

CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY



CAPITAL PROJECT

THE CONSTRUCTION OF A 5MI RESERVOIR AT SILOBELA, EXTENSION 5

Contract No. ALMT 01/ 2025

Chief Albert Luthuli Local Municipality

PO Box 24
CAROLINA
1185

Contact for Administration:

Name: Mr James Nkosi

Telephone. (017) 843 4025

Chief Albert Luthuli Local Municipality

PO Box 24
CAROLINA
1185

Contact for Technical:

Name: Mr Bongani Thela

Telephone. (017) 843 4084/5

Tenderer:.....

Registration Number:.....

Total of the prices inclusive of Value Added Tax: R.....

Amount in Words:.....

CLOSING DATE & TIME: 06 OCTOBER 2025

TENDER

This part of the Bid Specification Document consists of the following three sections:

Part T1: Submission procedures

- T1.1 Notice and invitation to submit an expression of interest
- T1.2 Submission data

Part T2: Returnable documents

- T2.1 List of returnable documents
- T2.2 Submission schedules

Part C3: Indicative scope of work

- C3 Indicative scope of work

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Part T1: Tendering Procedures

T1.1 Tender Notice and Invitation to Tender



CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY

INVITATION TO TENDER AND TENDER NOTICE

Tenders are hereby invited from functionality contractors for **THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5**, Tenderers should have a minimum CIBD Contractor Grading of **7CE or Higher**.

Tender documents will be obtainable from Supply Chain Management Unit (SCM) as from **10 September 2025** from the Chief Albert Luthuli Local Municipality Office in Carolina against payment of a non-refundable levy of R970,42. Only bank guaranteed cheques or cash will be accepted. Cheques shall be made payable to Chief Albert Luthuli Local Municipality. Documents can be obtained during normal working hours which are 08h00 - 17h00 Mondays to Fridays. This bid document is also available at no cost on the e-Tender Website at <http://www.etenders.gov.za/content/advertised-tenders>, CIDB Website and on CALLM Website.

Duly completed tenders enclosed in a sealed envelope marked **"THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5, CLOSING DATE: at 12h00"** with the name of the Tenderer, shall be deposited in the tender box provided at the Chief Albert Luthuli Local Municipality at 28 Kerk Street, Carolina before 12h00 on the closing date.

There will be a compulsory briefing session on the **16 September 2025 at 11am** at the SCM Boardroom, Carolina and tenderers are advised to read and understand the tender conditions.

Technical queries may be directed to **Mr. B Thela on 017 843 4085 / 071 843 4085** or email: bonganit@albertluthuli.gov.za. Tender documents enquiries may be directed to **Mr. J Nkosi on 017 843 4036** or email nkosija@albertluthuli.gov.za

All tenders will be subjected to the 80/10-point system and functionality criteria. The 90/10 point system shall apply whereby a contract will be allocated to a tenderer in accordance with the Preferential Procurement Policy Framework Act, Act No 5 of 2000 and as defined in the Conditions of Tender in the tender document, read in conjunction with the Preferential Procurement Policy of Chief Albert Luthuli Local Municipality where the lowest acceptable tender will determine the Preferential point system to be used: 80/20 or 90/10. The Preferential Procurement Regulations, 2022 do not make sub-contracting compulsory, however the revised regulations require organs of state to identify tenders, where it is feasible, to sub-contract a minimum of 30% of the value of the contract for contracts.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



T1.1 Tender Notice and Invitation to Tender

CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY

INVITATION TO TENDER AND TENDER NOTICE

Tenderers must have the necessary skills, experience, and capacity to perform the required work as outlined. The Contract Participation Goals CPG component is 30% minimum.

The closing date and time for the tender is **06 October 2025**.

The Municipality is not obliged to appoint the bidder with the lowest price but will consider the bidder scoring the highest number of points in line with the set criteria. The Chief Albert Luthuli Local Municipality reserves the right not to make any appointment for this tender.

Mr. ME THABETHE
MUNICIPAL MANAGER

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

T1.2 Tender data

The conditions of tender are the Standard Conditions of Tender as contained:

1. The Conditions of Tender are the Standard Conditions of Tender as contained in SANS 10845-3:2015 Edition 1.
2. SANS 10845-3:2015 Edition 1 is obtainable from SABS Standards Division, 1 Dr Lategan Road, Groenkloof or Private Bag X191, Pretoria, 0001. Tel: +27 12 428 7911 Fax: +27 12 344 1568. website: www.sabs.co.za.

SANS 10845-4 make several references to the Submission Data for details that apply specifically to this submission. The Submission Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions for the calling for Expressions of Interest.

Each item of data given below is cross-referenced to the clause in SANS 10845-4 to which it mainly applies.

Clause number	Tender Data
3.1	The Employer is Chief Albert Luthuli Local Municipality
3.2	The documents associated with the calling for expressions of interest issued by the employer comprise: THE TENDER Part T1: Tendering procedures T1.1 - Tender notice and invitation to tender T1.2 - Tender data Part T2: Returnable documents T2.1 - List of returnable documents T2.2 - Returnable schedules THE CONTRACT Part C1: Agreements and Contract data C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 - Performance Bond Part C2: Pricing data C2.1 - Pricing assumptions C2.2 - Bill of Quantities Part C3: Scope of work C3 - Scope of work Part C4: Site information C4 - Site information

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.4	The employer's agent is: Name: Kufanikiwa Consulting (Pty) Ltd Physical address: Unit 6 Forest Square 11 Derby Place Westville 3629 Postal address: Suite 208 POSTNET x 817 New Germany 3620 Telephone: +27(0) 31 701 1038 Fax: +27 (0) 31 701 0963 E-mail: water@kufanikiwa.co.za
3.4	The language for communications is English
3.6	The competitive selection procedure shall be applied.
4.1	Only those respondents who satisfy the following eligibility criteria and who provide the required evidence in their submissions are eligible to have their submissions evaluated: 1) Extensive experience in Civil Engineering Projects related to Water Bulk Pipelines and Pump Stations
4.1	Only those respondents who are registered with the Construction Industry Development Board, or are capable of being so registered within 21 working days from the closing date for submission, in a contractor grading designation of 7CE or Higher, are eligible to have their submissions evaluated. Joint ventures are eligible to have their submissions evaluated provided that: - Every member of the joint venture is registered with the CIDB not later than 21 working days from the closing date for submissions. - The lead partner has a contractor grading designation in the 7CE or Higher class of construction work; and - The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than the required contractor grading designation.
4.1	- The following respondents who are registered with the CIDB, or are capable of being so registered not later than 21 working days from the closing date for the submission, are eligible to have their submissions evaluated: - Those respondents who are registered with the Construction Industry Development Board, or are capable of being so registered within 21 working days from the closing date for submission, in a contractor grading designation of 7CE or Higher; and Joint ventures are eligible to have their submissions evaluated provided that: - Every member of the joint venture is registered with the CIDB not later than 21 working days from the closing date for submissions. - The lead partner has a contractor grading designation in the 8CEPE or Higher class of construction work; and - The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than the required contractor grading designation.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.7	The employer's address for delivery of submissions and identification details to be shown on each submission package are: Location of tender box: Ground Floor Physical address: 28 Kerk Street; Carolina; 1185 Identification details: The Municipal Manager, Chief Albert Luthuli Local Municipality, Tender No: ALMT01/ 2025 - THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5
4.9	The closing time for submissions is as stated in the Notice and Invitation to Submit an Expression of Interest.
4.9	Telephonic, telegraphic, telex, facsimile or e-mailed submissions offers will not be accepted.
4.12	No alternative tender offers will be considered
4.12	If a tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the employer's standards and requirements, the details of which may be obtained from the employer's agent. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the employer's costs in confirming the acceptability of the detailed design.
4.13.1	Parts of each tender offer communicated on paper shall be submitted as an original, plus 0 copies.
4.13.5	A compulsory clarification meeting with the Employer and its Representatives will take place at : SCM Boardroom 28 Kerk Street Carolina 1185 Date: Tuesday, 16 September 2025 Time: 11:00am Confirmation of attendance will be recorded in the attendance register to be signed by all bidders. No individual may represent more than one bidder at the compulsory briefing session. Representatives must attend the session in totality.
4.15	Non-completion of the attendance register will lead to automatic disqualification. Tender documents will not be made available during the clarification meeting. Addenda will be issued to and submissions will be received only from those responding entities appearing on the attendance list.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.13.4	The tenderer is required to submit with his tender the following certificates: 1) SARS Compliance Status PIN is required 2) Company Registration Certificate 3) Municipal rates statement of account not older than 3 months and not in arrears for more than 90 days. 4) CIDB Certificate 5) Registration on National Treasury central supplier database 6) Workman's Compensation Certificate 7) Valid original or certified copy of BBB-EE or a sworn affidavit 8) Tenders bank details accompanied by the stamped bank confirmation letter not older than 3 months 9) CSD Summary report 10) 3 Years Audited Financial Statement
4.13.6	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
4.15	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
4.16	The tender offer validity period is 90 days
4.20	The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part C1.3 of this procurement document
5.1	The Employer will respond to requests for clarification received up to 7 working days before the tender closing time.
5.2	The employer shall issue addenda until 7 working days before tender closing time.
5.4	Tenders will be opened in public
5.11.1	The financial offer will be reduced to a comparative basis using the Tender Assessment Schedule.
5.11.4	The procedure for the evaluation of responsive tenders is Method 3 (Financial offer and preference). There will be 3 stages utilised for evaluate responsive tenders. Stage 1 Utilising this procedure, functionality and quality will be used as a threshold for evaluations in this section. The minimum number of evaluation points for functionality and quality, and the calculation thereof, are according to the provisions of 5.11.9. Tender offers that fail to score the minimum number of points for quality will be rejected and deemed non-responsive. Stage 2 The financial offer will be scored using the following formula: $A = \frac{(1 - (P - P_m))}{P_m}$ The value of value of W_1 is: 1) 90 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R50,000,000 or 2) 80 where the financial value inclusive of VAT of one or more responsive tender offers have a value that equals or is less than R 50,000,000

 Contractor

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 Employer

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3) this bid is anticipated to be less than R50 000 000 therefore a 80/20 method shall be used.

Stage 3

1. Up to 100 minus W_1 tender evaluation points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed.

80/20 POINT SYSTEM DEPENDING ON THE LOWEST ACCEPTABLE TENDER: For procurement transactions with rand value greater than R50 Million (Inclusive of all applicable taxes) the specific goals as listed in table 3 below are applicable

No	Specific Goals	Preference Points allocated out of 20	Documentation to be submitted by bidders to validate their claim for points
1.	An EME or QSE or any entity which is at least 51% owned by Historically Disadvantaged Individuals (HDI)	10	• ID Copy Or • SANAS Accredited BBBEE Certificate or sworn affidavit where applicable Or • CSD Report Or • CIPC (company registration)
2.	Located in Chief Albert Luthuli Municipality or Gert Sibande District Municipality or Mpumalanga Province area for work to be done or services to be rendered in that area	2	• ID Copy (Mandatory) Or • Office Municipal Rates Statement Or • Permission to Occupy from local chief in case of rural areas (PTO) Or • Lease Agreement
3.	An EME or QSE or any entity which is at least 51% owned by women	4	• ID Copy Or • CSD Report Or • CIPC (company registration)
4.	An EME or QSE or any entity which is at least 51% owned by people with disability	2	• ID Copy (Mandatory) Or • Medical Certificate Or • South African Social Security Agency (SASSA) registration Or • National Council for Persons with Physical Disability in South Africa registration (NCPDPA) Or • CSD Report Or • CIPC (company registration)
5.	An EME or QSE or any entity which is at least 51% owned by youth .	2	• ID Copy Or • CSD Report Or • CIPC (company registration)

90/10 POINT SYSTEM DEPENDING ON THE LOWEST ACCEPTABLE TENDER:

For procurement transactions with rand value greater than R50 Million (Inclusive of all applicable taxes) the specific goals as listed in table 3 below are applicable

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Serial No	Specific Goals	Preference Points allocated out of 10	Documentation to be submitted by bidders to validate their claim for points
1.	An EME or QSE or any entity which is at least 51% owned by Historically Disadvantaged Individuals (HDI)	4	• ID Copy Or • SANAS Accredited BBEE Certificate or sworn affidavit where applicable Or • CSD Report Or • CIPC (company registration)
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area	2	• ID Copy (Mandatory) Or • Office Municipal Rates Statement Or • Permission To Occupy from local chief in case of rural areas (PTO) Or • Lease Agreement
3.	An EME or QSE or any entity which is at least 51% owned by women	2	• ID Copy • CSD Report Or • CIPC (company registration)
4.	An EME or QSE or any entity which is at least 51% owned by people with disability OR An EME or QSE or any entity which is at least 51% owned by youth.	2	• ID Copy (Mandatory) Or • Medical Certificate Or • South African Social Security Agency (SASSA) registration Or • National Council for Persons with Physical Disability in South Africa registration (NCPDPSA) • ID Copy • CSD Report Or • CIPC (company registration)

2. Bidders who qualify as EME's in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor or an affidavit. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.

3. Bidders other than EME's must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

4. A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

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

6. Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

7. A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the

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	contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub- contractor is an EME that has the capability and ability to execute the sub-contract. 8. A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.
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Contractor

Witness 1

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Employer

Witness 1

Witness 2

Part T2: Returnable Documents**T2.1 List of Returnable Documents**

The following documents are to be completed and returned as they constitute 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 return all information requested.

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PART T2: RETURNABLE DOCUMENTS

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 1: INVITATION TO BID – PART A

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY)					
BID NUMBER:	ALMT 01/ 2025	CLOSING DATE:	06 OCTOBER 2025	CLOSING TIME:	12H00
DESCRIPTION	THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
28 Kerk Street					
Carolina, 1185					
Tender Box Situated at the ground floor in the Chief Albert Luthuli Municipality Head Office in Carolina					
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:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT		☐ Yes ☐ No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?					
TOTAL NUMBER OF ITEMS 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]	
SIGNATURE OF BIDDER			TOTAL BID PRICE	R	
CAPACITY UNDER WHICH THIS BID IS SIGNED:			DATE		
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:					
DEPARTMENT	SCM Unit		TECHNICAL INFORMATION MAY BE DIRECTED TO:		
CONTACT PERSON	Mr J Nkosi		CONTACT PERSON	Mr Bongani Thela	
TELEPHONE NUMBER	017 843 4036		TELEPHONE NUMBER	017 843 4084 017 843 4085	
FACSIMILE NUMBER	017 843 4001		FACSIMILE NUMBER	017 843 4001	
E-MAIL ADDRESS	nkosija@albertluthuli.gov.za		E-MAIL ADDRESS	bonganit@albertluthuli.gov.za	

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

PART B

TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION. 1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED – (NOT TO BE RE-TYPED) OR ONLINE 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, 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:

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

MBD 2: DECLARATION OF GOOD STANDING REGARDING TAX

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.

