. Constant Supervision is required	Supervisor/ OHS officer	15	1
		Poor positioning of the ladder causing the ladder to fall resulting in injuries	22		An extension ladder must be positioned at an angle of 60 and 70 degrees. There must be a 1 to 4 ratio for the ladder to be stable and positioned safely. Use another employee to hold the ladder in position. All A-frame stepladders must be fully extended and spreaders must be locked into position. Ensure spreaders are operational and can lock into position. Supervisor to ensure that a helper is at hand.	Supervisor/ OHS officer	15	1

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		Ladders not equipped with non-slip devices may fall/ slip resulting in injuries/property damage	22		Ensure non-slip feet are in good condition. Ladder must be inspected by means of a daily checklist prior to use. All ladders must be numbered and a register of all ladders and their conditions must be completed monthly, inspections must be carried out by the appointed inspector.	Supervisor/ OHS officer/ Appointed ladder inspector	15	1
		More than one employee using the ladder at a time could cause the ladder to break under strain, causing injury to employees	19		Ladder could break under strain, causing injury to employees. Control use of ladder. Constant Supervision by the supervisor is required.	Supervisor/ OHS officer	15	3
		Employees using a ladder facing outwards could cause an employee to slip or miss a rung, resulting in injuries	15		Induct all employees on necessity of using ladders safely. Constant Supervision is required by supervisors.	Supervisor/ OHS officer	15	6
		Persons using ladders while lashing are not secure and/or locking device is defective resulting in injuries	22		Persons to ensure that the ladder is in a secure safe to use position before accessing the ladder. Check that the lashings are locked into place and they are in a good working order. Ladders to be inspected monthly and checked daily by appointed inspector, record of inspections will be kept on site.	Supervisor/ OHS officer/ ladder inspector	15	1
		Persons working on a ladder in the vicinity of glass doors or windows and falling onto/into/ through resulting in injuries	19		Ladders are to be stabilized by a coworker at the base. In the event of working near glass where there is a possibility to fall onto it; persons must be made aware of the hazard, supervisor to give direct supervision in these instances. Adequate secure ladders / platforms, safety harnesses, Correct issue of PPE, safety shoes, hardhat, overall, gloves, safety glasses, safety harnesses. Workers trained in the correct use off PPE issued	Supervisor/ OHS officer	15	3
		Persons not accessing /ascending the ladder in a safe manner resulting in injuries.	15		A 3 point contact must be maintained with the ladder at all times. Tool belts, or use a rope and pulley to get materials or equipment to different levels must be provided. Tools may also be attached to lanyards. Supervisor to arrange lifting device.	Supervisor/ OHS officer	15	6

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		Persons using uninspected and/ or unidentified ladders resulting in injuries	18	All ladders to be identified and inspected monthly and checked daily by the appointed ladder inspector. Records of inspections will be kept onsite. Any ladders found to be unsafe for use must be clearly marked “unsafe for use” and taken off site immediately. If the ladder is beyond repair it must be cut up and disposed of in accordance with the manufactures recommendations.	Supervisor/ OHS officer/ ladder inspector	10	4
		Persons working off a ladder that is not being stabilized by a co-worker or secured by tying the ladder down resulting in injuries and/or property damage	22	Ladders to be secured while being used. (G.S.R. 13 (b)) assistants to hold ladders & extension ladders to be secured with rope. Supervisor to ensure that there is always a co-worker to stabilize the ladder for the person working on it to ensure that there is rope available to tie the ladders down. Employees must be given training on the correct technique of tying a ladder down. Tie down ropes must be inspected in conjunction with the ladders by the appointed ladder inspector. Records of inspections must be kept on site.	Supervisor/ OHS officer	15	1
	Nip points	Persons using a ladder may be injured by pinch points.	8	When adjusting the length of an extension ladder, make sure the locking device is secured before use. Secure the locking device with wire or rope. Supervisor must ensure that the ladder is working properly.	Supervisor/ OHS officer	5	11
		Persons fingers or clothing getting caught in a nip point on the safety harness resulting in injury	13	Persons must be made aware of potential nip points on the safety harness. Safety gloves must be issued and worn.	Supervisor/ OHS officer	9	8
		Persons using scaffold may be injured by nip points.	8	Nip points must be identified to the employees by the supervisor. Scaffold erector to try as far as is reasonably practicable to guard all nip points.	Supervisor/ OHS officer/ scaffold inspector	3	11
	Electricity	Persons making contact with electricity resulting in injury.	19	No work shall be performed in areas where live wires are exposed. If unsure of whether or not the wires are live an electrician must be called to test the line and make it safe prior to work commencing. All exposed wires must be insulated whether dead or live by an electrician.	Supervisor/ OHS officer	15	3

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	Scaffold	Scaffold can collapse; scaffold planks/boards may break or give way; employees may fall off scaffold resulting in injuries and/or property damage	19		Scaffold may only be erected, altered or dismantled by qualified scaffold erectors and under the supervision of a competent person appointed in writing Always use scaffold safe or unsafe for use signs. Employees must wear safety harnesses when working on scaffold. Kick boards must be placed on all scaffolds to prevent items falling off. Only use scaffold if a Qualified Scaffold Inspector has inspected the scaffold and a safe to use sign displayed. Daily inspections to be done and a register to be kept up to date, copies of such inspections will be kept onsite. Inspections must also be done after bad weather (rain, strong wind) or after any part of the scaffold has been altered.	Supervisor/ OHS officer/ scaffold inspector	15	3
		Person being moved after a fall from height resulting in even more agitation of injuries	22		In the event of a person falling from height the person who fell may not be moved by a fellow employee unless that employee is a certified first aider. In the event of there being no certified first aider a supervisor or manager must be called to arrange paramedics. If the client has certified first aiders they may assist.	Supervisor/ OHS officer/ appointed First aider/ all employees	15	1
		Persons standing on the hand rails to reach areas too high to reach from the platform may result in injuries	22		No persons are permitted to stand on the hand rails to reach an area; if the scaffold is not high enough it must be made higher to reach required area. This must be done by the appointed scaffold erector once complete the scaffold must be checked by the appointed scaffold inspector. Constant supervision in required by the supervisor.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1

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		Lose or weekly braced scaffolds will collapse. Jacks extended too far do not make sufficient contact with standards and therefore cannot hold the weight. Damaged scaffold components can break / collapse resulting in injury and/or property damage.	22	All scaffold built must be fitted with base plates. Base jacks must not extend more than 400mm. Scaffold base plates must be secure and braced. All scaffold components must be in good condition, free of corrosion and not damaged. Report unsafe scaffolds to supervisor immediately. Do not work on an unsafe scaffold. Only use scaffolds if a safe to use sign is displayed and it has been 2 nd checked by THE MAIN CONTRACTOR appointed scaffold inspector (if scaffold is provided by the client) Constant Supervision is required when work is being performed from a scaffold.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1
		Employees may be injured when attempting to access/ descend the scaffold.	22	Scaffolding shall be erected in such a way so as not to obstruct any through way or access ladder Safe and convenient access for all employees to their place of work must remain a priority Supervisor must plan access to site areas before erecting scaffolding. Scaffold to be inspected/ checked prior to use. Constant Supervision is required when work is being performed from a scaffold.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1
		Employee could trip and fall off platform and/ or tools/ equipment can fall from scaffold resulting in injury and/ or property damage.	19	All scaffold planks and kick-boards to be well secured to scaffold structure to prevent displacement this is the responsibility of the scaffold erector. Scaffold platform must be kept clean and clear of any obstructions. Scaffold Inspector must ensure scaffold is safe to work on. Constant Supervision is required when work is being performed from a scaffold.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	3