In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate

MBD 2 Tax Clearance Certificate Requirements

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

1. In order to meet this requirement bidder is required to complete in full the attached form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Pin Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
2. SARS will then furnish the bidder with a Tax Pin that will be valid for a period of 1 (one) year from the date of approval.
3. The Tax Pin must be submitted together with the bid. Failure to submit the original and valid Tax Pin will result in the invalidation of the bid. Certified copies of the Tax Pin will not be acceptable.
4. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Pin.
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. The Tax Pin must be submitted together with this bid. Failure to submit the Tax Pin will result in invalidation of the bid. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Pin.

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- Original valid Tax Pin
- Proof of Registration with Central Supplier Database (CSD)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 4: DECLARATION OF INTEREST

1 Any legal person, including persons employed by the State¹, or persons having a kinship with persons employed by the State, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the State, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where:

- the bidder is employed by the State; and/or
- the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

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

2.1 Full Name of bidder or his or her representative:

2.2 Identity Number:

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

2.4 Company Registration Number:

2.5 Tax Reference Number:

2.6 VAT Registration Number:

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

¹“State” means:

- a) 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);
- b) any municipality or municipal entity;
- c) provincial legislature;
- d) National Assembly or the National Council of Provinces; or
- e) Parliament.

3 “Shareholder” means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

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

2.7.1 If so, furnish the following particulars:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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

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

Position occupied in the state institution:

Any other particulars:

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

2.7.2.1 If yes, did you attached proof of such authority to the bid document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.)

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

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

2.8.1 If so, furnish particulars:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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

2.9.1 If so, furnish particulars:

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

2.10.1 If so, furnish particulars:

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

2.11.1 If so, furnish particulars:

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

Full Name	Identity Number	Personal Tax Reference Number	State Employee Number / Persal Number

3. DECLARATION

I, the undersigned (name) _____

Certify that the information furnished in paragraphs 2 and 3 above is correct.

I accept that the state may reject the bid or act against me in terms of paragraph 23 of the general conditions of contract should this declaration prove to be false.

Signature

Date

Position

Name of bidder

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 6.1: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

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

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

The lowest acceptable tender will determine the Preferential point system to be used:

- 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 Points for this bid shall be awarded for:

- (a) Price; and
- (b) Chief Albert Luthuli Municipal objectives

1.3 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80/ 90
Municipal Objectives	20/ 10
Total points must not exceed	100

1.4 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (b) **“prices”** 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;

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3. POINTS AWARDED FOR PRICE

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

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

80/20

or

90/10

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

P_s = Points scored for price of bid under consideration

P_t = Price of bid under consideration

$P_{\min}$ = Price of lowest acceptable bid

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

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 (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
1. An EME or QSE or any entity which is at least 51% owned by Historically Disadvantaged Individuals (HDI)	4	10		
2. Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area	2	2		
3. An EME or QSE or any entity which is at least 51% owned by women	2	4		
4. An EME or QSE or any entity which is at least 51% owned by people with disability Or	2	2		
5. An EME or QSE or any entity which is at least 51% owned by youth . (only one specific goal is applicable between specific goal number 4	2	2		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
and specific goal number 5 under 90/10 Preference Point System)				

5. SUB-CONTRACTING

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

(Tick applicable box)

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

5.1.1 If yes, indicate:

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

(Tick applicable box)

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

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2022:

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Historically Disadvantages people		
Located in CALLM or GSDM or Mpumalanga		
Women Ownership		
People with disabilities		
Youth Owned		

6. DECLARATION WITH REGARD TO COMPANY/FIRM

6.1 Name of company/firm:.....

6.2 VAT registration number:.....

6.3 Company registration number:.....

6.4 TYPE OF COMPANY/ FIRM

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

6.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

6.6 COMPANY CLASSIFICATION

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

6.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:.....

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

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

- 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

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
- (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

WITNESSES:

1.

2.

SIGNATURE (S) OF BIDDER (S)

Date:

Address

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 6.2 : DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

This Municipal Bidding Document (MBD 6.2) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial development/ip.jsp](http://www.thedti.gov.za/industrial%20development/ip.jsp) at no cost.

- 1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
_____	_____ %
_____	_____ %
_____	_____ %

- 3.** Does any portion of the goods or services offered have any imported content?
(*Tick applicable box*)

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

- 3.1** If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

- 4.** Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO. ALMT 01/ 2025

ISSUED BY: CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY

NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names),
do hereby declare, in my capacity as
of(name of bidder entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
 - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 7.1: CONTRACT FORM – PURCHASE OF GOODS

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SUCCESSFUL BIDDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SUCCESSFUL BIDDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to the **CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY** in accordance with the requirements and specifications stipulated in bid number **ALMT 01/ 2025** at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
 - (i) Bidding documents, viz
 - Invitation to bid;
 - Central Supply Database registration;
 - Pricing schedule(s);
 - Technical Specification(s);
 - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
 - Declaration of interest;
 - Declaration of bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
 - (ii) General Conditions of Contract; and
 - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.
5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
6. I confirm that I am duly authorised to sign this contract.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**NAME
(PRINT)**

CAPACITY

SIGNATURE

**NAME OF
FIRM**

DATE

Witnesses

1.....

2.....

DATE:
.....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 7.2: CONTRACT FORM - RENDERING OF SERVICES

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SERVICE PROVIDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SERVICE PROVIDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)

7. I hereby undertake to render services described in the attached bidding documents to the **CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY** in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number **ALMT 01/ 2025** at the price/s quoted. My offer/s remains binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.
8. The following documents shall be deemed to form and be read and construed as part of this agreement:
- (iv) Bidding documents, viz
 - Invitation to bid;
 - Central Supply Database registration;
 - Pricing schedule(s);
 - Filled in task directive/proposal;
 - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
 - Declaration of interest;
 - Declaration of Bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
 - (v) General Conditions of Contract; and
 - (vi) Other (specify)
9. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
10. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.
11. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
12. I confirm that I am duly authorised to sign this contract.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**NAME
(PRINT)**

CAPACITY

SIGNATURE

**NAME OF
FIRM**

DATE

Witnesses

1.....

2.....
DATE:
.....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 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.	Yes ☐	No ☐
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.	Yes ☐	No ☐
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?	Yes ☐	No ☐
4.3.1	If so, furnish particulars:		
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 ☐

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

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 (name) _____

certify that the information furnished on this declaration form is true and correct.

I accept that the state may reject the bid or act against me in terms of paragraph 23 of the general conditions of contract should this declaration prove to be false.

Signature

Date

Position

Name of bidder

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MDB 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 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 offers.*

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

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

Contract Number ALMP 01/ 2025

THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5
(Bid Number and Description)

In response to the invitation for the bid made by:

Chief Albert Luthuli Local Municipality
(Name of Municipality / Municipal Entity)

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

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

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

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- 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.
- 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

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.*

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The quality criteria and maximum score in respect of each of the criteria are as follows:

COMPETENCE ACHIEVEMENT SCHEDULES

TABLE A1: EXPERIENCE, REPUTATION AND REFERENCES

	TARGETED GOALS Name reference with contact details	TENDERED GOAL	POINTS Claimed by tenderer	ALLOCATED POINTS
1		5		
2		5		
3		5		
4		5		
	SUB-TOTAL: Reputation and References	20		

SCORING QUALITY FOR TABLE A1 ABOVE: (Maximum 20 Points)

- Experience on previous contracts of a project with a specific scope (Concrete Water Retaining Structures) and value completed over last ten (5) years.
- Reference details must be valid in order to ensure gathering of relevant information. Experience must be on the Construction of Concrete Water Retaining Structures.
- The tenderer must submit an appointment letter and completion certificate for each project and signed by Consultant, Client, and Contractor. **Projects must be completed within the period stipulated in the original appointment letter.**
- Points shall be allocated to tenderers who submit both the appointment, completion certificate and the reference letter for each project.
- Points shall be awarded as follows for each project completed with a traceable reference:

Required	Points allocation	Proof required.
4 water retaining structures projects value above R 30 million or more	20 Points	Attach appointment letter and completion certificate per project submitted for evaluation.
3 water retaining structures projects value above R 30 million or more	16 Points	
2 water retaining structures projects value above R 30 million or more	12 Points	
1 water retaining structures value above R 30 million or more	4 Points	
No water retaining structures projects, value below 30m	0 points	

Note: Where appointed project values received from tenderers for consideration exceed the value stated above, a maximum of 4 points shall be awarded per project. Tenderers who do not submit at least one project shall be disqualified and not considered for further evaluation. To score the full 20 points, a minimum of 4 similar projects must be included.

5.11.9

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

TABLE A2: FINANCIAL REFERENCES

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	Bank rating of "C" or better (proof attached)	4		
2	Proof of guarantee/letter of intent from a registered financial institution to the value of 10% of the offer shall be submitted	6		
	SUB-TOTAL: Financial references	10		

SCORING QUALITY FOR TABLE A2 ABOVE- (Maximum 10 Points)

- Proof of Banking Details and Bank Rating Letter of "C" or better must be attached.
- Proof of guarantee/letter of intent from a registered financial institution to the value of 10% of the offer shall be submitted.

Point Allocation:

Failure to Submit Details	Disqualification
Bank Rating of D, E or F	Disqualification
Bank Rating C or better	4 points
Proof of Guarantee/Letter of intent	6 points

A maximum of 10 points shall be allocated for Table A2.

Note: Bank rating and proof of guarantee must be attached. Tenderers who do not submit any of the above required documents shall be disqualified and shall not be considered further evaluation.

TABLE A3: SPECIFIC KNOWLEDGE

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	Site agent trained in labour in intensive construction methods	4		
2	Contracts Manager	4		
3	Senior Foreman	4		
4	Quality control Officer	4		
5	Safety Officer	4		
	SUB-TOTAL: Specific Knowledge	20		

SCORING QUALITY FOR TABLE A3 ABOVE - (Maximum 20 Points)**Key Staff**

- Site Agent – NQF 5 Labor Intensive Construction and National Diploma in Civil and minimum of 10 years' experience in the construction of bulk water pipelines, reservoirs and pump stations to score the maximum points in this category.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

- Contracts Manager – A BTech/ BSc /BEng qualification in Civil or Higher, minimum 10 years' experience in the construction of bulk water pipelines, water treatment works, and pump stations.
- Senior Foreman – NQF 4 Labor Intensive Construction, minimum 10 years relevant experience in the Construction of Bulk Water Pipelines, Water Treatment Works, and Pump Stations to score the maximum points in this category.
- Quality Control Officer – N Dip Civil Engineering, minimum 10 years' experience in the construction of bulk water pipelines, water treatment works, and pump stations. to score the maximum points in this category.
- Safety Officer – Safety Management Training Course and registration with SACPCMP minimum 10 years or more relevant experience to score the maximum points in this category.

Point Allocation:

Personnel	15 Years' Experience or more	10 Years and more', Less than 15 Years' Experience	Less than 10 Years' Experience
Site Agent	4	4	0
Contracts' Manager	4	4	0
Senior Foreman	4	4	0
Quality Control Officer	4	4	0
Safety Officer	4	4	0

Note: CV's and certified copies of qualifications must be attached in order to qualify for points. Where CVs are attached with no certified copies of qualifications, no point will be awarded. A maximum of 4 points will be awarded for each relevant personnel and a maximum of 20 points can be awarded in this category.

TABLE A4: PLANT AND EQUIPMENT

Minimum of two construction plant

	TARGETED GOALS	POINTS PER PLANT SUBMITTED	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	2 TLB	3		
2	2 Tipper Truck 10m ³	2		
3	2 Mechanical Vibrating Roller Man-Operated	2		
4	2 Excavator minimum 20t Chain operated	3		
	Sub-Total	10		

Points are allocated for the availability of required plant and equipment for the project (proof of ownership to be attached or letter of intent from a hiring company must be attached). There will be no pro-rated points allocated for this section.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

Where letters of intent from a hiring company are attached, they should:

- Be letters obtained prior to tender closing.
- Not be older than 1 month prior to closing of tender.
- Be signed and dated with the company stamp.

Note: No points shall be allocated for unsigned letters which do not fulfil the above requirements.

TABLE A5: PROJECT EXECUTION PLAN

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	Methodology	4		
2	Organogram	4		
3	Health and Safety Plan	4		
4	Storm Water Management Plan	4		
5	Programme	4		
	Sub-Total	20		

SCORING QUALITY FOR TABLE A5 ABOVE - (Maximum 20 Points)

Points are allocated for the Methodology, Organogram, Health and Safety Plan, Stormwater Management Plan and Programme, respectively.

Points will be allocated for each document listed in table 4 as per below:

Excellent	The method statement, organogram, stormwater management report, health and safety plan and programme are specifically tailored for the project objectives and requirements, and deals in detail with the critical construction aspects	4 points
Good	The method statement, organogram, stormwater management report, health and safety plan and programme are generally tailored for the project objectives and requirements, and deals with the construction aspects	3 points
Satisfactory	The method statement, organogram, stormwater management report, health and safety plan and programme are generic and has been tailored to meet the project objectives and requirements without dealing with construction aspects	2 points
Poor	The method statement, organogram, stormwater management report, health and safety plan and programme are poor and does not adequately identify / satisfy project objectives or requirements. The tenderer has misunderstood the scope of work and did not deal with construction aspects	1 point
No submission	The tenderer does not submit the Project Execution Plan	0 points

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Note: The Project Engineer will evaluate each of these submitted document and shall determine the quality based on the scoring criteria above. A maximum of 20 points will be awarded in this category.

TABLE A6: QUALITY ASSURANCE AND CONTROL PLAN

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	Quality Plan Report	10		
	Sub-Total	10		

SCORING QUALITY FOR TABLE A6 ABOVE - (Maximum 10 Points)

Points are allocated as below:

Excellent	The quality assurance and control plan is specifically tailored for the project objectives and requirements, and deals in detail with the critical construction aspects	10 points
Good	The quality assurance and control plan is generally tailored for the project objectives and requirements, and deals with the construction aspects	8 points
Satisfactory	The quality assurance and control plan is generic and has been tailored to meet the project objectives and requirements without dealing with construction aspects	6 points
Poor	The quality assurance and control plan is poor and does not adequately identify / satisfy project objectives or requirements. The tenderer has misunderstood the scope of work and did not deal with construction aspects	2 points
No submission	The tenderer does not submit the quality control plan	0 points

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Note: The Project Engineer shall evaluate the submitted document and shall determine the quality based on the scoring criteria above. A maximum of 10 points will be awarded in this category.

TABLE A7: QUALITY MANAGEMENT SYSTEM

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	Quality Management Report	10		
	Sub-Total	10		

SCORING QUALITY FOR TABLE A7 ABOVE - (Maximum 10 Points)

Points are allocated as below:

Excellent	The tenderer has submitted an ISO 9001 Accredited Quality Management System document.	10 points
Satisfactory	The tenderer has submitted a generic internal Quality Management Document which is not ISO Accredited.	6 points
No submission	The tenderer does not submit the Quality Management System document.	0 points

Note: The Project Engineer will evaluate the submitted document and shall determine the quality based on the scoring criteria above. A maximum of 10 points will be awarded in this category.

TABLE A8: FUNCTIONALITY AND QUALITY SCORING TOTALS

Scoring as per Tables A1 to A7 above.		Maximum Points to be Allocated	Points Claimed by Tenderer	Allocated Points
Functionality and Quality	Table A1	20		
	Table A2	10		
	Table A3	20		
	Table A4	10		
	Table A5	20		
	Table A6	10		
	Table A7	10		
	Sub Total	100		

The minimum number of evaluation points for quality is 70 points. Tenderers who score less than 70 points in this category will be deemed as non-responsive.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

5.13	All respondents who submit responsive submissions and: 1) a) are registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/) unless it is a foreign supplier with no local registered entity b) submit an original valid Tax Clearance Certificate issued by the South African Revenue Services or have made arrangements to meet outstanding tax obligations or are in good standing with SARS according to the Central Supplier Database; c) are registered with the Construction Industry Development Board in an appropriate contractor grading designation; d) do not have any of their 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; e) have not abused the Employer's Supply Chain Management System or have failed to perform on any previous contract and have been given a written notice to this effect; f) have completed the Compulsory Declaration and who are considered by the Employer not to have any conflicts of interest which may impact on their ability to perform the proposed contract in the best interests of the Employer or potentially compromise the tender process and are free of persons in the state who are not permitted to submit tenders or to participate in the contract; g) are registered and in good standing with the compensation fund or with a licensed compensation insurer; h) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. and 2) In the opinion of the Employer can as necessary demonstrate that they possess the necessary 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; will be invited to submit tender offers.
5.17	The number of paper copies of the signed contract to be provided by the Employer is one.
	The additional conditions of submission are: 1. The Employer/Employer's Agent may request that the tenderer provide written evidence that his financial, labour and other resources are adequate for carrying out the contract. 2. The Employer reserves the right to appoint a firm of chartered accountants and auditors and/or execute any other financial investigations on the financial resources of any tenderer. The tenderer shall provide all reasonable assistance in such investigations. 3. The Employer reserves the right to reduce the scope of work to within the available budget. 4. In addition, the Employer may appoint more than one Contractor for the project.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM A: COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, separate declaration in respect of each partner must be completed and submitted.

Section 1: Enterprise Details

Name of enterprise:	
Contact person:	
Email:	
Telephone:	
Cell no	
Fax:	
Physical address	
Postal address	

Section 2: Particulars of companies and close corporations

Company / Close Corporation registration number	
--	--

Section 3: SARS Information

Tax reference number	
Tax Pin no	
VAT registration number:	

Section 4: CIDB registration number

CIDB Registration number (if applicable)	
---	--

Section 5: National Treasury Central Supplier Database

Supplier number	
Unique registration reference number	

Section 6: Particulars of principals

principal: means a natural person who is a partner in a partnership, a sole proprietor, a director of a company established in terms of the Companies Act of 2008 (Act No. 71 of 2008) or a member of a close corporation registered in terms of the Close Corporation Act, 1984, (Act No. 69 of 1984).

Full name of principal	Identity number	Personal tax reference number

Attach separate page if necessary

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Contractor

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Witness 1

--

Witness 2

--

Employer

--

Witness 1

--

Witness 2

Section 7: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any principal is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|--|
| ☐ a member of any municipal council | ☐ an employee of any department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act of 1999 (Act No. 1 of 1999) |
| ☐ a member of any provincial legislature | |
| ☐ a member of the National Assembly or the National Council of Province | |
| ☐ a member of the board of directors of any municipal entity | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ an official of any municipality or municipal entity | ☐ an employee of Parliament or a provincial legislature |

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

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

*insert separate page if necessary

Section 8: Record of family member in the service of the state

Family member: a person's spouse, whether in a marriage or in a customary union according to indigenous law, domestic partner in a civil union, or child, parent, brother, sister, whether such a relationship results from birth, marriage or adoption

Indicate by marking the relevant boxes with a cross, if any family member of a principal as defined in section 5 is currently or has been within the last 12 months been in the service of any of the following:

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

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

Name of family member	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 9: Record of termination of previous contracts with an organ of state

Was any contract between the tendering entity including any of its joint venture partners terminated during the past 5 years for reasons other than the employer no longer requiring such works or the employer failing to make payment in terms of the contract.

☐ Yes ☐ No (Tick appropriate box)

If yes, provide particulars (insert separate page if necessary)

Section 10: Declaration

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tendering entity confirms that the contents of this Declaration are within my personal knowledge, and save where stated otherwise in an attachment hereto, are to the best of my belief both true and correct, and:

- i) neither the name of the tendering entity or any of its principals appears on:
 - a. the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004)
 - b. National Treasury's Database of Restricted Suppliers (see www.treasury.gov.za)
- ii) neither the tendering entity or any of its principals has within the last five years been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa);
- iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);
- iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers
- v) has not engaged in any prohibited restrictive horizontal practices including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract etc) or intention to not win a tender;
- vi) has no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- vii) neither the tenderer or any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity and are not in arrears for more than 3 months;
- viii) SARS may, on an on-going basis during the term of the contract, disclose the tenderer's tax compliance status to the Employer and when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by the National Treasury, for SARS to do likewise.

Signature

Date

Capacity under which the Bid is signed

Name of bidder

NOTE 1 The Standard Conditions of Tender contained in SANS 10845-3 prohibits anticompetitive practices (clause 3.1) and requires that tenderers avoid conflicts of interest, only submit a tender offer if the tenderer or any of his principals is not under any restriction to do business with employer (4.1.1) and submit only one tender either as a single tendering entity or as a member in a joint venture (clause 4.13.1). Clause 5.7 also empowers the Employer to disqualify any tenderer who engages in fraudulent and corrupt practice. Clause 3.1 also requires tenderers to comply with all legal obligations.

NOTE 2: Section 30(1) of the Public Service Act, 1994, prohibits an employee (person who is employed in posts on the establishment of departments) from performing or engaging remunerative work outside his or her employment in the relevant department, except with the written permission of the executive authority of the department. When in operation, Section 8(2) of the Public Administration Management Act, 2014, will prohibit an employee of the public administration (i.e. organs of state and all national departments, national government components listed in Part A of Schedule 3 to the Public Service Act, provincial departments including the office of the premier listed in Schedule 1 of the Public Service Act and provincial departments listed in schedule 2 of the Public Service Act, and provincial government components listed in Part B of schedule 3 of the Public Service Act) or persons contracted to executive authorities in accordance with the provisions of section 12A of the Public Service Act of 1994 or persons performing similar functions in organs of state from conducting business with the State or to be a director of a public or private company conducting business with the State. The offence for doing so is a fine or imprisonment for a period not exceeding 5 years or both. It is also a serious misconduct which may result in the termination of employment by the employer.

NOTE 3: Regulation 44 of Supply Chain Management regulations issued in terms of the Municipal Finance Management Act of 2003 requires that organs of state and municipal entities not award a contract to a person who is the service of the state, a director, manager or principal shareholder in the service of the state or who has been in the service of the state in the previous twelve months.

NOTE: 4: Regulation 45 of Supply Chain Management regulations requires a municipality or municipal entity to disclose in the notes to the annual statements particulars of any award made to a close family member in the service of the state.

NOTE: 5 Corrupt activities which give rise to an offence in terms of the Prevention and Combating of Corrupt Activities Act of 2004) include improperly influencing in any way the procurement of any contract, the fixing of the price, consideration or other moneys stipulated or otherwise provided for in any contract and the manipulating by any means of the award of a tender.

NOTE: 6 Section 4 of the Competition Act of 1998 prohibits restrictive horizontal practice including agreements between parties in a horizontal relationship which have the effect of substantially preventing or lessening competition, directly or indirectly fixing prices or dividing markets or constitute collusive tendering. Section 5 also prohibits restrictive vertical practices. Any restrictive practices that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO:

1. For Closed Corporations

- CK1 or CK2 as applicable (Founding Statement)

2. For Companies

- A copy of the Certificate of Incorporation
- Certified Copies of the ID's of the Directors and
- the shareholders register

3. For Joint Venture Agreements

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

4. For Partnership

- Certified Copies of the ID's of the partners

5. One-person Business / Sole trader

- Certified Copy of ID

6. B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE

- Sworn affidavit and valid B-BBEE Status Level Verification Certificates or Certified Copy thereof.

FORM B: AUTHORITY OF SIGNATORY

Details of person responsible for tender process:

Name :

Contact number :

Office address :

Signatories for close corporations and companies shall confirm their authority by attaching to this form a **duly signed and dated original or certified copy on the Company Letterhead** of the relevant resolution of their members or their board of directors, as the case may be.

PRO-FORMA FOR COMPANIES AND CLOSE CORPORATIONS:

"By resolution of the board of directors passed on (date) _____

Mr _____
has been duly authorized to sign all documents in connection with the Tender for:

Contract Number ALMT 01/ 2025

THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5
and any Contract which may arise there from on behalf of:

(BLOCK CAPITALS)

SIGNED ON BEHALF OF THE COMPANY IN HIS CAPACITY AS:

DATE: _____

FULL NAMES OF SIGNATORY: _____

AS WITNESSES: 1. _____

2. _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PRO-FORMA FOR JOINT VENTURES:

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise

Mr/Ms _____,

Authorised signatory of the company _____,

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

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature: _____ Name: _____ Designation: _____
		Signature: _____ Name: _____ Designation: _____
		Signature: _____ Name: _____ Designation: _____
		Signature: _____ Name: _____ Designation: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- Duly signed and dated original or certified copy of Authority of Signatory on company letterhead.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM C: FINANCIAL REFERENCES / TENDERER'S CREDIT RATING AND BANK DETAILS

Notes to tenderer:

1. The tenderer shall attach to this form a letter from the bank confirming the bank account and details. Failure to provide the required letter with the tender submission shall render the tenderer's offer unresponsive.
2. The tenderer's banking details as they appear below shall be completed.
3. In the event that the tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

BANK NAME:		
ACCOUNT NAME: (e.g. ABC Civil Construction Pty Ltd)		
ACCOUNT TYPE: (e.g. Savings, Cheque etc.)		
ACCOUNT NO:		
ADDRESS OF BANK:		
CONTACT PERSON:		
TELEPHONE NUMBER OF BANK OR CONTACT PERSON:		
How long has this account been in existence (tick which is appropriate):	0-6 months	
	7-12 months	
	13-24 months	
	More than 24 months	

Name of Tenderer: _____

Date: _____

Signature: _____

Full name of signatory: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- Original or certified copy of a letter from tenderer's bank (not older that three months from tender closure)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM D: MUNICIPAL UTILITY ACCOUNT

DECLARATION BY THE TENDERER

I the undersigned _____

_____ has been duly authorized to sign all documents with the Tender for:

THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5

on behalf of

(referred to herein as "the Bidder")

hereby make a declaration as follows:

1. I declare that the bidder and /or any of its director(s) / member(s) does not owe the municipality, or any other municipality and/or municipal entity any amount which is in arrears in respect of any municipal rates and taxes or municipal service charges.
2. I understand and accept that in the event that this declaration is proved to be false, the bid shall be rejected forthwith. All other rights of the municipality (including but not limited to the right to claim damages where applicable) shall remain reserved in full.

SIGNED ON BEHALF OF
THE COMPANY

IN HIS CAPACITY AS

DATE

FULL NAMES OF SIGNATORY

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- Municipal utility account invoice must be in line with the address on the CSD (not older that three months).
- If the company is operating on lease premises both the lease agreement and municipal utility account invoice must be attached, the same address as the lease agreement. (Failure to do so will lead to disqualification). It must not owe more than 3 months.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM E: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS (MBD 6.2)

This Municipal Bidding Document (MBD 6.2) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

3. General Conditions

- 3.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 3.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 3.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 3.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 3.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial development/ip.jsp](http://www.thedti.gov.za/industrial%20development/ip.jsp) at no cost.

- 3.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
_____	_____ %
_____	_____ %
_____	_____ %

- 3.** Does any portion of the goods or services offered have any imported content?
(Tick applicable box)

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

- 3.1** If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

- 4.** Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO. ALMT 01/ 2025

ISSUED BY: CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY
NB

- 3 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 4 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names),

do hereby declare, in my capacity as

of(name of bidder entity), the following:

- (f) The facts contained herein are within my own personal knowledge.
- (g) I have satisfied myself that:
- (ii) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (h) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (i) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- (j) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM F: 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:

1. Are you by law required to prepare annual financial statements for auditing? YES / NO
 - 1.1. If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.
2. Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? YES / NO
 - 1.2. If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.
 - 1.3. If yes, provide particulars.
.....
.....
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? YES / NO
 - 3.1. If yes, furnish particulars
.....
.....
.....
4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? YES / NO
 - 4.1. If yes, furnish particulars
.....
.....

--

Contractor

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Witness 1

--

Witness 2

--

Employer

--

Witness 1

--

Witness 2

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 DECLARATION PROVE TO BE FALSE.

Signature

Date

Position

Name of Bidder

FORM G: KEY PERSONNEL

The Tenderer shall list below the key personnel whom he proposes to employ on the project should his Tender be accepted.

Please list the personnel that you intend to appoint on this contract.			
DESCRIPTION	Name of Full-time member	Staff to be appointed on this contract	
		No of Full-Time employment	No of Part Time employment
Contracts Manager			
Site Agent			
Quality Technician			
Senior Foreman			
Safety Officer			
Other			
1.			
2.			
3.			
4.			
5.			

Provide two paged Curriculum Vitae (CV) of each Proposed Key Personnel to be used in this project. Each CV should give at least the following:

- Position in the firm and within the organization of this assignment;
- Proof of Educational qualifications;
- Relevant experience (actual duties performed, involvement and responsibility), including locations, dates and durations of assignments, starting with the latest;
- Language proficiency; and
- References (company name, individual name, position held, contact details).

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- CV and certified qualifications

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM H: SCHEDULE OF PREVIOUS EXPERIENCE

The procedure for the evaluation of responsive Bids will be on the average of the previous four projects where the firm was involved for CHIEF ALBERT LUTHULI LOCAL MUNICIPALITY (CALLM) projects or other clients. Reference of clients other than CALLM MUST be provided.