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		Collapse of scaffold if not tied to structure or braced correctly, causing employees to fall resulting in injury and/ or damage to property.	22		Scaffold is tied to existing structure, wherever possible. If scaffold cannot be tied to a structure, correct propping and bracing must be done. Use cross-bracing diagonal bracing and outriggers to support the scaffold. Use only scaffold if a "Safe to use" sign is displayed and it has been second checked by the appointed THE MAIN CONTRACTOR scaffold inspector (if scaffold is provided by the client). Constant Supervision is required when work is being performed from a scaffold.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1
		Persons placing heavy equipment on the scaffold causing collapse of scaffold resulting in injuries property damage.	22		Heavy equipment/ materials must not be placed on scaffold platforms unless the scaffold has been designed to hold the weight. Consult competent person regarding safe working load of scaffold prior to loading material and equipment onto scaffold. Supervisor to be aware of the problem and must control it. Advise employees of safe load weight on the scaffold scaffolds.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1
		Falling person may fall onto debris or material resulting in worse injuries and/ or property damage.	22		Area on ground level below scaffold must be kept free from debris and material. Supervisor to control housekeeping.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1
	Surfaces	Ground below may cause danger to stability of scaffold base plates resulting in injuries and/ or property damage.	22		Area on ground level below scaffold must be kept free from debris and material. Scaffold must only be erected on a level surface which has been cleaned of all obstructions. This must be ensured by the scaffold erector and checked by the scaffold inspector. Constant Supervision is required when work is being performed from a scaffold.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1
	Falling objects	A falling scaffold component may cause injury and/ or property damage	22		During erection and dismantling of scaffolds, employees not involved must be kept away from the area. Display "Unsafe for Use" sign. Barricade the area. Supervisor to ensure that sign has been changed and to control other employees.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1

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		Persons using uninspected and/ or unidentified scaffolds resulting in injuries	22	All scaffolds to be identified and inspected daily by the appointed scaffold inspector. Records of inspections will be kept onsite. Any scaffolds found to be unsafe for use must be clearly marked “unsafe for use” and must be inspected by the appointed scaffold inspector prior to use and must then be tagged safe for use if so. If the scaffold is determined not safe for use it must be made safe by the appointed scaffold erector and then inspected again by the appointed inspector.	Supervisor/ OHS officer/ scaffold inspector/ scaffold erector	15	
	Access and egress	Persons accessing and exiting the scaffold not using the provided access/egress resulting in injuries	22	No persons are permitted to use the cross/ stabilizer bars as a means of access/egress. Only the access way provided may be used. This must be monitored by the supervisor. Training on the correct way to access and exit a scaffold and the safe use thereof must be given.	Supervisor/ OHS officer/ scaffold inspector/ scaffold erector	15	1
	Mobile equipment	Mobile equipment crashing in to scaffolding resulting in injuries and/ or property damage.	19	Supervisors to liaise with other persons on the site to be able to schedule work during a time convenient for all so that all can work free of concern pertaining to the activities of other persons, supervisor to try to schedule work that must be performed in a mobile equipment traffic area at a time when the equipment will not be running, if this is not possible, a banksman with a whistle and a flag will be positioned in such a manner as to be able to alert the mobile equipment operator and the persons on the scaffold of each ones position, if need be, the area must be barricaded as far as is reasonably possible and a sign must be placed stipulating that there are men working above. Persons on the scaffold to hook up their safety harness to a secure anchorage point.	Supervisor/ OHS officer	15	3

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	Scaffold tag	Untagged scaffold used by persons resulting in injuries and/ or property damage.	22		Only scaffold that has been inspected by the appointed scaffold inspector and is found to be “safe for use” must be tagged safe for use and only then is it allowed to be accessed. Any scaffold that is tagged “unsafe for use” is not to be used by any persons. If it is to be used it must be made safe, inspected and tagged as such. Records of such inspections will be kept on site.	Supervisor/ OHS officer/ scaffold inspector	15	1
	Sharp and/ or protruding edges	Sharp edges and/ or protruding edges may cause injury and/ or property damage.	22		Dangerous protruding ends of scaffold must be identified clearly to warn employees of the danger. Try to eliminate protruding edges – if not possible warning signs and banners must be put in place to warn employees Supervisor to be aware of the problem and control it.	Supervisor / OHS officer/ scaffold inspector/ scaffold erector	15	1
	Safety harness	Not hooking safety harness catch to anchor point. Anchor point not secure or strong enough. Personnel fall to lower levels resulting in injuries	22		Safety harness must be worn at all times when working close to openings and edges. Safety harness to be worn when performing any work above 1.5 meters from floor level. In the event of a work height > 2m a fixed lanyard safety harness must be used. When working at height <2m an extendable lanyard with a shock absorber safety harness must be used. Ensure anchor point is secure and can hold the weight. Ensure all safety harness catches are hooked onto anchor points. If there is no place to hook a safety harness – a lifeline must be supplied. Monthly check done by the appointed safety harness inspector on all safety harnesses and registers kept on site	Safety harness inspector/ Supervisor/O HS officer	15	1

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		Persons receiving sub-standard / defective harness resulting in injuries	22		Personnel to check harnesses carefully before accepting them. Defective Harnesses must be clearly marked "DEFECTIVE" and disposed of adequately. Safety harness inspector to complete a monthly register and records of inspections to be kept on site. Persons using the harness to complete a daily checklist prior to using the harness. Any deviations must be reported to the supervisor and harness inspector immediately. Only SABS approved safety harnesses will be used.	Safety harness inspector/ Supervisor/ OHS officer	15	1
		Persons using harness with damaged frayed stitching caused by poor storage and/or wear and tear resulting in injuries	22		Harness must be stored in a hanging elevated position or in its own closeable storage container. Supplier recommendations must be taken into consideration. Monthly inspections to be carried out to inspect the integrity of the safety harness, records to be kept on site. Harnesses found to be "DEFECTIVE" must be clearly marked and destroyed.	Supervisor/ OHS Officer	15	1
		Persons using safety harnesses that have not been load tested and do not meet the SABS requirements resulting in injury.	22		Only safety harnesses that have been load tested and meet the requirements of the SABS will be allowed to be used. THE MAIN CONTRACTOR will only purchase harnesses with a valid certificate of compliance with the SABS requirements.	Assistant to the CEO 16(2)/ project manager/ supervisor/ safety officer/ safety harness inspector	15	1
		Persons incorrect application of harness resulting in injury	18		Ensure adequate training of correct application and use of harness is provided to all personnel using harnesses.	Supervisor/ OHS officer	10	4
		Persons using harness previously exposed to a fall resulting in injury	19		Ensure shock absorbers are all still intact, visual inspection on webbing and stitching before and after use. Monthly inspection register to be completed by appointed safety harness inspector and record thereof to be kept onsite.	Supervisor/ OHS officer/ safety harness inspector	15	3