Evaluation of the Tenderer's position in terms of his previous experience. Emphasis will be placed on the following:

- Experience in the relevant technical field
- Experience of contracts of similar size
- At least four of the references will be contacted to obtain their input.

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. This information is material to the award of the Contract.

Description of Work / Experience	Value (R) VAT excluded	Period work executed		Reference		
		Appointment Date	Completion Date	Name	Organisation	Tel No and e-mail

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM N: SCHEDULE OF CURRENT PROJECTSProvide the following information on current projects. This information is material to the award of the Contract.

Description of Project	Value (R) VAT excluded	Appointment Date	Completion Date	Reference		
				Name	Organisation	Tel No and e-mail / Fax

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM O: SCHEDULE OF INFRASTRUCTURE AND RESOURCES / PLANT AND EQUIPMENT

Note: Attach additional pages to this page if more space is required.

Provide information on the following:

1. Infrastructure and resources available for this project:

Physical facilities and Buildings.

Description	Address	Owned / Leased

2. Equipment

Provide information on equipment and resources that you have available for this project.

1. Earthmoving Equipment	No. of Units Owned by Contractor	Number of Units Allocated to this Contract	
		Owned	Hired
2. Construction Equipment			

Size of enterprise and current workload:

What was your turnover in the previous financial year?

What is the estimated turnover for your current financial year?

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM I: SCHEDULE OF PROPOSED SUB-CONTRACTORS

Name of Sub-Contractor	Full Description of Work to be Performed by Sub-Contractor

Signature

Date

Position

Name of bidder

FORM J: RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communication received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer		
No.	Date	Title of Details

Signature

Date

Position

Name of bidder

FORM K: PROPOSED AMENDMENTS AND QUALIFICATIONS

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

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

Page	Clause or item	Proposal

Signature

Date

Position

Name of bidder

FORM L: PROOF OF GOOD STANDING WITH COMPENSATION COMMISSIONER

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- Certified copy of Letter of Good Standing with Compensation Commissioner.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

FORM M: TENDERER'S PROJECT STRUCTURE

Notes to tenderer:

- The intention of this form is to demonstrate the tenderer's project structure, as well as the lines of responsibility between members of the project team and between the project team and the overall company structure. The tenderer must attach his own organogram to this form.
- Tenderers which are large companies may simplify the organogram by 'rolling up' portfolios e.g. combining directors/associates into one box of the organogram. However, the individual positions of the key personnel within the structure must still be shown.
- Joint Venture tenders will require each element of the venture to submit separate organogram that show the individual structure of each member company and the lines of responsibility of the proposed personnel involved in the project. In addition, there must also be a combined organogram that indicates how the joint venture itself will function and the proposed share of the work. Joint Venture tenderers shall note that the share of work indicated will be used in the analysis of such a tenderers preference proposed on returnable form D1, and that if awarded the share of work shall become a contractual obligation between the members of the joint venture.
- State the city or town where the company's head office is located. The locality of regional or satellite office, regardless of degree of autonomy or size is not required. Only submit the number of offices other than the head office. Do not count offices outside RSA
- Registered professional engineers, technicians or technologist's means those who are involved in the built industry as well as allied fields such as environmental professionals. Registered professionals of other disciplines (e.g. mechanical) are considered as employees only.

Signature

Date

Position

Name of bidder

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- Tenderer’s organogram

FORM N: DECLARATION OF TENDERER’S LITIGATION HISTORY

Note to tenderer:
The tenderer shall list below details of any litigation with which the tenderer (including its directors, shareholders or other senior members in previous companies) has been involved with any organ of state or state department within the last ten years. The details must include the year, the litigating parties, the subject matter of the dispute, the value of any award or estimated award if the litigation is current and in whose favour the award, if any, was made.

Employer	Other Litigating Party	Dispute	Award Value	Date Resolved

Signature

Date

Position

Name of bidder

FORM O: ANNUAL FINANCIAL STATEMENTS DECLARATION AND AUDITED 3-YEAR FINANCIAL STATEMENTS

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

- 1) The enterprise's financial year end is
- 2) The enterprise's financial statements have been prepared in accordance with the provisions of the Companies Act of 2008 or the Close Corporation Act of 1984, as applicable

- 3) The enterprise has compiled its financial accounts [tick one box]:

☐ internally ☐ independently

- 4) The following statement applies to the enterprise [tick one box and provide relevant information]

☐ enterprise has had its financial statements audited;

name of auditor

☐ enterprise is required by law to have an independent review of its financial statements

name of independent reviewer:

☐ enterprise has not had its financial statements audited and is not required by law to have an independent review or audit of such statements

- 5) The attached income statement and balance sheet is a true extract from the financial statements complying with applicable legislation for the preceding financial year within 12 months of the financial year end.

[Attach the income statement and the balance sheet contained in the financial statement]

- 6) The annual turnover for the last financial year is R

- 7) The total assets as at the end of the last financial year is R

- 8) The total liabilities as at the end of the financial year is R

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM P: ANNUAL FINANCIAL STATEMENTS DECLARATION AND AUDITED 3-YEAR FINANCIAL STATEMENTS

ATTACH THE FOLLOWING DOCUMENTS HERETO:

- 3 Year audited financial statements.

I hereby declare that the contents of this Declaration are within my personal knowledge and save where stated otherwise are to the best of my belief both true and correct.

Signature

Date

Position

Name of bidder

FORM Q: FORM OF INTENT TO PROVIDE GUARANTEE

The Tenderer to attach to this schedule a letter from his/her bank or financial institution indicating the intent to provide a guarantee for this contract. The Guarantee amount is provided in the Contract Data. The wording of the guarantee shall be as indicated in C1.3.

T2.2 RETURNABLE DOCUMENTS

OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

The tenderer must provide the following returnable documents:

- Form 2A: Verification certificate from a verification agency accredited by SANAS and recognized as an Accredited B-BBEE Verification Agencies (see www.sanas.co.za/directory/bbee_default.php) or a registered auditors approved by IRBA if preference points are claimed in respect of Broad-Based Black Economic Empowerment.
- Form 2B: Certificate of Contractor Registration issued by the Construction Industry Development Board
- Form 2C: A letter of good standing from the Compensation Fund or a licensed insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act 1993 (Act No. 130 of 1993)
- Form 2D: Central Supplier Database
- Form 2E Points Claimed For Supply Chain Management Policy (Quality and Functionality)**

RETURNABLE SCHEDULES THAT WILL BE USED FOR TENDER EVALUATION PURPOSES AND BE INCORPORATED INTO THE

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data Part 2: Data Provided by the Contractor
- C1.3 Performance Guarantee
- C2.2 Bill of Quantities

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**FORM R: VERIFICATION CERTIFICATE FROM A VERIFICATION AGENCY
ACCREDITED BY SANAS AND RECOGNIZED AS AN ACCREDITED B-BBEE
VERIFICATION AGENCIES**

The Tenderer to attach to this schedule a letter for BBBEE Status Level Certificate issued in terms of Section 9(1) of the Broad Based Black Economic Empowerment Act 2003.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM S: CERTIFICATE OF CONTRACTOR REGISTRATION ISSUED BY THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

Tenderers shall attach to this page, a copy of their Valid Certificate of Registration with the Construction Industry Development Board.

**FORM T: A LETTER OF GOOD STANDING FROM THE COMPENSATION FUND OR
A LICENSED INSURER AS CONTEMPLATED IN THE COMPENSATION FOR
OCCUPATIONAL INJURIES AND DISEASES ACT 1993 (ACT NO. 130 OF 1993)**

Tenderers shall attach to this page, a copy of their COID Certificate.

FORM U: CENTRAL SUPPLIER DATABASE

Tenderer to attach Proof of Registration of their Master Registration Number (Supplier Number) document to this page to verify the supplier's registration and tax status on Central Supplier Database.

FORM V: POINTS CLAIMED FOR SUPPLY CHAIN MANAGEMENT POLICY (QUALITY AND FUNCTIONALITY)

The quality criteria and maximum score in respect of each of the criteria are as follows:

COMPETENCE ACHIEVEMENT SCHEDULES

TABLE A1: EXPERIENCE, REPUTATION AND REFERENCES

	TARGETED GOALS NAME REFERENCE WITH CONTACT DETAILS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1		5		
2		5		
3		5		
4		5		
	SUB-TOTAL: REPUTATION AND REFERENCES	20		

TABLE A2: FINANCIAL REFERENCES

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	BANK RATING OF "C" OR BETTER (PROOF ATTACHED)	4		
2	PROOF OF GUARANTEE/LETTER OF INTENT FROM A REGISTERED FINANCIAL INSTITUTION TO THE VALUE OF 10% OF THE OFFER SHALL BE SUBMITTED	6		
	SUB-TOTAL: FINANCIAL REFERENCES	10		

TABLE A3: SPECIFIC KNOWLEDGE

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	SITE AGENT TRAINED IN LABOUR IN INTENSIVE CONSTRUCTION METHODS	4		
2	CONTRACTS MANAGER	4		
3	SENIOR FOREMAN	4		
4	QUALITY CONTROL OFFICER	4		
5	SAFETY OFFICER	4		
	SUB-TOTAL: SPECIFIC KNOWLEDGE	20		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

TABLE A4: PLANT AND EQUIPMENT

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	2 TLB	3		
2	2 Tipper Truck 10m³	2		
3	2 Mechanical Vibrating Roller Man-Operated	2		
4	2 Excavator Minimum 20T Chain Operated	3		
	SUB-TOTAL	10		

TABLE A5: PROJECT EXECUTION PLAN

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	METHODOLOGY	4		
2	ORGANOGRAM	4		
3	HEALTH AND SAFETY PLAN	4		
4	STORM WATER MANAGEMENT PLAN	4		
5	PROGRAMME	4		
	SUB-TOTAL	20		

TABLE A6: QUALITY ASSURANCE AND CONTROL PLAN

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	QUALITY PLAN REPORT	10		
	SUB-TOTAL	10		

TABLE A7: QUALITY MANAGEMENT SYSTEM

	TARGETED GOALS	TENDERED GOAL	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
1	QUALITY MANAGEMENT REPORT	10		
	SUB-TOTAL	10		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

TABLE A8: FUNCTIONALITY AND QUALITY SCORING TOTALS

SCORING AS PER TABLES A1 TO A7 ABOVE.		MAXIMUM POINTS TO BE ALLOCATED	POINTS CLAIMED BY TENDERER	ALLOCATED POINTS
FUNCTIONALITY AND QUALITY	TABLE A1	20		
	TABLE A2	10		
	TABLE A3	20		
	TABLE A4	10		
	TABLE A5	20		
	TABLE A6	10		
	TABLE A7	10		
	SUB TOTAL	100		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

CONTRACT

This part of the Bid Specification Document consists of the following four sections:

- **Part C1: Agreement and Contract Data**

This section details the:

- Form of offer and Acceptance (yellow pages);
- Contract Data (yellow pages); and
- Performance Guarantee (white pages)

- **Part C2: Pricing Data**

This section details the:

- Pricing Instructions (yellow pages); and
- Bill of Quantities (yellow pages)

- **Part C3: Scope of Work**

This section details the:

- Scope of Work (Blue)

- **Part C4: Site Information**

This section details the:

- Site Information (Green)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PART C1: AGREEMENT AND CONTRACT DATA

C1.1 Form of Offer and Acceptance

OFFER

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

Contract Number ALMP 01/ 2025

THE CONSTRUCTION OF A 5ML RESERVOIR AT SILOBELA, EXTENSION 5 - ALMT 01/ 2025

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

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

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

Rand (*in words*); and 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) _____
Name(s) _____
Capacity _____
for the tenderer _____

(name and address of the organization)

Witness signature _____
Witness name _____
Date _____

ACCEPTANCE

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

The terms of the contract, are contained in:

- Part C1 Agreements and contract data (which includes this agreement);
- Part C2 Pricing data;
- Part C3 Scope of work;
- Part C4 Site information; and
- Drawings and documents or parts thereof, which may be incorporated by reference into 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 schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

For the Employer:

Signature Date

Name

Capacity

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Name and address of organization:

Chief Albert Luthuli Local Municipality
PO Box 1748
Carolina
2350

Name and signature of witness:

Signature

Name

Capacity

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SCHEDULE OF DEVIATIONS

Notes:

1. *The extent of deviations from the tender documents issued by the employer before the tender closing date is limited to those permitted in terms of the conditions of tender.*
2. *A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, 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.*

Subject:

Details:

Subject:

Details:

Subject:

Details:

Subject:

Details:

Subject:

Details:

Subject:

Details:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

By the duly authorised representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

For the Tenderer:

For the Employer:

.....	Signature	
.....	Name	
.....	Capacity	

Name and address of organization:

Name and address of organization:

.....		
.....		
.....		
.....	Witness Signature	
.....	Witness Name	
.....	Date	

CONFIRMATION OF RECEIPT

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

the (day)

of (month)

20 (year)

at (place)

For the Contractor:

Signature

Name

Capacity

Name and signature of witness:

Signature

Name

--

Contractor

--

Witness 1

--

Witness 2

--

Employer

--

Witness 1

--

Witness 2

C1.2 CONTRACT DATA**CONDITIONS OF CONTRACT**

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

PART 1: DATA PROVIDED BY THE EMPLOYER**1. GENERAL**

Clause	Description
1.1.1.13	The "Defects Liability Period" is 12 months
1.1.1.14	The "Due Completion Date", or time for achieving Practical Completion is 12 months from handover.
1.1.1.15	The "Employer" is the Chief Albert Luthuli Local Municipality.
1.1.1.16	The "Employer's Agent" is Mr Melusi Ndlovu Pr. Tech. Eng. of Kufanikiwa Consulting (Pty) Ltd
1.1.1.26	The "Pricing Strategy" is re-measurement Contract.
1.2.1.2	The Employer's Agent address for receipt of communications and notices is: Telephone: (031) 701 1038 Facsimile: 031 701 0963 Address (Physical): Unit 6 Forest Square, 11 Derby Place, Westville; 3629 Address (Postal): Suite 208, Postnet x 817, New Germany; 3620
3.2.3	The Employer's Agent is required to obtain the specific approval of the Employer for the following functions or duties: a) Approve extension of time for practical completion in terms of Clause 5.12.1; b) Approve imposition of penalty for delay in terms of Clause 5.13.1; c) Issue of a Variation Order in terms of Clause 6.3.2; and d) Approve the use of contingency funds.
5.1.1 and 5.8.1	The special non-working days are public holidays, Sundays and the days on which the contractor grants the majority of his permanent workforce leave around the 15 th December and the first Monday of the subsequent year. Any day declared by the IEC as a Voting day for Local or National Election in RSA
5.3.1	The Contractor shall submit within 14 days from the Commencement Date the following documentation for approval by the Employer's Agent: a) Health and Safety Plan (Refer to Clause 4.3); b) Initial programme (Refer to Clause 5.6) and estimated cash flow; c) Security (Refer to Clause 6.2); d) Insurance (Refer to Clause 8.6); e) Proof of registration with the Workman's Compensation Commissioner. f) Valid original copy of Tax Clearance Certificate; and g) Written acceptance of appointment. h) Competent key personnel CV's and Organogram (4.11)
5.3.2	The time to submit the documentation required before commencement of the Works is 14 days.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

5.4.1	The Site is located within inhabited areas, is generally accessible to the public and is not exclusive to the Contractor. The Contractor shall safeguard the public as statutorily required and shall coordinate assistance from the Community Liaison Officer (CLO) as nominated by the Employer.												
5.8.1	The non-working days are Sundays. The special non-working days are indicated under Clause 5.1 above.												
5.12	FORMULA FOR EXTENSION OF TIME IN RESPECT OF ABNORMAL RAINFALL Extension of time in terms of Clause 5.12 of the general conditions of contract in respect of abnormal rainfall shall be determined in terms of the method below for each calendar month or part thereof, unless the project specifications determine otherwise: $V = (N_w - N_n) + (R_w - R_n)/20$ Where: V: Extension of time in calendar days for the calendar month under consideration. N_w: Actual number of days during the calendar month under consideration on which a rainfall of 10mm and more is recorded. R_w: Actual total rainfall in mm recorded during the calendar month under consideration. N_n: Average number of days, derived from rainfall records, on which a rainfall of 10mm and more was recorded during the relevant calendar month as per the data tabulated hereinafter. R_n: Average total rainfall in mm for the relevant calendar month, derived from rainfall records, as tabulated hereinafter. Where the extension of time due to abnormal rainfall has to be calculated for portion of a calendar month, pro rata values shall be used. Should V be negative for any particular month, and should its absolute value exceed the corresponding value of N_n, then V shall be taken as being equal to minus N_n. The total extension of time to be granted shall be the algebraic sum of all the monthly extensions, provided that if this total is negative then the time for completion shall not be reduced due to subnormal rainfall. The Contractor shall, at its own cost, provide and erect on the Site at a location approved of 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 its 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, the Employer's Agent shall be entitled to witness the reading of the gauge. The rainfall records applicable to this Contract are those recorded at Carolina. The following values of N_n and R_n shall apply: <table><tr><th>MONTH</th><th>N_n (Days)</th><th>R_n (mm)</th></tr><tr><td>January</td><td>16</td><td>120.6</td></tr><tr><td>February</td><td>12</td><td>104.5</td></tr><tr><td>March</td><td>11</td><td>75.1</td></tr></table>	MONTH	N _n (Days)	R _n (mm)	January	16	120.6	February	12	104.5	March	11	75.1
MONTH	N _n (Days)	R _n (mm)											
January	16	120.6											
February	12	104.5											
March	11	75.1											

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

	April	5	35.2
	May	2	11.6
	June	1	5.4
	July	1	5.3
	August	2	9.2
	September	4	22.5
	October	11	70.6
	November	15	109.1
	December	17	119.4
	Total	97	617.9
5.13.1	The penalty for failing to complete the Works is 0.08% of the contract amount per day, to a maximum of 5% of the contract amount.		
5.14.1	The requirements for achieving Practical Completion are set out in the Scope of Works Part C3.1.2.1.		
5.14.7	This contract does not contain multiple "Due Completion Dates".		
5.16.3	The latent defects liability period for civil engineering works is 10 years.		
6.2.1	The type of security for the due performance of the Contract shall be a Fixed Performance Guarantee of 10% of the value of the Works (Excl. Contingencies and VAT). The Performance Guarantee shall follow the suggested wording according to the pro-forma included in Section C1.3 - Performance Guarantee.		
6.5.1.2.3	The percentage allowance on the net cost of workmen and materials actually used in the completed work is 15%.		
6.8.2	The Contract Price Adjustment Factor shall be applied to this Contract. • The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: ○ The value of x = 0.10 ○ The values of the coefficients are (and the sum thereof is unity): ▪ a = 0.15 Labour ▪ b = 0.20 Contractor's equipment ▪ c = 0.55 Material ▪ d = 0.10 Fuel ○ The indices as follows are published by Statistics South Africa and shall be agreed on at commencement: ▪ "L" is the "Labour Index"; ▪ "P" is the "Contractor's Equipment Index"; ▪ "M" is the "Materials Index"; and ▪ "F" is the "Fuel Index".		

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

	○ The base month "0" is November 2025. ○ The applicable month for the statement is denoted by "t".
6.8.3	Price adjustment in the cost of special materials shall be applied to this Contract.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%. The percentage advance on Plant not yet supplied to Site 80% (if plant is fabricated or stored on other places than the Site).
6.10.3	The limit on retention is 10% of the Contract Price
8.6.1	The following insurances shall be effected and maintained in the joint names of the Employer and Contractor:
8.6.1.1	Insurance of the Works, Plant and materials for the period of Care of the Works for a sum insured that is the aggregate of:
8.6.1.1.1	The Contract Price (Excl. Contingencies and VAT);
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance is R 0.00 (Excl. VAT); and
8.6.1.1.3	The amount to cover professional fees payable in respect of the repair or reinstatement of damage to the works or said movables is R 0.00 (Excl. VAT).
8.6.1.2	The Contractor is responsible for Special Risks Insurance.
8.6.1.3	Liability insurance of at least R 5 000 000.00 per event with the number of events being unlimited.
8.6.5	The insurances shall be affected with an insurance company registered in South Africa.
10.5.2	Dispute resolution shall be by ad-hoc adjudication.
10.5.3	The number of Adjudication Board Members to be appointed is one or three.
10.7.1	In the event of disagreement with the Adjudication Board's decision the determination of disputes shall be by arbitration.
10.8.1	In the event of disagreement with the Arbitrator the determination of disputes shall be by court proceedings.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PART 2: DATA PROVIDED BY THE CONTRACTOR**1. GENERAL****Clause Description**1.1.1.9 **Name of the Contractor:**1.2.1.2 **Address of the Contractor:**Physical:Postal:

.....

.....

.....

.....

E-Mail:

Telephone No:

Fax No:

6.2.1

Type of Security	Contractor's Choice. Indicate "Yes" or "No"
Cash Deposit of 10% of the Contract Sum.	
Fixed Performance Guarantee of 10% of the Contract Sum.	
Variable Performance Guarantee of% of the Contract Sum for the first period and ...% of the Contract Sum for the second period.	
Retention of 10% of the value of the Works.	
Cash Deposit of 10% of the Contract Sum plus retention of 10% of the value of the Works.	
Fixed Performance Guarantee of 10% of the Contract Sum plus retention of 10% of the value of the Works.	
Variable Performance Guarantee of% of the Contract Sum for the first period and% of the Contract Sum for the second period plus retention of% of the value of the Works.	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

6.8.3 Variation in cost of special materials

The variation in cost of special materials is:

[illegible]

C1.3 Pro Forma Performance Guarantee

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means: _____

Physical address: _____

“Employer” means: Chief Albert Luthuli Local Municipality

“Contractor” means: _____

“Employer's Agent” means: A Professional Registered with the Engineering Council of South Africa (ECSA) and is Melusi Ndlovu Pr. Tech. Eng.

“Works” means: _____

“Site” means: _____

“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: _____ (*Insert Variable or Fixed*)

“Expiry Date” means: _____ (*Give date*) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

CONTRACT DETAILS

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

1. VARIABLE PERFORMANCE GUARANTEE

1.1 Where a Variable Performance Guarantee has been selected, the Guarantor's liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows:

1.1.1 From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:

R _____

Amount in words _____

1.1.2 From the day following the date of the said interim payment certificate 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, whichever occurs first:

R _____

Amount in words _____

1.2 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum, has been issued and the date on which the Certificate of Completion of the Works has been issued.

2. FIXED PERFORMANCE GUARANTEE

2.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2.2 The Guarantor's period of liability shall be from and including the date on which the Performance Guarantee is signed, 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.

2.3 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. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES

3.1 The Guarantor hereby acknowledges that:

3.1.1 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.

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

3.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- 3.2.1 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 3.2.2;
- 3.2.2 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 3.2.1 and the sum certified has still not been paid;
- 3.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.
- 3.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, 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:
- 3.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3;
- 3.3.2 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 3.3; and
- 3.3.3 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.
- 3.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 3.5 Where the Guarantor has made payment in terms of 3.3, 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.
- 3.6 Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 3.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 3.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider 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.
- 3.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 3.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, 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.
- 3.11 This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

as a liquid document for the purposes of obtaining a court order.

3.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any 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 (1) _____

Part C2: Pricing Data

C2.1 Pricing Instructions

Measurement and payment shall be in accordance with Clause 8 of the SANS 1200 Standardised Specifications for Civil Engineering Construction referred to in the Scope of Works, subject to the variations and amendments contained in the Section C3.5 Project Specifications.

Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification read together with the relevant clauses of Part C3: Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified.

Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Bill of Quantities, the Employer's Agent shall direct the applicable requirements.

The clauses in a specification in which further information regarding the listed items in the Bill of Quantities can be obtained appear under "Payment Reference" column.

The reference clauses indicated are not necessarily the only sources of information in respect of billed items. Further information and set specifications may be found in Section C3.5 Project Specifications. Standardised Specifications are identified by the letter or letters which follow "SANS" in the SANS 1200 series of specifications, e.g. G for SABS 1200 G.

Unless otherwise stated, items are measured nett in accordance with the drawing and no allowance is made for waste. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due only.

The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the various items. The prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. The prices will be used as a basis for assessment of payment for additional work that may have to be carried out.

It will be assumed that prices included in these Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org or www.iso.org for information on standards).

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

A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities and recorded as zero. A single lump sum will apply should a number of items be grouped together for pricing purposes.

Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

Ha	=	hectare
h	=	hour
kℓ	=	kilolitre
kg	=	kilogram
km	=	kilometre
kW	=	kilowatt
km-pass	=	kilometre pass
MN	=	Mega Newton
kPa	=	kilopascal
MN.m	=	Mega Newton- metre
ℓ	=	litre
%	=	percentage
m	=	metre
PC Sum	=	Prime Cost Sum
mm	=	millimetre
Prov Sum	=	Provisional Sum
PS/m	=	Provisional Sum per month
PS/d	=	Provisional Sum per day
Sum/wd	=	Sum per working day
m ²	=	square metre
No.	=	number
m ² .pass	=	square metre-pass
R/Only	=	Rate Only
m ³	=	cubic metre
Sum	=	lump sum
m ³ .km	=	cubic metre-kilometre
t	=	ton (1 000 kg)
MPa	=	Mega Pascal
W/day	=	Work day
%	=	percentage
mth	=	month

The parts of the contract to be constructed using labour-intensive methods have been marked in the Bill of Quantities with the letters LI in a separate column filled in against every item so designated.

The works, or parts of the works so designated, are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour-intensive specification.

Payment for items which are designated to be constructed labour-intensively will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

C2.2 Bill of Quantities

SUMMARY OF BILL OF QUANTITIES

SUMMARY OF SCHEDULES		
SECTION	DESCRIPTION	SCHEDULED AMOUNT
SECTION 1	PRELIMINARIES AND GENERAL	R
SECTION 2	DAYWORKS	R
SECTION 3	BULK EARTHWORKS	R
SECTION 4	CONCRETE STRUCTURAL	R
SECTION 5	MISCELLANEOUS ITEMS	R
SECTION 6	PIPEWORK	R
SUB-TOTAL A		R
Plus 10% for Contingencies on Sub-Total A (Compulsory)		R
Plus 5% for Escalation on Sub-Total A (Compulsory)		R
SUB-TOTAL		R
PLUS 15% VAT (Compulsory)		R
TOTAL TENDER PRICE		R

(Carried Forward to Tender Cover Page)

TENDERER: _____

COMPANY: _____

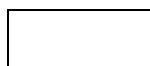
ADDRESS: _____

CELL: _____

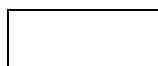
FAX: _____

SIGNATURE: _____

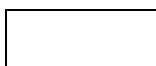
DATE: _____



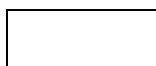
Contractor



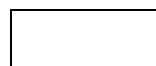
Witness 1



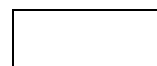
Witness 2



Employer



Witness 1



Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SABS 1200 A		<u>SECTION 1: PRELIMINARIES AND GENERAL ITEMS</u> NOTE: A rate or price must be entered in the amount column for each item. No item's cost may be "included" in the price of any other item's cost and the price tendered for any item for which a price is not tendered will be held to be zero.				
1.1	PSA 8.2.1		FIXED-CHARGE ITEM				
1.1.1	PSA 8.3.1		Allow for Contractual Requirements	Sum	1		
	8.3.2		<i>Establishment Facilities on the site</i>				
	PSA 8.3.2.1		Facilities for Engineer (SABS 1200 AB)				
1.1.2			a) Furnished Office	Sum	1		
1.1.3			b) Telephone and Email	Sum	1		
1.1.4			c) Project Nameboards (2 no) - to include EPWP Logo	Sum	1		
1.1.5			d) Parking (2 Vehicle)	Sum	1		
1.1.6			e) Ablution Facilities	Sum	1		
	8.4.2.2		<i>Facilities for Contractor</i>				
1.1.7			a) Offices, storage sheds, fencing etc	Sum	1		
1.1.8			b) Workshop	Sum	1		
1.1.9			c) Laboratories	Sum	1		
1.1.10			e) Ablution and latrine facilities	Sum	1		
1.1.11			f) Tools and equipment	Sum	1		
1.1.12			g) Water supplies,electric power and communication	Sum	1		
TOTAL SECTION 1 CARRIED FORWARD							