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		Persons incorrectly attaching harness to anchorage point resulting in injury	22		Ensure harness is attached to an anchorage point that can hold at least 3x your weight. Training to be given. Supervisor to monitor.	Supervisor/ OHS officer	15	1
<u>Entering confined spaces to conduct work</u>	Entering confined spaces to conduct work	Asphyxiation. Poisoning from toxic or flammable gases or fumes. Trips and slips from unsure footing.	19		The following measures decrease the risk. ✓ Permit to work system should be in operation, stipulating time limits. Workers should also be competent to undertake the required work. ✓ Effective communication must be established between workers in the confined space, and those outside the area. ✓ The atmosphere of the confined area should be tested before any personnel gain entry. If dangerous fumes are found to be present, suitable breathing apparatus must be worn and the personnel entering must wear a safety rope - one end of which must be held by the person keeping watch outside. ✓ Suitable ventilation should be provided. ✓ Any equipment which may release excess oxygen or engines emitting carbon dioxide should not be used in confined spaces. ✓ Smoking, naked lights, sparking tools and nylon material should be prohibited. ✓ If during work contact with contaminated water is likely (i.e. in sewers), all workers must be suitably inoculated. ✓ Appropriate PPE should be worn.	Supervisor/ OHS officer	15	3

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	Working in tunnels/trenches where water is present	Working in tunnels/trenches where water is present	17		Appropriate clothing and good personal hygiene. Avoid exposure to the skin as infection enters through abrasions. Lanolin based barrier cream should be used before work commences. After work the face, hands and forearms should be washed with hot soapy water. Keep hands away from the face during work, to limit contact with the skin. No eating, drinking or smoking by personnel until the hygiene rules above have been observed. Supervisor to ensure all operatives are aware of the precautions to be taken, and to ensure that hygiene standards are maintained	Supervisor/ OHS officer	9	5
	Employee	Persons entering confined spaces whom suffer from claustrophobia resulting in injuries.	8		All persons who may be required to work in confined spaces are to undergo a medical to prove that they are competent/ fit to work in confined environments.	Supervisor/ OHS Officer/ Occupational Medicine Practitioner	3	11
<u>Pipe Stacking</u>	Stacking of articles	Stacking Operation not supervised by a competent person may cause severe injuries, and damage to property	14		Stacking and storage to be supervised by a person with specific knowledge. Competent person to be appointed in writing	Site Manager/ Supervisor/ Stacking and storage inspector/ OHS officer/ SHE Representative	13	7
		Stacks that are in danger of collapsing and not dismantled will cause severe injuries, possible fatalities and damage to property	14		No pipe will be stacked on top of each other, one level only. Pipe will be stacked on even ground and sand bags will be used and placed on both sides and in the middle of the pipe to support and prevent pipe from rolling	Site Manager/ Supervisor/ Stacking and storage inspector/ OHS officer/ SHE Representative	13	7

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		Stability of stacks is endangered by vehicles or other machinery or person moving past them resulting in severe injuries, possible fatalities and damage to property	14		Supervisor to ensure pipe stacking area is barricaded off with adequate signage displayed	Supervisor/ Stacking and storage inspector/ OHS officer/ SHE Representati ve	13	7
<u>Laying of pipe</u>	Pipe	Pipe not stacked and stored correctly will cause damage to property and substandard workmanship	14		Competent person to be appointed in writing. Supervisor to oversee activity	Supervisor/ Stacking and storage inspector/ OHS officer/ SHE Representati ve	13	7
		Substandard lifting equipment used whilst laying of pipe may cause severe injuries, possible fatalities and damage to property	14		Lifting equipment to be inspected by a competent person to prevent. Visual checks to be done on a daily basis	Supervisor/ OHS officer/ SHE Representati ve	13	7
		Failure to make use of flagmen whilst transporting pipe to specific area may result in severe injuries and damage to property	14		Supervisor to ensure flagmen are used and positioned correctly in order to guide traffic in right direction	Supervisor/ SHE Representati ve/ Flagmen	13	7
		Incorrect placing of pipe on top of soil whilst TLB positions itself to lower pipe with back bucket may cause pipe to roll into excavation resulting in severe injuries, possible fatalities and damage to property	14		Competent person to oversee activity. Sand bags will be placed before pipe is positioned by TLB	Supervisor/ OHS officer/ SHE Representati ve	13	7
		Taking unsafe positions whilst joining pipes together may cause severe injuries, possible fatalities and damage to property	14		Supervisor to ensure that the employees directing the pipe are standing in a safe position until pipe is steady and ready to be joined	Supervisor/ OHS officer/ SHE Representati ve	113	7
<u>Welding of Pipes</u>	Wearing Personal Protective Equipment	Insufficient personal protective equipment used whilst welding may cause severe injuries	13		Supervisor to ensure all personnel has required PPE. Overall to protect them from heat, Apron, gloves, face shield and for safety shoes	Supervisor/ OHS officer/ SHE Representati ve/ Appointed Welder	9	8

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	Welding equipment/ machine	Incompetent person operating the equipment may cause severe injuries and damage to property	13		Operators to be competent and appointed in writing	Supervisor/ OHS officer/ SHE Representative/ Appointed Welder	9	8
		No fire extinguisher available whilst using welding machine may result in severe injuries and damage to property	9		Sufficient fire equipment to be available on site at all times	Supervisor/ Fire equipment inspector/ OHS officer/ SHE Representative	5	10
		Substandard equipment used may cause severe injuries and damage to property	13		Checklists to be done before use	Supervisor/ Tools and equipment inspector/ OHS officer/ SHE Representative	9	8
		Workplace not partition off may cause exposure to person/s to flying objects and dangerous radiation	9		Supervisor to ensure area is effectively partitioned off	Supervisor/ OHS officer/ SHE Representative/ Appointed Welder	5	10
<u>Bending pipe</u>	Pipe	Persons falling/ tripping over pipes that are left lying around resulting in injuries.	13		Pipes must be stored in a demarcated storage area and this must be controlled by the appointed stacking and storage supervisor and monitored by the site supervisor.	Supervisor/ OHS officer/ stacking and storage supervisor	6	8

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		Poor manual handling/ lifting practices resulting in injury	13	Awareness and training re correct posture during manual handling and use of lifting/transport i.e. trolleys to transport goods/boxes, where stacking ensure heavy articles are at the bottom and light articles are at the top, arrange manual handling training for employees that carries a lot of equipment and articles on a daily basis.	Supervisor/ OHS officer	6	8
	Sharp and/ or protruding edges	Sharp edges and/ or protruding edges may cause injury and/ or property damage.	13	Dangerous protruding / sharp edges of pipe must be identified clearly to warn employees of the danger. Try to eliminate protruding edges – if not possible warning signs and banners must be put in place to warn employees Supervisor to be aware of the problem and control it.	Supervisor/ OHS officer	6	8
	Nip points	Persons hands being caught in nip points resulting in injuries.	8	Safety gloves must be issued to all employees who will/ may be exposed to nip points. Safety gloves must be worn when exposure to nip points is imminent, this must be monitored by the site supervisor. Recorded proof of PPE issue must be kept on site and must be signed and dated by each individual employee.	Supervisor/ OHS officer	5	11
	Pipe bender	Incorrect use of pipe bender resulting in injuries and/ or property damage	8	Only competent persons are to use the pipe bender. This must be monitored by the site supervisor. Correct techniques must be taught to all persons using the pipe bender.	Supervisor/ OHS officer	3	11
<u>Installing bosal/ PVC conduit</u>	Pipe	Persons falling/ tripping over pipes that are left lying around resulting in injuries.	8	Pipes must be stored in a demarcated storage area and this must be controlled by the appointed stacking and storage supervisor and monitored by the site supervisor.	Supervisor/ OHS officer/ stacking and storage supervisor	3	11

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		Poor manual handling/ lifting practices resulting in injury	13		Awareness and training re correct posture during manual handling and use of lifting/transport i.e. trolleys to transport goods/boxes, where stacking ensure heavy articles are at the bottom and light articles are at the top, arrange manual handling training for employees that carries a lot of equipment and articles on a daily basis.	Supervisor/ OHS officer	6	8
	Hand tools	REFER TO USE OF HAND TOOLS			REFER TO USE OF HAND TOOLS	Supervisor/ OHS officer		
	Nip points	Persons hands being caught in nip points resulting in injuries.	8		Safety gloves must be issued to all employees who will/ may be exposed to nip points. Safety gloves must be worn when exposure to nip points is imminent, this must be monitored by the site supervisor. Recorded proof of PPE issue must be kept on site and must be signed and dated by each individual employee.	Supervisor/ OHS officer	3	11
	Electricity	Persons making contact with electricity resulting in injury.	19		No work shall be performed in areas where live wires are exposed. All exposed wires must be insulated whether dead or live. If unsure of whether or not the wires are live an electrician must be called to test the line and make it safe prior to work commencing. In the event of not being certain of the position of the electrical cables it is necessary to first determine the exact position prior to placing the pipe to avoid making contact with electrical wires. Ensuring others are kept clear of the work area and screens / barriers are erected to secure the safety of others nearby.	Supervisor/ OHS officer	15	3
	Sharp and/ or protruding edges	Sharp edges and/ or protruding edges may cause injury and/ or property damage.	8		Dangerous protruding / sharp edges of pipe must be identified clearly to warn employees of the danger. Try to eliminate protruding edges – if not possible warning signs and banners must be put in place to warn employees Supervisor to be aware of the problem and control it.	Supervisor/ OHS officer	3	11

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	Falling objects	Persons below struck by falling objects resulting in injuries	13	No gear, debris or other material shall be dropped from heights. Tool lanyards must be attached to all tools. Hand tool inspector to ensure that this is done and that lanyards are in good working condition. All material and equipment must be lowered or chuted to lower levels. Supervisors to plan during site set up and induct employees. Hard hats to be issued to all employees. Work area must be barricaded as far as is reasonably practicable and a look out must be placed to warn other site workers of the men working above and to direct them as to when it is safe to pass.	Supervisor/ OHS officer	6	8
	Employee	Untrained/ incompetent persons installing conduit resulting in injuries and/ or property damage	9	Only competent persons are to perform fitting/ installation of pipe/conduit. This must be managed by the site supervisor.	Supervisor/ OHS officer	6	10
	Ladder	REFER TO LADDERS IN WORKING AT HEIGHT		REFER TO LADDERS IN WORKING AT HEIGHT	Supervisor/ OHS officer		
	Scaffold	REFER TO LADDERS IN WORKING AT HEIGHT		REFER TO SCAFFOLD IN WORKING AT HEIGHT	Supervisor/ OHS officer		
<u>Operating Portable electrical tools</u>	Operator	Untrained / unskilled person can cause damage or injury both to himself and others if operating a portable electrical tool	18	Persons that have not been determined competent to operate a specific portable electric tool will not be allowed to operate the tool on site. Only competent operators with a valid letter of competency specifying that specific tool will be permitted to operate it.	Supervisor/ OHS officer/ Project manager	10	4
	Flammable / combustible materials / liquids	The use of electrical equipment has high potential to cause a fire and/ or explosion	22	Ensuring that there are no flammable liquids or materials in the work area to create a problem. A fire extinguisher of suitable size and type must be available within 5 meters of the working area	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	15	1

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	PPE	Persons using incorrect or no PPE resulting in injuries. ALSO SEE USE OF PPE.	13	Ensuring that all personnel involved in the job have been issued with the correct PPE and use it correctly, this must be monitored by the Supervisor and checked regularly by the OHS officer. For drilling the following PPE is required: Heavy industry garment, Safety gloves, eye protection, ear plugs/muffs, safety boots/shoes, and safety shoes. For an angle grinder: Face shield, safety glasses, leather gloves, heavy industry garment, safety boots/shoes with shields over the laces of the shoes/boots. ALSO SEE USE OF PPE.	Supervisor/ OHS officer	6	8
	Machine Guarding	Operating electrical equipment from which the guards have been removed resulting in injuries	18	No equipment with missing guards will be allowed on site. All equipment guards will be in place if the equipment is to be used. Inspections prior to use must be carried out and recorded in the appropriate register by the appointed portable electrical tool inspector and checked by the OHS officer and/ or Supervisor. Proof of inspections will be kept on site.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	10	4
	Extension cords	Persons using illegal extensions / poorly joined and insulated resulting in injuries	18	No illegal lengthening of extension cords is allowed. Ensure all technicians (including subcontractors) are using legal and safe electrical equipment. Any extension cords that have been joined and are poorly insulated will not be allowed on site. All extension cords must be inspected prior to use by the appointed inspector and all inspection findings must be recorded and proof of these inspections will be kept on site.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	10	4

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	Sockets/ plugs	Persons using broken or damaged male sockets resulting in injury/electrocution	18	Plugs are not allowed to be removed from equipment and replaced with a different type (i.e. fused 2-point plugs cut off and replaced with 3-point plugs). Only plugs/ sockets that are in a good safe to use condition will be permitted to be used. Any plugs identified to be unsafe for use will be cut off of the equipment to prevent further use and the equipment will be taken off site. Inspections must be carried out by the appointed inspector and checked by the OHS officer and/ or supervisor.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	10	4
	Electricity	Persons making contact with electricity resulting in injuries.	19	All drilling machines on site that are to be used will be fitted with all the required safety mechanisms and will be checked prior to use. No work shall be performed in areas where live wires are exposed. All exposed wires must be insulated whether dead or live. If unsure of whether or not the wires are live an electrician must be called to test the line and make it safe prior to work commencing. In the event of not being certain of the position of the electrical cables it is necessary to first determine the exact position prior to drilling.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	15	3
	Noise	When working in area of > 85dBA for more than 8 hours/day, every day resulting in hearing loss	18	All drill machine operators are to be issued with and use adequate hearing protection. Supervisor to monitor over exposure to excessive noise and rotate persons to lessen exposure to each. Enforce PPE (i.e. ear plugs and/or ear muffs)	Supervisor/ OHS officer	10	4
	Shavings	Persons making contact with drill shavings and/ or grinder slag resulting in injuries	13	A good level of housekeeping must be maintained at all times. Drill shavings and grinder slag are to be swept up (by means of a brush) and disposed of appropriately. Ensure All users of such machines use the correct PPE – Eye protection, safety gloves, heavy industry garment and safety boots/ shoes. Supervisor to monitor.	Supervisor/ OHS officer	6	8