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 1 BROUGHT FORWARD							
1.1.13			h) Dealing with water	Sum	1		
1.1.14			i) Access	Sum	1		
1.1.15			j) Plant	Sum	1		
1.1.16			k) Laydown & piperack facilities	Sum	1		
1.1.17			j) Other fixed-charge obligations	Sum	1		
1.1.18			Adherance to safety regulations & protective clothing for local labour,based upon a 3 monthly rotation period. Supply of Safety Apparel (Safety Boots, Reflector Vests, Orange Overalls bearing the EPWP Logo and large EPWP on the back and safety gloves for all targeted labour	Sum	1		
1.1.19	PSA 8.3.2.2		Preparation of risk assessments, safe work procedures, the project H&S File, the H&S plan, the provision of PPE and protective clothing, and other H&S matters that the contractor deems necessary	Sum	1		
1.1.20	8.3.3		All work required to be done for environmental management as per the EMPr. NB. Exclude topsoil; compaction of earth berms and grassing etc. as these are individually itemised.	Sum	1		
			Completion and checking the Project H&S File and handing over to the Client on completion of the Works				
1.1.21			Removal of site establishment on completion	Sum	1		
TOTAL SECTION 1 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 1 BROUGHT FORWARD							
1.2	8.4		TIME RELATED ITEMS				
1.2.1	8.4.1		Contractual requirements	Sum	1		
	PSA 8.4.2		Operate and maintain facilities on the site for the duration of construction:				
	PSA 8.4.2.1		Facilities for Employer's Agent				
1.2.2			a) Furnished Office and Parking (2 Vehicle)	Sum	1		
1.2.3			b) Telephone	Sum	1		
1.2.4			c) Project Nameboards (2 no)- to include the EPWP logo.	Sum	1		
1.2.5			d) Survey assistance and material	Sum	1		
			e) Parking Bay (2 Vehicle)	Sum	1		
	8.4.2.2		Facilities for Contractor for duration of construction, except where otherwise stated				
1.2.6			a) Offices, storage sheds, fencing etc	Sum	1		
1.2.7			b) Workshop	Sum	1		
1.2.8			c) Laboratories	Sum	1		
1.2.9			e) Ablution and latrine facilities	Sum	1		
1.2.10			f) Tools and equipment	Sum	1		
1.2.11			g) Water supplies,electric power and communication	Sum	1		
TOTAL SECTION 1 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 1 BROUGHT FORWARD							
1.2.12			h) Dealing with water	Sum	1		
1.2.13			i) Access	Sum	1		
1.2.14			j) Plant	Sum	1		
1.2.15	PSA 8.4.2.2		k) Laydown & piperack facilities	Sum	1		
1.2.16	8.4.3		Supervision for the duration of construction	Sum	1		
1.2.17	8.4.5		Company and head office overhead costs for the duration of the contract	Sum	1		
1.2.18			Updating and amending the risk assessments, safe work procedures, the project H&S file, the H&S plan, the provision of PPE and protective clothing and any other H&S matters that the contractor deems necessary	Sum	1		
1.2.19			Full compliance with all H&S matters during construction of the works under the contract	Sum	1		
1.2.20			All work required to be done for Environmental management as per the EMPr. NB Excluding topsoil; compaction of earth berms and grassing etc. as these are individually itemised	Sum	1		
1.2.21	8.4.5		Other time-related obligations	Sum	1		
1.3	PSA 8.5		SUMS STATED PROVISIONALLY BY ENGINEER				
1.3.1			(a) Provide indemnity for unused materials on site (bond cost)	Prov. Sum	1	R 100 000.00	R 100 000.00
1.3.2			(i) Overheads and profits on item 1.3.1	%	100 000		
1.3.3			(b) Three fillings of reservoir	Prov. Sum	1	R 160 000.00	R 160 000.00
1.3.4			(i) Overheads and profits on item 1.3.3	%	160 000		
TOTAL SECTION 1 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSI VE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 1 BROUGHT FORWARD							
1.3.5		LI	(c) Water for testing pipelines (2 fillings per test length)	Prov. Sum	1	R 50 000.00	R 50 000.00
1.3.6			(i) Overheads and profits on item 1.3.5	%	50 000		
1.3.7			(d) Relocation of existing services and fences where ordered	Prov. Sum	1	R 300 000.00	R 300 000.00
1.3.8			(i) Overheads and profits on item 1.3.7	%	300 000		
1.3.9			(e) Inspection of materials by inspectors appointed by the Engineer	Prov. Sum	1	R 130 000.00	R 130 000.00
1.3.10			(i) Overheads and profits on item 1.3.9	%	130 000		
1.3.11			(f) Provisional sum for Community Liaison Officer	Prov. Sum	1	R 50 000.00	R 50 000.00
1.3.12			(i) Overheads and profits on item 1.3.11	%	50 000		
1.3.13			(g) Allowance for 2No students for in-service training	Prov. Sum	1	R 70 000.00	R 70 000.00
1.3.14			(i) Overheads and profits on item 1.3.13	%	70 000		
1.3.15			(h) Allowance for Environmental Control Officer (ECO) to inspect, monitor, assess construction site and prepare monthly site audit reports to the client and to be appointed under the Engineer	Prov. Sum	1	R 120 000.00	R 120 000.00
1.3.16			(i) Overheads and profits on item 1.3.15	%	120 000		
1.3.17			(i) Allowance for SHE Officer to inspect, monitor, assess construction site and prepare monthly site audit reports to the client and to be appointed under the Engineer	Prov. Sum	1	R 120 000.00	R 120 000.00
1.3.18			(i) Overheads and profits on item 1.3.16	%	120 000		
1.3.19			(j) Provision of basic survey reference by a nominated surveyor as ordered by engineer	Prov. Sum	1	R 60 000.00	
1.3.20			(i) Overheads and profits on item 1.3.19	%	60 000		
TOTAL SECTION 1 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 1 BROUGHT FORWARD							
1.3.21			(k) Additional testing where instructed by engineer	Prov. Sum	1	R 60 000.00	R 60 000.00
1.3.22			(i) Overheads and profits on item 1.3.21	%	60 000		
1.3.23		LI	(l) Proving of existing underground services as instructed by the Engineer	Prov. Sum	1	R 10 000.00	R 10 000.00
1.3.24			(i) Overheads and profits on item 1.3.23	%	10 000		
1.3.25			(m) Safety and Security when instructed by the Engineer	Prov. Sum	1	R 30 000.00	R 30 000.00
1.3.26			(i) Overheads and profits on item 1.3.25	%	30 000		
1.3.27			(n) Provisional Sum for repair to unknown services by local authority/ service provider	Prov. Sum	1	R 30 000.00	R 30 000.00
1.3.28			(i) Overheads and profits on item 1.3.27	%	30 000		
1.3.29			(o) Provisional Sum for relocation of services by local authority/service provider as Directed by the Engineer	Prov. Sum	1	R 50 000.00	R 50 000.00
1.3.30			(i) Overheads and profits on item 1.3.29	%	50 000		
1.3.31			(p) Provisional Sum for preparing and proving of pipe joint integrity	Prov. Sum	1	R 10 000.00	R 10 000.00
1.3.32			(i) Overheads and profits on item 1.3.31	%	10 000		
1.3.35			(q) Provisional Sum for the supply and installation of approved locks/ keys	Prov. Sum	1	R 4 000.00	R 4 000.00
1.3.36			(i) Overheads and profits on item 1.3.35	%	4 000		
1.3.37			(r) Provisional Sum for the supply and installation of approved safety equipment and signage	Prov. Sum	1	R 10 000.00	R 10 000.00
1.3.38			(i) Overheads and profits on item 1.3.38	%	10 000		
TOTAL SECTION 1 CARRIED FORWARD							

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 1 BROUGHT FORWARD							
1.3.39			(s) Allowance for lightning protection	Prov. Sum	1	R 50 000.00	R 50 000.00
1.3.40			(i) Overheads and profits on item 1.3.39	%	50 000		
1.3.41			(t) Allowance for telemetry	Prov. Sum	1	R 120 000.00	R 120 000.00
1.3.42			(i) Overheads and profits on item 1.3.41	%	120 000		
1.3.43			(u) Provisional Sum for procuring an ISD Consultant	Prov Sum	1	R 200 000.00	R 200 000.00
1.3.44			(i) Overheads and profits on item 1.3.43	%	200 000		
1.3.45			(v) Provisional Sum for paying Project Steering Committee members for monthly attending meetings	Prov Sum	1	R 55 000.00	R 55 000.00
1.3.46			(i) Percentage charges and profit on item 1.3.45	%	55 000		
1.4	8.7		DAYWORKS				
1.4.1			a) Labour	Prov Sum	1	R 30 000.00	R 30 000.00
1.4.2			Percentage adjustment to above to cover overheads, charges and profits	%	30 000		
1.4.3			b) Materials	Prov Sum	1	R 60 000.00	R 60 000.00
1.4.4			Percentage adjustment to above to cover overheads, charges and profits	%	60 000		
1.4.5			c) Plant	Prov Sum	1	R 50 000.00	R 50 000.00
1.4.6			Percentage adjustment to 1.4.5 to cover overheads, charges and profits	%			
TOTAL SECTION 1 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSI VE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 1 BROUGHT FORWARD							
1.5	PSA 8.6		TRAINING				
1.5.1			Provisional Sum for the provision of Technical Support by the Engineer on Site/Construction monitoring to assist the Contractor				
1.5.2			a) Generic Skills (i) Training Costs/Support Cost	Prov Sum	1	R 300 000.00	R 300 000.00
1.5.3			(ii) Handling cost and profit in respect of sub-item	%	300 000		
1.5.6			Transport and accommodation of workers for training where it is not possible to undertake the training in close proximity to the site.(Provisional sum)	Prov Sum	1	R 60 000.00	R 60 000.00
1.5.7			(i) Handling cost and profit in respect of sub-item	%	60 000		
TOTAL SECTION 1 CARRIED FORWARD TO SUMMARY							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAU	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2			<u>SECTION 2: DAYWORKS</u> No dayworks will be carried out without an instruction from the Engineer				
2.1	PAA.5.1		SECTION 2: DAYWORKS				
2.1.1			Allow for dayworks for sundry items not covered by measured items:				
2.1.2			LABOUR				
2.1.3			Site Agent	hrs	200		
2.1.4			Gang Supervisor	hrs	200		
2.1.5			Unskilled Labourers	hrs	200		
2.1.6			Bricklayer	hrs	200		
2.1.7			Pipe Fitter	hrs	200		
2.1.8			Semi Skilled Labourers	hrs	200		
2.2			Construction Hand and Operator	hrs	200		
2.2.1			Carpenter	hrs	80		
2.2.2			Clerk	hrs	240		
2.2.3			Artisans	hrs	200		
2.2.4			Foreman	hrs	200		
2.2.5			Welder	hrs	80		
2.2.6			Painter	hrs	80		
TOTAL SECTION 2 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 2 BROUGHT FORWARD							
2.2.7			Electrician	hrs	80		
2.2.8			MATERIALS				
2.2.9			Provisional sum for cost of material	Sum	1		
2.2.10			Contractor's mark-up on material	%	20		
2.2.11			PLANT				
2.2.12			T L B	hrs	80		
2.2.13			Light delivery vehicles (1t or equivalent)	km	200		
2.2.14			10 Ton Truck with Crane	km	200		
2.2.15			Generator Set	hrs	200		
2.2.16			Concrete Core Drilling Machine including operators (600mm diameter)	hrs	160		
2.2.17			Pipe Cutting Machine (steel)	hrs	160		
2.2.18			Welding Machine	hrs	160		
2.2.19			Compressor and Jack Hammer	hrs	160		
2.2.20			Tip Truck	hrs	160		
2.2.21			Water Tanker	hrs	160		
2.2.22			Plate Compactor	hrs	160		
TOTAL SECTION 2 CARRIED FORWARD TO SUMMARY							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT T CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.1	SANS 1200DA		RESERVOIR - SITE CLEARANCE & EXCAVATION				
3.1.1	8.3.1		Clear vegetation and trees of girth up to 1m on structure sites	m ²	1500		
3.1.2			Strip 150mm thick topsoil, set aside and maintain for re-use	m ²	1500		
3.1.3	8.3.2		Excavate in all materials, set aside and maintain for re-use in the formation of the embankments around the reservoir structure and chambers and dispose of surplus material as directed by the Engineer.	m ³	5600		
3.1.4			Backfill around reservoir structure and chambers, form and compact embankments using material from stockpile	m ³	3000		
3.1.5			Extra over item 7.1.3 for Hard rock excavation by use of explosives (Prov)	m ³	1000		
3.1.6	8.3.3.2		Topsoiling and grassing to embankments and designated areas as directed by the Engineer	m ²	5000		
3.2	1200DA		RESTRICTED EXCAVATION				
3.2.1	8.3.2		Excavate and use for backfill or embankment, or dispose as directed by the Engineer	m ³	2000		
3.2.2			Extra over item 7.2.1 for: Hard rock excavation by use of explosives (Prov)	m ³	200		
3.3	SANS 1200 DM		EARTHWORKS (ROADS)				
3.3.1			Clear vegetation and trees of girth up to 1m on new farm track alignment as directed by the Engineer (Prov)	m ²	12000		
3.3.2			Strip topsoil 100mm thick and stockpile for future use	m ²	12000		
3.3.3			Cut to fill and compact to 95% MOD AASHTO density (measured in cut) (Prov)	m ³	1800		
TOTAL SECTION 3 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 3 BROUGHT FORWARD							
3.3.4			Import G5 material from commercial sources and compact to 95% MOD AASHTO density in maximum 150mm layers.	m³	1800		
3.3.5			Import G2 material from commercial sources, and	m³	1800		
TOTAL SECTION 3 CARRIED FORWARD TO SUMMARY							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.1	8.4		5ML RESERVOIR (CONCRETE STRUCTURAL) Reference Drawing no. ALMP09/2022- S101 & S102 CONCRETE Reservoir Grade 35/19mm concrete in :				
4.1.1	8.4.3		Roof Slab (200mm thk)	m ³	265		
4.1.2			Columns including drop heads	m ³	55		
4.1.3			Concrete Wall (350mm thk)	m ³	310		
4.1.4			Columnn Base Thickenings (2.0 x 2.0 x 0.325)	m ³	30		
4.1.5			Concrete Strip Footings	m ³	110		
4.1.6			Floor Slab (200mm thk)	m ³	215		
			Chambers				
4.1.7	8.4.3		Grade 25/19mm to Floor slab, walls and roof slab	m ³	140		
			Blinding Layer				
4.1.8	8.4.2		Grade 15/19mm	m ³	160		
	8.4.3		Mass Concrete Pipe Encasement				
4.1.9			Grade 35/19mm to Reservoir Chamber Pipework	m ³	70		
4.1.10			Grade 20/19mm to drainage pipes under reservoir wall footing	m ³	40		
TOTAL SECTION 4 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.1.11			Shear Pads under floor joints Grade 20/19mm	m ³	70		
4.1.12	8.4.1		No-fines concrete under reservoir floor slab 19mm stone (1:9 mix)	m ³	215		
4.2			Shear Pads under floor joints <u>FORMWORK</u> - Reservoir				
4.2.1	8.2.5		450mm wide rough Formwork to outside face of wall base beneath ground level measured as a narrow width	m	115		
4.2.2	8.2.1		Rough formwork to outside walls beneath ground level	m ²	550		
4.2.3	8.2.2		Smooth formwork to exposed surface of outside walls of the reservoir	m ²	110		
4.2.4	8.2.3		Smooth formwork to inside walls	m ²	660		
4.2.5	8.2.3		Smooth formwork to circular column including hopper and base	m ²	200		
4.2.6	8.2.4		Smooth Horizontal plane to roof soffit	m ²	910		
4.2.7	8.2.5		400mm wide smooth Formwork for outside edge of roof slab upstand measured as a narrow width	m	110		
4.2.8	8.2.5		200mm wide smooth Formwork for inside edge of roof slab upstand beam measured as a narrow width	m	110		
4.2.9	8.2.5		400mm wide smooth Formwork for upstand of roof slab slab access openings measured as a narrow width	m	15		
TOTAL SECTION 4 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 4 BROUGHT FORWARD							
4.2.10	8.2.2		<u>Chambers</u> Smooth vertical plane to outside face of walls	m ²	160		
4.2.11	8.2.2		Smooth vertical plane to inside face of walls	m ²	140		
4.2.12	8.2.2		Smooth horizontal plane to roof soffit	m ²	60		
4.3	8.3		<u>REINFORCEMENT FOR RESERVOIR INCL. CHAMBER</u>				
4.3.1	8.3.1		High-tensile bars	ton	5		
4.3.2	8.3.1		Mild-steel bars	ton	5		
4.4	8.4.4		<u>UNFORMED SURFACE FINISHES</u> Wood-floated finish to:				
4.4.1			No-fines underfloor layer, blinding, pipe block and chamber floor	m ²	3300		
4.4.2			Steel-floated finish to: Reservoir floor	m ²	950		
4.4.3			Reservoir roof	m ²	1360		
4.4.4			Reservoir chamber roof slab	m ²	50		
4.4.5			Top of No-fines concrete layer with 5mm thick 1:3 cement sand mortar	m ²	1360		
4.4.6	PSG - 7.2.6		Contractor's attendance to water tightness testing of the reservoir, cleaning and adding disinfecting chemicals	Sum	1		
4.4.7			Reservoir Telemetry system	Sum	1		
4.4.8			Supply water to site for testing of the reservoir	Sum	1		
4.4.9			Lightening protection of reservoir and pump station	Sum	1		
4.4.10			Stormwater overflow system	Sum	1		
TOTAL SECTION 4 CARRIED FORWARD							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT T CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 4 BROUGHT FORWARD							
4.5	8.5		<u>JOINTS (the unit rate shall cover the cost of all materials and labour for the construction of each joint as shown on the drawings, including the cost of formwork, testing and making good) Reference Drawing no. ALMP09/2022-S101 & S102</u>				
4.5.1			Horizontal construction joint at wall kicker as per joint type W1 detail	m	110		
4.5.2			Horizontal construction joint in wall at mid height as per joint type W2 detail	m	110		
4.5.3			Horizontal construction joint between wall base and floor slab as per joint type F1 detail	m	100		
4.5.4			Horizontal construction joint in floor slab as per joint type F2 detail	m	170		
4.5.5			Horizontal construction joint in floor slab as per joint type F3 detail	m	60		
4.5.6			Horizontal construction joint between top of wall and u/s of roof slab as per joint type R1 detail (incl 2 Layers of 5 Ply Malthoid)	m	110		
4.5.7			200mm wide waterproofing bandage type sealant to combiflex as per detail L or similar approved.	m	600		
4.5.8			20mm thick closed cell high density polyethylene joint filler to floor slab expansion joints. Sikaflex or similar approved.	m	200		
4.5.9			250mm wide Rearguard 'R' waterstop under floor slab joints. Sika or similar approved	m	350		
TOTAL SECTION 4 CARRIED FORWARD TO SUMMARY							