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	Dust	Persons exposed to excessive dust resulting in lung disease	18	All measures must be taken to minimize dust exposure, work area must be cleaned out or wet prior to work taking place to minimize dust. All employees to be issued with and wear appropriate dust masks in high dust areas. This must be monitored by the site supervisor.	Supervisor/ OHS officer	10	4
	Nip points	Persons exposed to nip points on equipment resulting in injuries	8	All potential nip points must be identified to all persons exposed to and/ or operating equipment. Nip points must be guarded as far as is reasonably practicable. All persons operating equipment must be issued with safety gloves, and loose clothing must be put away or covered by a heavy industry garment. Supervisor to monitor.	Supervisor/ OHS officer	3	11
	Rotating equipment	Persons being injured by rotating equipment	8	All reasonable measures must be taken guard and protect persons from exposed rotating equipment. Exposed rotating equipment must be covered by guards to prevent contact with persons or equipment. In the event of it not being able to be covered it must be switched off for the duration of the work being performed. Supervisor to monitor.	Supervisor/ OHS officer	3	11
	Equipment – drill machine	Person operating the Portable electric equipment may lose control of the equipment resulting in injuries	13	All Portable electric equipment must be fitted with a dead man switch, to prevent the equipment from being powered when contact between the operator and the equipment has been broken. Equipment must be inspected by the appointed inspector prior to use.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	6	

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		A person using a drilling machine that is unsafe has potential to cause injury and/ or damage. Operation of a machine that has not been identified for inspection may result in persons being injured as hazardous equipment may go undetected	22		Only trained competent persons should check this type of equipment. Welder should be checked by the Storeman BEFORE it is issued to anyone for use to ensure that it is safe to use and in good working order. All portable electrical tools must be identified and entered on a register/checklist. The appointed portable electrical tool inspector will inspect each Portable electric tool prior to use. A maintenance register will be implemented for annual or as need (within a year) inspections by a qualified electrician. All records of inspections conducted will be kept in a register on site.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	15	1
		Faulty stop start mechanism may cause the equipment to run uncontrolled resulting in injuries	17		No faulty equipment will be allowed on site. Prior to use of any portable electrical equipment proof of inspection done by the appointed person must be provided to the OHS officer and/ or site supervisor. Proof of inspections will be kept on site	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	9	5
		Persons use of equipment with improper cord insulation resulting in injuries/electrocution	21		Any equipment with a worn cord will be taken off site. Inspections will be carried out by the appointed inspector and record thereof will be kept on site and checked by the OHS officer and/ or supervisor	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	10	2
		Improper planning for the number of tools required on site may lead to the overexertion of any given tool resulting in the tool burning out causing injuries and/or damage to property	8		The requirements for portable electrical tools must be assessed for the project prior to the project commencing.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	3	11
		Persons operating electrical equipment without an earth leakage system resulting in injuries and/or electrocution	22		All portable electrical equipment will be fitted with or connect to a power source fitted with an earth leakage system. This must be managed by the Supervisor.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	15	1

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		Persons operating electrical equipment without double reinforced insulation resulting in injuries and/or electrocution	22	All portable electrical equipment used on site will have double reinforced insulation. Any equipment found to not comply with this standard will be removed from site. The person responsible for purchasing the equipment will be instructed to only purchase equipment that meets the above mentioned requirements.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector/ Store-man	15	1
		Persons operating a damaged drill machine resulting in injury	13	All drill machines must be numbered, monthly inspections on the machine must be carried out by that appointed portable electrical equipment inspector and pre use checklist must be completed by the operator prior to use and must be signed off by the appointed inspector. Any machine found to be "DEFECTIVE" must be removed from site. Correct issue of PPE, safety shoes, hardhat, safety glasses, gloves, hearing protection. Workers to be trained in the correct use of PPE and its limitations.	Supervisor/ OHS officer	6	8
		Persons operating a drilling machine while standing in water.	19	Electrical equipment is never to be operated in wet environments as far as is reasonably practicable; in the event of it being unavoidable the excess water surrounding the required work area must be swept clear and the area made as dry as possible. Supervisor to monitor.	Supervisor/ OHS officer	15	3
	Drill bit	Persons being struck by a broken drill bit resulting in injuries.	18	All drill machines and accessories to be inspected by the appointed portable electrical equipment inspector, any "DEFECTIVE" equipment must be marked as such and taken off site immediately. Supervisor to ensure that the correct drill bit for the task is used and that it is in a good condition. All users of drilling machines are to use the correct PPE – Eye protection, safety gloves, heavy industry garment, and safety shoes/boots.	Supervisor/ OHS officer	10	4
		Persons making contact with a hot drill bit resulting in injuries	13	Persons operating a drilling machine must exercise caution when handling the drill bit after it has been used, gloves must be worn to avoid injuries as a result of the hot bit. Supervisor to monitor.	Supervisor/ OHS officer	6	8

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	Equipment – Angle grinder	Person operating the Portable electric equipment may lose control of the equipment resulting in injuries	18		All Portable electric equipment must be fitted with a dead man switch, to prevent the equipment from being powered when contact between the operator and the equipment has been broken. Equipment must be inspected by the appointed inspector prior to use.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	10	4
		A person using an angle grinder that is unsafe has potential to cause injury and/ or damage. Operation of a machine that has not been identified for inspection may result in persons being injured as hazardous equipment may go undetected	13		Only trained competent persons should check this type of equipment. Welder should be checked by the Storeman BEFORE it is issued to anyone for use to ensure that it is safe to use and in good working order. All portable electrical tools must be identified and entered on a register/checklist. The appointed portable electrical tool inspector will inspect each Portable electric tool prior to use. A maintenance register will be implemented for annual or as need (within a year) inspections by a qualified electrician. All records of inspections conducted will be kept in a register on site.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	9	8
		Persons operating equipment with a faulty stop start mechanism may cause the equipment to run uncontrolled resulting in injuries	18		No faulty equipment will be allowed on site. Prior to use of any portable electrical equipment proof of inspection done by the appointed person must be provided to the OHS officer and/ or site supervisor. Proof of inspections will be kept on site	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	10	4
		Persons use of equipment with improper cord insulation resulting in injuries/electrocution	19		Any equipment with a worn cord will be taken off site. Inspections will be carried out by the appointed inspector and record thereof will be kept on site and checked by the OHS officer and/ or supervisor	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	15	3
		Improper planning for the number of tools required on site may lead to the overexertion of any given tool resulting in the tool burning out causing injuries and/or damage to property	13		The requirements for portable electrical tools must be assessed for the project prior to the project commencing.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	6	8

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		Persons operating electrical equipment without an earth leakage system resulting in injuries and/or electrocution	19		All portable electrical equipment will be fitted with or connect to a power source fitted with an earth leakage system. This must be managed by the Supervisor.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector	15	3
		Persons operating electrical equipment without double reinforced insulation resulting in injuries and/or electrocution	19		All portable electrical equipment used on site will have double reinforced insulation. Any equipment found to not comply with this standard will be removed from site. The person responsible for purchasing the equipment will be instructed to only purchase equipment that meets the above mentioned requirements.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector/Sto re-man	15	3
		Persons operating a damaged angle grinder resulting in injury	13		All angle grinders must be numbered, monthly inspections on the machine must be carried out by that appointed portable electrical equipment inspector and pre use checklist must be completed by the operator prior to use and must be signed off by the appointed inspector. Any machine found to be "DEFECTIVE" must be removed from site. Correct issue of PPE, safety shoes, hardhat, safety glasses, face shield, gloves, and hearing protection. Workers to be trained in the correct use of PPE and its limitations.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector/Sto re-man	6	8
	Cutting/grinding disk	Persons being struck by cutting/grinding disk while angle grinder is in operation resulting in injuries.	18		Only competent persons are to operate the angle grinder. All other employees are to stay clear of the operator while he is operating the machine. Work area must be barricaded off. Supervisor to monitor.	Supervisor/ OHS officer	10	4
		Persons changing the cutting/grinding disk resulting in injuries.	12		Persons replacing/ fitting a cutting/grinding disk must do it in a safe manner, only persons competent to operate a grinder are to partake in this activity. This must be monitored by the site supervisor, and the equipment must be inspected by the appointed inspector prior to use and record thereof must be kept onsite.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector/Sto re-man	5	9

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		Person's improper disposal of cutting/grinding disks resulting in injuries.	8	Cutting/ grinding disks must be disposed of in accordance with the prescribed method of disposal by the manufacturer/supplier. This must be monitored by the site supervisor.	Supervisor/ OHS officer	3	11
		Persons using the incorrect cutting/ grinding disk resulting in injuries.	13	Supervisor to ensure that the correct disk for the task is used. Competent operator to inform supervisor of project requirements. Adequate stock of all required disks must be kept at hand based on the required task. This must be monitored by the site supervisor.	Supervisor/ OHS officer/ Appointed Portable electric tool inspector/Sto re-man	6	8
		Persons making contact with a hot cutting/ grinding disk resulting in injuries	12	Persons operating an angle grinder must exercise caution when handling the disk after it has been used, gloves must be worn to avoid injuries as a result of the hot bit. Supervisor to monitor.	Supervisor/ OHS officer	5	9
		Persons being struck by a broken disk resulting in injuries.	13	All angle grinders and accessories to be inspected by the appointed portable electrical equipment inspector, any "DEFECTIVE" equipment must be marked as such and taken off site immediately. Supervisor to ensure that the correct disk for the task is used and that it is in a good condition. All users of angle grinders are to use the correct PPE – Eye protection, face shield, safety gloves, heavy industry garment, and safety shoes/boots.	Supervisor/ OHS officer	6	8
		Persons using the incorrect disk for the task resulting in injuries	13	Supervisor to plan activates to ensure that the correct equipment for that task is available. Supervisor to ensure that the correct disk for the task is used and that it is in a good condition.	Supervisor/ OHS officer	6	8
	Grinding sparks	Persons making contact with grinding sparks resulting in injury.	12	A portable shield must be provided and used when operating a grinder in an area where other persons may be exposed you grinding sparks. All operators are to wear the required PPE for grinding: double eye protection, face shield, leather gloves, safety boots with lace shields, heavy industry garment. All other employees are required to stand behind the spark shield to avoid contact with sparks.	Supervisor/ OHS officer	5	9

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	Vibration	Persons exposed to prolonged segmental vibration resulting in injuries	18		Persons operating portable electrical equipment to be monitored as to prevent excessive exposure to vibration. In the event of prolonged use, persons are to switch out with one another every 10 minutes. To lessen the exposure to individuals. This must be monitored by the site supervisor. If employees are exposed to vibration regularly they must undergo annual medicals to monitor their physical health, these medicals must be conducted by an Occupational Medicine Practitioner.	Supervisor/ OHS officer/ Occupation Medicine Practitioner	10	4
<u>Use of Hand Tools</u>	Noise	When working in area of > 85dBA for more than 8 hours/day, every day resulting in injuries.	18		All operators using tools are to be issued with and use adequate hearing protection. Supervisor to monitor over exposure to excessive noise and rotate persons to lessen exposure to each. Enforce PPE (i.e. ear plugs and/or ear muffs)	Supervisor/ OHS officer	10	4
	Dust	Persons exposed to excessive dust resulting in injuries	18		All measures must be taken to minimize dust exposure, work area must be cleaned out or wet prior to work taking place to minimize dust. All employees to be issued with and wear appropriate dust masks in high dust areas. This must be monitored by the site supervisor.	Supervisor/ OHS officer	10	4
	Hand tools	Persons using defective hand tools may result in injuries.	12		Pre-use inspection must be carried out; tools must be maintained on a regular basis. Supervisor must ensure all tools are kept safe to use. Tools must be inspected on a monthly basis by the appointed hand tool inspector and record of inspections must be kept on site. Any tools found to be defective must be removed from site and disposed of accordingly.	Supervisor/ OHS officer/ hand tool inspector	3	9
		Persons using dirty greasy tools resulting in injuries.	8		Always keep tools clean and store after use. Employee to be inducted regarding hand tools and correct storage thereof. Hand tool inspector to ensure that tools are clean and safe to use prior to use. Supervisor to monitor.	Supervisor/ OHS officer/ hand tool inspector	3	11

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		Insufficient tools on site: Persons may resort to using makeshift tools resulting in injuries and/or property damage	8		Proper planning by the project manager and the project supervisor is crucial, prior to the project commencing a list of all required equipment must be identified and all identified equipment must be taken to site	Supervisor/ OHS officer	3	11
		Persons may use damaged unserviceable tools resulting in injury	8		Unserviceable tools must be clearly marked as damaged and disposed of in the appropriate manner.	Supervisor/ OHS officer	3	11
		Persons may use broken or modified tools resulting in injuries	8		Broken or modified tools must be taken off site immediately once identified and must be disposed of appropriately	Supervisor/ OHS officer	3	11
		Persons selecting the wrong tool for the job resulting in injuries	8		Training must be given on tool selection for specific tasks. Supervisor to monitor non-compliance and rectify.	Supervisor/ OHS officer	3	11
		Persons using uninspected hand tools resulting in injuries	8		All hand tools must be identified and entered into a register/checklist. All hand tools must be inspected. Records of such inspections must be kept on site.	Supervisor/ OHS officer	3	11
	Projectile objects	Persons being struck by flying objects resulting in injury	13		Induct all employees to take care of their health and safety and of others working in the area. Warn others working in your area of potential hazards. All employees to wear eye protection when working in an area where they may be exposed to projectile objects.	Supervisor/ OHS officer	6	8
	Employee	Incompetent persons using hand tools may result in injuries	12		Competent people, Use correct tool or equipment for the right job. Training must be given on the correct use of hand tools. Supervisor to monitor	Supervisor/ OHS officer	3	9
	Falling objects	Persons being struck by falling objects resulting in injuries.	8		All hand tools to be fitted with tool lanyards, lanyards and tools are kept in good condition. Appropriate PPE to be issued and used by all employees	Supervisor/ OHS officer/ hand tool inspector	3	11
	Electricity	Persons making contact with electricity resulting in injuries.	22		All hand tool to have a non-conductive handle. Hand tool inspector to ensure that the handles of all tools are in sound condition and that they are not modified or "fixed" with anything that can conduct electricity. Supervisor to monitor.	Supervisor/ OHS officer/ hand tool inspector	15	1