Contractor

Witness 1

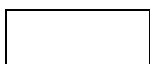
Witness 2

Employer

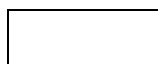
Witness 1

Witness 2

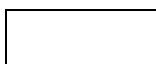
ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.1	SANS 1200H		SECTION 5: MISCELLANEOUS ITEMS				
5.1.1	8.3.1.2		Supply and install stainless steel ladder on the inside of the Reservoir, complete as per details on standard drawing no.s101 & 102	no.	1		
5.1.2			Supply and install stainless steel ladder on the outside of the Reservoir, complete, as per details on Drawing no. s101 & 102	no.	1		
5.1.3			Supply and install stainless steel ladder on the inside of Chambers, complete, as per details on drawing no. S101 & S102	no.	3		
5.1.4			Supply and install Mosden GRP fibre glass hatch cover (or similar approved) for :				
5.1.5			750x600 access opening in Reservoir roof slab	no.	1		
5.1.6			1000x1000 access opening in Reservoir roof slab	no.	1		
5.1.7			1200x1000 access opening in Inlet chamber roof slab	no.	1		
5.1.9			1500x1000 access opening in Outlet chamber roof slab	no.	1		
5.1.10			900x900 access opening in Meter chamber roof slab	no.	1		
5.1.11			Supply and install GMS vent pipes as per details on Drawing no. S101 & S102	no.	7		
5.1.12			Construct side-wall agricultural drain as per Detail 1 on Drawing no. S101 & S102	m	120		
5.1.13			Construct reservoir underfloor drains as per detail on Drawing no. S101 & S102	m	240		
5.1.14			250 micron PVC membrane beneath no-fines conc layer	m ²	1250		
5.1.15			100mm thick layer of 26mm washed stone to reservoir roof slab	m ²	910		
5.1.16			Screed reservoir roof to fall at min 1:200 from roof centre outwards to stormwater drainage outlets	m ²	910		
5.1.17			75mm dia Stormwater downpipes as per roof outlet drainage detail on drg. No. S101 & S102	no.	8		
TOTAL SECTION 5 CARRIED FORWARD							



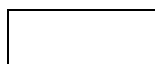
Contractor



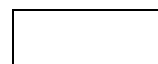
Witness 1



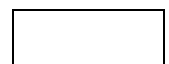
Witness 2



Employer



Witness 1



Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 5 BROUGHT FORWARD							
5.1.18			Construct and maintain Access Road to site for duration of contract	Sum	1		
5.1.19			Supply and install concrete palisade fencing as per standard details on drawing no. S101 & S102	m	450		
5.1.20			Supply and install 900mm wide gate for pedestrian access complete, as per standard details on drawing no. S101 & S102	no.	1		
5.1.21			Supply and install 4.5m wide double gate for vehicular access as per standard details on drawing no. S101 & S102	no.	2		
5.1.22			Supply and lay concrete coping blocks on reservoir roof slab upstand beam as per Detail 2 on drg no. S101 & S102, CCB 9 by LG Green or similar approved	m	110		
5.1.23			Construct Headwall with Reno Mattress protection as per details on Drawing no. S101 & S102	Sum	1		
5.1.24			Construct Meter Chamber as per details on drawing no. as per details on drawing no. ALMP09/202- S101 & S102 (Price to exclude pipework)	Sum	2		
5.1.25			Construct Stormwater manhole approx 2m deep as per details on dwg no. S101 & S102 including supply and installation of heavy duty cast iron cover	no.	3		
5.1.26			Fabricate and install stainless steel pipe strap bracket for reservoir overflow pipe as per details on drawing no. S101 & S102	no.	2		
5.1.27			Supply and lay 300mm dia half round precast channels for stormwater drainage	m	100		
5.1.28			Stone pitching to reservoir embankments as per Roof Outlet Detail on drg no. ALMP09/2022 , S101 & S102	m ²	100		
5.1.29			Mentis rectagrid type RS40 gratings to chambers	m ²	5		
TOTAL SECTION 5 CARRIED FORWARD TO SUMMARY							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT T CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1	SANS 1200 L	8.2.1	<u>SECTION 6:FITTINGS FOR ASSEMBLY</u> RESERVOIR CHAMBERS <i>Reference drawing nos : Inlet chamber ALMP09/2022 - S104, Outlet chamber ALMP09/2022 - S101</i> Design,Manufacture, supply, install, connect, calibrate, commission, Grd 42 X Steel Pipes and Fittings unless otherwise stated. (Flanges Table 1600 unless sched. otherwise). in accord. with SABS 719/71 (4.5mm wall Rilson coated or similar corosion protection coating thickness) 350 micron final thickness internal and external.				
6.1.1			355mm dia pipe, D/FL, 2670mm long	no.	3		
6.1.2			355mm dia 90 deg bend, D/FL, 305mm C/F	no.	3		
6.1.3			355x100mm dia Tangential tee, 1000mm long, D/FL	no.	3		
6.1.4			100NB Wedge gate valve, Flanged	no.	3		
6.1.5			355mm dia pipe, D/FL, 545mm long	no.	3		
6.1.6			355mm dia pipe, PE, 2600mm long (cut closure pipe)	no.	3		
6.1.7			355mm dia pipe, D/FL, 900mm long	no.	3		
6.1.8			100mm dia 90deg bend, PE/FL	no.	3		
6.1.9			355mm dia bellmouth, 500mm long, FL	no.	3		
6.1.10			355mm dia pipe, D/FL, 2350mm long	no.	3		
6.1.11			355mm dia pipe, PE/FL, 600mm long	no.	3		
6.1.12			355NB Isolation valve with handwheel, Amri Butterfly Isoria PN16	no.	3		
6.1.13			355NB Viking Johnson Flange adaptor	no.	3		
6.1.14			355mm dia pipe, D/FL, 1100mm long	no.	3		
6.1.15			355mm dia puddle pipe, D/FL, 1120mm long, central	no.	3		
6.1.16			355mm dia pipe, D/FL, 545mm long	no.	3		
6.1.17			355mm dia pipe, D/FL, 1000mm long	no.	3		
6.1.18			355mm dia puddle pipe, D/FL, 1200mm long with central puddle collar	no.	3		
TOTAL SECTION 6 CARRIED FORWARD							

Contractor

Witness 1

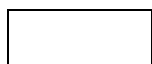
Witness 2

Employer

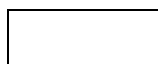
Witness 1

Witness 2

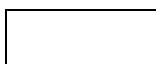
ITEM	PAYMENT T CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 6 BROUGHT FORWARD							
6.1.19			355NB Isolation valve with handwheel, Amri Butterfly Isoria PN16	no.	3		
6.1.20			355mm dia pipe, PE/FL, 700mm long (cut closure pipe)	no.	3		
6.1.21			355NB Viking Johnson Flange adaptor	no.	3		
6.1.22			355NB Bermad level control valve, 700 series model 750-66B, PN16, complete including float control device	no.	3		
6.1.23			355mm dia pipe, D/FL, 655mm long	no.	3		
6.1.24			355mm dia pipe, PE/FL, 1285mm long (cut closure pipe)	no.	3		
6.1.25			355mm dia puddle pipe, 830mm long, D/FL with central puddle collar	no.	3		
6.1.26			355mm dia 45deg elbow, 205mm C/F, PE/FL	no.	3		
6.2	SANS 1200L 8.2.3		FITTINGS FOR ASSEMBLY <u>...Continued</u>				
			METER INSTALLATION Design, Manufacture, supply, install, connect, calibrate, commission, Grd 42 X Steel Pipes and Fittings unless otherwise stated. (Flanges Table 1600 unless sched. otherwise) in accord. with SABS 719/71 (4.5mm wall thickness) Rilson coated or similar corrosion protection coating 350 micron final thickness internal and external.				
			355 DIA METER INSTALLATION				
			355 dia V.J Flange adaptor to suit steel pipe	no.	3		
			355x300 dia Reducer, f/f = 500mm, FBE	no.	3		
			355 dia puddle pipe, puddle flange central, f/f = 600mm, FBE	no.	3		
6.2.1			355 dia steel pipe, f/f = 380mm, FBE	no.	3		
6.2.2			RSV gate valve, 300NB, non rising spindle, Vosa or similar approved	no.	3		
6.2.3							
6.2.4							
6.2.5							
TOTAL SECTION 6 CARRIED FORWARD							



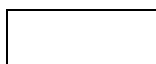
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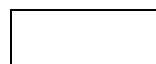
Witness 1



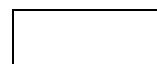
Witness 2



Employer



Witness 1



Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
TOTAL SECTION 6 BROUGHT FORWARD								
6.2.5	SANS 1200L		RSV gate valve, 300NB, non rising spindle, Vosa or similar approved	no.	3			
6.2.6			Elster Kent (or similar approved) strainer, 300NB	no.	3			
6.2.7			355 dia steel pipe, f/f = 1700mm, FOE	no.	3			
6.2.8			355 dia V.J Flange adaptor to suit steel pipe	no.	3			
6.2.9			355NB Elster Kent (or similar approved) Bulk Water Meter (Mag flow)	no.	3			
6.2.10			355 dia steel pipe, f/f = 350mm, FBE	no.	3			
6.2.11			555x300 reducer, f/f = 1000mm, FBE	no.	3			
			SITE WORKS - PIPELINES (continues)					
6.3			8.2.2	STEEL BENDS Medium radius and flanged both ends :				
6.3.1				500mm dia x 11 to 22 deg	no.	2		
6.3.2				500mm dia x 22 to 45 deg	no.	2		
6.3.3		500mm dia x 46 to 60 deg	no.	2				
6.3.4		500mm dia x 61 to 90 deg	no.	2				
6.4	8.2.2	STEEL TEES						
6.4.1		500x500 all flanged 500mm C/AF	no.	3				
6.4.2		500x200 all flanged 500mm C/AF	no.	1				
6.5	8.2.3	FLANGE ADAPTORS						
6.5.1		500 dia to suit PVC pipes	no.	10				
TOTAL SECTION 6 CARRIED FORWARD								

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ITEM	PAYMENT CLAUSE	LABOUR INTENSIVE (LI)	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL SECTION 6 BROUGHT FORWARD							
6.5.2			500 dia VJ to suit steel pipes	no.	5		
6.6			NON-RETURN VALVE PIPE WORK				
6.6.1			500 dia puddle pipe f/f = 1500 FBE puddle flange central	no.	1		
6.6.2			500 dia Bermad non return valve model 70N-I	no.	1		
6.6.3			500x200 dia tee FAR	no.	1		
6.6.6			500 dia steel pipe f/f = 3000 FBE	no.	1		
6.6.5			200 dia Bermad surge anticipator valve Model 735-55-M	no.	1		
6.6.6			200 dia x90deg steel bend FBE	no.	3		
6.6.7			200 dia PVC class 9 pipe in short lengths	m	10		
6.6.8			200 dia flange adaptor to suit PVC	no.	6		
6.7	SANS 1200LF		MARKER POSTS				
6.7.1	8.2.8		Supply and install marker beacon as per details on standard drg. No. ALMP09/2022 - S105	no.	3		
6.7.2			Supply and install valve marker as per details on dwg no. ALMP09/2022 - S105	no.	3		
6.7.3			Supply and install ground level marker as per details on dwg no. ALMP09/2022 - S105	no.	3		
6.8			<u>RESERVOIR OVERFLOW DRAINAGE PIPE</u>				
6.8.1			Supply and lay 375 dia, Class 50D Ogee concrete stormwater pipe	m	100		
6.5.2			500 dia VJ to suit steel pipes	no.	5		
TOTAL SECTION 6 CARRIED FORWARD TO SUMMARY							

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Part C3: SCOPE OF WORKS**C3.1 DESCRIPTION OF WORKS****C3.1.1 EMPLOYERS OBJECTIVES**

This project forms part of the **Chief Albert Luthuli Municipality's** overall development of infrastructure within the municipality's boundaries.