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	PPE	Worker unprotected due to wrong PPE resulting in injuries. ALSO SEE USE OF PPE.	12	Always the correct personal protective equipment suitable for the type of tool or job being done. Use the prescribed PPE for the tool or job – goggles, gloves, dust mask, etc. this must be monitored by the site supervisor. ALSO SEE USE OF PPE.	Supervisor/ OHS officer	3	9
Excavations	Pre Inspection on equipment	Failure to do pre use inspection can cause injuries or damage to property	14	A competent person shall inspect all equipment on arrival	Supervisor/ OHS officer/ SHE Representative		7
	Use of untrained operators	Untrained operators will cause injuries to themselves and to others and damage to property	14	Only licensed operators will be allowed to operate machinery	Supervisor/ OHS officer/ SHE Representative/ Competent Operator	9	7
	Communication between Men and Machinery	Failure to have good communication can cause injuries to persons or damage to property	14	Communication must be in an understood language (English)	All Employees	13	7
	The use of flagman	Failure to use a flagman can cause injuries to persons or damage to property	13	Flagmen must be posted whilst excavation takes place	Site Manager/ Supervisor/ OHS officer/ SHE Representative	9	8
	Excavate area with excavator	Unclear markings identifying edges and failure to use flagmen may cause machinery to fall into excavation or trenched area, resulting in injury to persons or damage to property.	13	All trenches & excavations to be barricaded off by netting or temporary fencing. Backfilling to be done properly as per standard	Supervisor/ OHS officer/ SHE Representative	6	8
		Excavation area not barricaded properly could cause machinery and people to enter the danger area of the excavation and cause it to collapse	13	All trenches & excavations to be barricaded off. Backfilling to be done properly as per standard	Supervisor/ OHS officer/ SHE Representative	6	8

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	Compacting	An unqualified operator will cause injury to himself, person/s and damage to property	9		Only licensed operators must operate machinery	Supervisor/ OHS officer/ SHE Representati ve	3	10
<u>Backfilling and compacting</u>	Barricading around backfilling area	No barricading netting may cause unauthorized access which may result in injuries	9		Barricade netting and signage to be erected and displayed. Visual inspection to be done on a daily basis	Supervisor/ OHS officer/ SHE Representati ve	6	10
	Pre-inspections	No inspections done on machinery/ equipment will cause injury to people and damage to property	13		Pre-inspection checklist to be in place with equipment register on site. No machinery or any equipment will be authorized to leave the site without inspection and the knowledge of the SHE representative	Supervisor/ OHS officer/ SHE Representati ve	6	8
	Storage of flammable liquids	Gases could build up resulting in explosion if ignited causing severe injuries, possible fatalities and damage to property	13		Liquids to be store in a chemical store and checked regularly. Fire extinguishers to be nearby and easy accessible	Supervisor/ OHS officer/ SHE Representati ve/ Controller of flammable liquids store	6	8
	Operating of machinery/equip ment	Incompetent persons using machinery could lose control and injure people and damage to property	13		Competent operator to be appointed in writing	Site Manager/ Supervisor/ OHS officer	6	8
	Controlling traffic around backfilling area	Failure to make use of a flagman may cause injury to people and damage to property	13		Flagman to be appointed in writing to control flow of traffic on site	Site Manager/ Supervisor/ OHS officer	6	8
	Compacting machinery	Operating machinery without required PPE may cause an injury to operator/ lung diseases, illnesses and/ or hearing loss	9		Regular supply and wearing of required PPE (dust masks, ear/eye/hands/head/feet protection)	Supervisor/ OHS officer	5	10
		People working in same area while compactor is in operation may cause excessive noise	9		People to be removed from compacting area were compacter is busy compacting till compacting is finished and/ or use ear protection whilst working	Supervisor/ OHS officer/ SHE Representati ve	5	10

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		Machines are left unattended and running with no supervision which may cause severe injuries to people and damage to property	9		Competent Operators to be made aware in toolbox talks that no moving machinery will be left unattended	Supervisor/ OHS officer/ SHE Representati ve	5	10
Reinforcing	Receiving and handling of reinforcing	The wrong reinforcement being delivered which can cause substandard workmanship	13		Goods to be checked according to order and to be supervised by a competent person	Site Manager/ Supervisor	6	8
		Reinforcing handled incorrectly may cause damage to property and possible injury to persons	9		Flagmen to give directions to driver, and workers to wear the required PPE	Supervisor/ OHS officer/ SHE Representati ve	5	10
	Handling of material by hand	Reinforcing is not stable after being loosened for offloading which can cause reinforcing to fall from truck resulting in severe injuries and property damage	9		Use TLB to off load material. Competent person to oversee whilst offloading take place	Supervisor/ OHS officer/ SHE Representati ve	5	10
		Employees can trip and fall carrying too heavy material causing injury to person/s and damage to property	9		Correct lifting procedure to be in place. Housekeeping to be in good order at all times	Supervisor/ OHS officer/ SHE Representati ve	5	10
		Sharp edges can cut hands causing an injury to person	5		Use correct and required PPE whilst working	Supervisor/ OHS officer/ SHE Representati ve	2	14
		Incorrect lifting may cause severe back injuries	9		Use correct lifting procedure	Supervisor/ OHS officer/ SHE Representati ve	2	10
	Handling of reinforcing by mobile machinery	Sub standard equipment can cause load to fall, may cause severe injuries and damage to property	9		Competent person to inspect sling, number sling on register and sling certificate available in safety file	Supervisor/ OHS officer/ SHE Representati ve/ Appointed Operator	2	10

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		Incorrect sling used might cause load to fall may cause severe injuries and damage to property	9		Load certificate to be available	Supervisor/ OHS officer/ SHE Representative/ Appointed Operator	2	10
		Unauthorized operator operates machinery may cause severe injuries and damage to property	9		Only qualified operators to operate machinery. Pre-use checklists to be done by operators and overseen by supervisors.	Supervisor/ OHS officer/ SHE Representative/ Appointed Operator	5	10
		Sub standard machinery being used might cause severe injuries and damage to property	9		Supervisor to ensure all machinery are checked before leaving site camp	Supervisor/ OHS officer/ SHE Representative/ Appointed Operator	5	10
	Fixing or placing rebar in position	Workers walking on rebar will cause employees to trip and fall	5		Safe platform to be erected and inspected by a competent person	Supervisor/ OHS officer/ SHE Representative	3	14
		Rebar is handled without safety gloves will cause sharp edges to cut hands and fingers	4		Wear correct PPE at all times (gloves)	Supervisor/ OHS officer/ SHE Representative	3	15
		Material lifted up wrongly may cause back injuries due to incorrect lifting procedure	4		Train people on correct lifting technique and ensure all workers attend safety toolbox talks	Supervisor/ OHS officer/ SHE Representative	3	15
		Workers do not wear eye protection whilst cutting wires which can cause binding wire to hurt eyes	4		Wear required PPE (eye protection and gloves)	Supervisor/ OHS officer/ SHE Representative	3	15

CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY -
CONTRACT 2 – Mthonjeni Baseline Risk

		Binding wires left to lie around untied, loose binding wire could cause tripping and falling	4	Keep wire roll up neatly. Responsible person/s to oversee and check housekeeping on a daily basis	Supervisor/ OHS officer/ SHE Representati ve	3	15
Pouring of Concrete	Truck driving in working area	Truck has no reverse hooter causing truck to run into employees resulting serious injuries and possible fatality	13	Truck must have a reverse hooter, Appoint flagman to guide truck into position .wearing reflector vest and directing the driver	Site Manager/ Supervisor/ Flagman/ SHE Representati ve/ Appointed Operator	6	8
		Truck not complying with site requirements may cause severe injuries and damage to property	13	Ensure pre inspections are done according to site requirements.	Site Manager/ Supervisor/ Flagman/ SHE Representati ve/ OHS officer	6	8
	Discharging concrete	Workers do not wear proper eye protection when discharging concrete may cause splashes into eyes	9	All employees working in that area to wear eye protection	Supervisor/ SHE Representati ve/ OHS officer	5	10
		A worker tries to move the chutes into place with his hands causing injuries to hands or fingers	9	All employees to wear required PPE whilst working on site (PVC gloves; eye protection) Good communication needed whilst discharging of concrete	Supervisor/ SHE Representati ve/ OHS officer	5	10
	Placing concrete	Concrete coming in contact with skin. Cement on skin may cause chemical burns to employee	5	All employees to wear required PPE whilst working on site. (PVC gloves, overall, eye protection and safety shoes)	Supervisor/ SHE Representati ve/ OHS officer	3	14

CONTRACT NO.: ORTDM SCMU 45-24/25
MTHONJENI / eNGXANGXASINI WATER SUPPLY -
CONTRACT 2 – Mthonjeni Baseline Risk

		Workers receiving concrete while standing on rebar may cause slip, trip and fall resulting in severe injuries	5		Provide proper platform when pouring concrete	Site Manager/ Supervisor/ SHE Representative/ OHS officer	3	14
	Vibrating Concrete	Excessive noise may cause hearing loss to employees and to other persons in the surrounded area.	5		Required PPE to be worn (Ear Protection)	Supervisor/ SHE Representative/ OHS officer	3	14
		Sub standard poker may cause injuries	9		Equipment to be inspected monthly, indicated on a register. All faulty equipment to be reported and replaced	Supervisor/ SHE Representative/ OHS officer	5	10
	Floating and leveling of concrete	Workers hands are injured whilst working with a float	5		Wear Required PPE (PVC gloves)	Supervisor/ SHE Representative/ OHS officer	3	14
	Mixing concrete by hand	Making use of substandard tools and equipment may result in severe injury	12		Tools and equipment shall be checked and inspected properly before use. Substandard tools and equipment shall be reported and replaced immediately	Supervisor/ SHE Representative/ OHS officer	5	10
		Failure to use PPE will result in severe injuries and health problems	21		PPE will be issued. A register will be kept on file. The supervisor and safety rep will ensure employees adhere to our requirements	Supervisor/ SHE Representative/ OHS officer	10	10

OHS ACKNOWLEDGEMENT SHEET FOR CONTRACTORS – JOB SAFETY ANALYSIS

JSA Title: Risk assessment and management

Prepared By: EMPLOYER AGENT (CHSA)

Date: 26 MAY 2025

Business Unit: ORTDM-WATER SUPPLY SCHEME / OHS

Work/Project Location: MTHONJENI / eNGXANGXASINI WATER
SUPPLY - CONTRACT 2

Sign On Sheet

NOTE:
By my signature below I hereby state that I have read and understand the Job Safety Analysis on the previous page/s, and will abide by any and all conditions and restrictions stated therein

<u>Name</u>	<u>Company</u>	<u>Contractors No</u>	<u>Date</u>	<u>Signature</u>

APPENDIX J: BOOK OF DRAWINGS

		Telephone: (+27) 43 748 0018 Email: info@romh.co.za Website: www.romh.co.za	DRAWING ISSUE REGISTER & ISSUE SLIP		PROJECT : MTHONJENI / NGXANGXASINI WATER SUPPLY PROJECT No. : ORTDM SC						
Technical enquiries: L. Senti Commercial enquiries: M. Kashe Prepared by: A. Mayekiso		0847316689			LEGEND:		Issued for information	Issued for Tender	Issued for construction	Issued for approval	
DRAWING NUMBER:		DRAWING TITLE			DATE:		REVISIONS:				
ISSUED BY: A. MAYEKISO ISSUED DATE: 2025-05-22					METHOD OF DELIVERY:		REVISION 22 May 2025				
TENDER:											
PRC-027-07-076-04-01	LOCALITY PLAN			EMAIL	0						
PRC-027-07-076-04-02	SITE DEVELOPMENT PLAN			EMAIL	0						
PRC-027-07-076-04-03	RETICULATION LAYOUT PLAN			EMAIL	0						
PRC-027-07-076-04-04	LONGITUDINAL SECTION: SHEET 1 OF 2			EMAIL	0						
PRC-027-07-076-04-05	LONGITUDINAL SECTION: SHEET 2 OF 2			EMAIL	0						
PRC-027-07-076-04-06	TYPICAL SPRING PROTECTION INFRASTRUCTURE DETAILS			EMAIL	0						
PRC-027-07-076-04-07	TYPICAL STANDPIPE INFRASTRUCTURE DETAILS			EMAIL	0						
PRC-027-07-076-04-08	TYPICAL AIR- AND SCOUR VALVE INFRASTRUCTURE DETAILS			EMAIL	0						
PRC-027-07-076-04-09	DISTRIBUTION RESERVOIR DETAILS			EMAIL	0						
PRC-027-07-076-04-10	TYPICAL FENCING DETAILS			EMAIL	0						
PRC-027-07-076-04-11	TYPICAL WATER INFRASTRUCTURE INFRASTRUCTURE			EMAIL	0						
PRC-027-07-076-04-12	TYPICAL PRESSURE REDUCING VALVE AND BREAK PRESSURE TANK INFRASTRUCTURE DETAILS			EMAIL	0						

ISSUED BY: L. SENTI PrTech(Eng) PrCPM 201470402
 COMPANY: ROMH Consulting
 DATE & SIGNATURE: 2025/05/22
 COMMENTS:

RECEIVED BY:
 COMPANY:
 DATE & SIGNATURE:
 COMMENTS:

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