C3.1.2 OVERVIEW OF THE WORKS

The contract encompasses the construction of a new 5ML reinforced concrete reservoir at Silobela. The scope includes the tying into a new 355 rising main from Carolina Water Treatment Works through an inlet chamber and an outlet chamber for future tie-ins.

Silobela is a developing township, with Extension 5 confirmed to provide an additional 2613 new households by the Department of Human Settlement. The existing water infrastructure is not sufficiently capacitated to accommodate the new demand of the new housing units.

Labour-intensive works comprise the activities described in SANS 1921-5, Earthworks activities, which are to be performed by hand, and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this Scope of Work and are identified in the Bill of Quantities.

Labour-intensive works comprise the activities described in SANS 1921-5, Earthworks activities, which are to be performed by hand, and its associated specification data. Such works shall be constructed using local workers who are temporarily employed in terms of this Scope of Work.

C3.1.2.1 EXTENT OF THE WORKS

The work to be executed under this contract includes inter alia, for the supply of all prescribed materials, the plant and labour involved for the construction of the following, and not limited to the same for:

- 1) Tie into newly constructed 355 dia rising main from Carolina Reservoir
- 2) Bulk Excavations
- 3) Subgrade Improvements
- 4) Under-structure drainage construction
- 5) Reinforced Concrete construction of base, walls and reservoir roof slab
- 6) Construction of inlet/outlet chamber and equipping with fittings
- 7) Provision of Level control valves and telemetry

The tenderer shall refer to Annexure B of this document:

DRAWING NO.	DRAWING TITLE	SHEET
VU-WTR-24-005-101	RESERVOIR GENERAL ARRANGEMENT CONCRETE LAYOUT, SECTIONS & DETAILS	1 OF 1
VU-WTR-24-005-102	CONSTRUCTION JOINT DETAILS	1 OF 1
VU-WTR-24-005-103	5ML RESERVOIR FOUNDATIONS, FLOOR SLABS, WALL & COLUMNS REINFORCING DETAILS	1 OF 1
VU-WTR-24-005-104	INLET CHAMBER DETAILS	1 OF 1
VU-WTR-24-005-105	5ML RESERVOIR SITE PLAN	1 OF 1
VU-WTR-24-005-106	MARKER POST DETAILS	1 OF 1
VU-WTR-24-005-107	RESERVOIR MANHOLE DETAIL	1 OF 1

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

C3.1.2.2 Location of the Works

The project falls within Chief Albert Local Municipality (CALLM) and CALLM is situated in the north-eastern part of Mpumalanga, approximately 62km north of Ermelo and approximately 220km east of Johannesburg. CALLM is one of seven local municipalities under the jurisdiction of the Gert Sibande District Municipality (GDSM). The co-ordinates of the project area are taken at Carolina Water Treatment Works, are Latitude 26° 5'39.78"South and Longitude 30° 5'22.78" East.

C3.1.3 Labour Intensive Construction

Labour Intensive Construction shall mean the economically efficient employment of as great a portion of labour as is technically feasible to produce a standard of construction as demanded by the Specifications with completion by the Due Completion Date, thus the effective substitution of labour for equipment.

Appropriate portions of the Works included in the Contract shall be executed using Labour-Intensive Construction methods.

Except where the use of plant is essential in order, in the opinion of the Engineer, to meet the specified requirements by the Due Completion Date, the Contractor shall use only hand tools and equipment in the construction of those portion(s) of the Works that are required in terms of these Project Specifications to be constructed using Labour Intensive Construction methods.

These portions of the Works shall be constructed utilising only locally employed labour and/or the labour of local sub-contractors, supplemented to the extent necessary and unavoidable by the Contractors key personnel as provided for in sub-clause C3.1.3 unless otherwise instructed by the Engineer and in accordance with the further provisions of the relevant sections of Part C3 of the Scope of Works.

The portions of the Works to be executed using Labour Intensive Construction methods are:

- Clearing and grubbing of the site;
- Hand proving for service detection
- Laying of the pipelines
- Transportation and spoiling of all trench materials, where the disposal site is located within 20 metres of source;
- Construction of water fittings
- Mixing and placing of small concrete works;
- Steel fixing
- Compaction of access roads

In respect of those portions of works which are not listed above, the construction methods adopted and plant utilised shall be at the discretion of the Contractor, provided always that the construction methods adopted and plant utilised by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

C3.1.3.1 Labour intensive competencies of supervisory and management staff

Contractors having a CIDB contractor grading designation of 4CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2019 to 30 June 2021, are registered for training towards, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1CE, 2CE, 3CE and 4CE shall have personally completed, or for the period 1 April 2019 to 30 June 2021 be registered on a skills programme for the NQF level 2. All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2019 to 30 June 2021 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	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard

C3.1.3.2 Employment of unskilled and semi-skilled workers in labour-intensive works**C3.1.3.3 Requirements for the sourcing and engagement of labour**

- 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.
- The rate of pay set for the EPWP for the use of local labour is set at a minimum rate per day, agreed with the Chief Albert Local Municipality.
- Tasks established by the contractor must be such that:
 - the average worker completes 5 tasks per week in 40 hours or less; and,
 - the weakest worker completes 5 tasks per week in 55 hours or less.
- The contractor must 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 C3.4.3.2.1
- The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

- a) where the head of the household has less than a primary school education;
- b) that has less than one full time person earning an income;
- c) where subsistence agriculture is the source of income.
- d) those who are not in receipt of any social security pension income

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

- a) 60 % women;
- b) 20% youth who are between the ages of 18 and 35; and
- c) 2% on persons with disabilities.

C3.1.3.4 Payment for the Labour-Intensive Component of the Works:

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

C3.1.3.5 Applicable Labour Law

The Ministerial Determination 4: Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment act of 1997 by the Minister of Labour in Government Notice NR347 of 4 May 2012, as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers. An EPWP contract shall be signed between the contractor and the EPWP participant using the template appended. The contracts shall expire on earlier of (i) 31 March, (ii) at the end of the project; or (iii) completion of the works allocated.

C3.1.3.6 Introduction

This document contains the standard terms and conditions for workers employed in elementary occupations on an Expanded Public Works Programme (EPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of an EPWP.

In this document –

- (a) “department” means any department of the State, implementing agent or contractor;
- (b) “employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a EPWP;
- (c) “worker” means any person working in an elementary occupation on a EPWP;
- (d) “elementary occupation” means any occupation involving unskilled or semi-skilled work;
- (e) “management” means any person employed by a department or implementing agency to administer or execute an EPWP;
- (f) “task” means a fixed quantity of work;
- (g) “task-based work” means work in which a worker is paid a fixed rate for performing a task;
- (h) “task-rated worker” means a worker paid on the basis of the number of tasks completed;
- (i) “time-rated worker” means a worker paid on the basis of the length of time worked.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.1.3.7 Terms of Work

- (a) Workers on an EPWP are employed on a temporary basis or contract basis

C3.1.3.8 Normal Hours of Work

- (a) An employer may not set tasks or hours of work that require a worker to work:
- i. more than forty hours in any week
 1. on more than five days in any week; and
 2. for more than eight hours on any day.
 - ii. An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
 - iii. A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

C3.1.3.9 Meal Breaks

- (a) A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- (b) An employer and worker may agree on longer meal breaks.
- (c) A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
- (d) A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

C3.1.3.10 Special Conditions for Security Guards

- (a) A security guard may work up to 55 hours per week and up to eleven hours per day.
- (b) A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

C3.1.3.11 Daily Rest Period

- (a) Every worker is entitled to a daily rest period of at least twelve consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

C3.1.3.12 Weekly Rest Period

- (a) Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

C3.1.3.13 Sick Leave

- (a) Only workers who work for more than 24 hours have the right to claim sick-pay in terms of this clause
- (b) A worker who is unable to work on account of illness or injury is entitled to claim one Day's paid sick leave for every full month that the worker has worked in terms of a contract.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- (c) A worker may accumulate a maximum of twelve days' sick leave in a year
- (d) Accumulated sick-leave may not be transferred from one contract to another contract.
- (e) An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
- (f) An employer must pay a time-rated worker the worker's daily rate of pay for a day's
- (g) An employer must pay a worker sick pay on the worker's usual payday.
- (h) Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
 - (i) absent from work for more than two consecutive days; or
 - (j) absent from work on more than two occasions in any eight-week period.
- (k) A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
- (l) A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

C3.1.3.14 Maternity Leave

- (a) A worker may take up to four consecutive months' unpaid maternity leave.
- (b) A worker is not entitled to any payment or employment-related benefits during maternity leave.
- (c) A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- (d) A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.
- (e) A worker may begin maternity leave -
 - a. four weeks before the expected date of birth; or
 - b. on an earlier date –
 - i. if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - ii. if agreed to between employer and worker; or
 - iii. on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- (f) A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

C3.1.3.15 Family responsibility leave

Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances –

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- (a) when the employee's child is born;
- (b) when the employee's child is sick;
- (c) in the event of a death of –
- (d) the employee's spouse or life partner;
- (e) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

C3.1.3.16 Statement of Conditions

An employer must give a worker a statement containing the following details at the start of employment –

- (a) the employer's name and address and the name of the EPWP;
- (b) the tasks or job that the worker is to perform; and
- (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
- (d) the worker's rate of pay and how this is to be calculated;
- (e) the training that the worker will receive during the EPWP.
- (f) An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
- (g) An employer must supply each worker with a copy of these conditions of employment.

C3.1.3.14 Keeping Records

Every employer must keep a written record of at least the following –

- (a) the worker's name and position;
- (b) Certified ID copies of all locally employed labour
- (c) Signed Contracts between the employer and the EPWP Participants
- (d) Attendance Registers for the EPWP Participants
- (e) Monthly Reporting Template as per EPWP requirements
- (f) in the case of a task-rated worker, the number of tasks completed by the worker;
- (g) in the case of a time-rated worker, the time worked by the worker;
- (h) Proof of payments made to each worker.
- (i) The employer must keep this record for a period of at least three years after the
- (j) completion of the EPWP.

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C3.1.3.15 Payment

- (a) An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
- (b) A worker may not be paid less than the minimum EPWP wage rate per day or per task. This will be adjusted annually on the 1st of November in-line with inflation (available CPI as provided by StatsSA six (6) weeks before implementation).
- (c) A task-rated worker will only be paid for tasks that have been completed.
- (d) An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.
- (e) A time-rated worker will be paid at the end of each month.
- (f) Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- (g) Payment in cash or by cheque must take place –
 - a. at the workplace or at a place agreed to by the worker;
 - b. during the worker's working hours or within fifteen minutes of the start or finish of work;
 - c. in a sealed envelope which becomes the property of the worker.
- (h) An employer must give a worker the following information in writing –
 - a. the period for which payment is made;
 - b. the numbers of tasks completed or hours worked;
 - c. the worker's earnings;
 - d. any money deducted from the payment;
 - e. the actual amount paid to the worker.
- (i) If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.
- (j) If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

C3.1.3.16 Deductions

- (a) An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
- (b) An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
- (c) An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the

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agreement law, court order or arbitration award concerned.

- (d) An employer may not require or allow a worker to –
- a. repay any payment except an overpayment previously made by the employer by mistake;
 - b. state that the worker received a greater amount of money than the employer actually paid to the worker; or
 - c. pay the employer or any other person for having been employed.

C3.1.3.17 Health and Safety

- (a) Employers must take all reasonable steps to ensure that the working environment is healthy and safe.
- (b) A worker must –
- a. work in a way that does not endanger his/her health and safety or that of any other person;
 - b. obey any health and safety instruction;
 - c. obey all health and safety rules of the EPWP;
 - d. use any personal protective equipment or clothing issued by the employer;
 - e. report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

C3.1.3.18 Compensation for Injuries and Diseases

- (a) It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on an EPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
- (b) A worker must report any work-related injury or occupational disease to their employer or manager.
- (c) The employer must report the accident or disease to the Compensation Commissioner.
- (d) An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

C3.1.3.19 Termination

- (a) The employer may terminate the employment of a worker for good cause after following a fair procedure.
- (b) A worker will not receive severance pay on termination.
- (c) A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

- (d) A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract.
- (e) However, the worker may be re-engaged if a position becomes available.
- (f) A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available.

C3.1.3.20 Certificate of Service

On termination of employment, a worker is entitled to a certificate stating –

- (a) the worker's full name;
- (b) the name and address of the employer;
- (c) the EPWP on which the worker worked;
- (d) the work performed by the worker;
- (e) any training received by the worker as part of the EPWP;
- (f) the period for which the worker worked on the EPWP;
- (g) any other information agreed on by the employer and worker.

C3.1.3.21 Contractor's default in payment to Labourers and Employees

- (a) Any dispute between the Contractor and labourers, regarding delayed payment or default in payment of fair wages, if not resolved immediately may compel the
- (b) Employer to intervene.
- (c) The Employer may, upon the Contractor defaulting payment, pay the moneys due to the workers not honoured in time, out of any moneys due or which may become due to the Contractor under the Contract.

C3.1.3.22 Provision of Hand tools

- (a) The Contractor shall provide his labour force with hand tools of adequate quality, sufficient in numbers and make the necessary provisions to maintain the tools in good and safe working conditions

C3.1.3.23 Reporting

The Contractor shall submit monthly returns/reports as specified below:

- (a) Signed Master rolls/pay sheets of temporary workers and permanent staff detailing the number, category, gender, rate of pay and daily attendance.
- (b) Certified ID copies of all locally employed labour
- (c) Signed Contracts between the employer and the EPWP Participants
- (d) Attendance Registers for the EPWP Participants
- (e) Monthly Reporting Template as per EPWP requirements

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(f) Plant utilization returns

(g) Progress report detailing production output compared to the programme of works

C3.1.3.24 UNEMPLOYMENT INSURANCE FUND

The contractor will be responsible for payment or contribution of UIF for all labour employed under the project. Proof of payment of UIF shall be available upon request.

C3.1.3.25 WORKMEN'S COMPENSATION ACT

All labour employed on the site shall be covered by the Workmen's Compensation Act. The contractor shall pay in full, including the payment of the necessary levies, such amounts, as are due in terms of the Act. The contractor at the commencement of the contract shall resolve the manner in which Workmen's Compensation will be handled. Amounts paid by the contractor shall not be included in the wage rates but shall be an extra payment allowed for by the contractor.

C3.1.3.26 Specific provisions pertaining to SANS 1914-5

Definitions

Targeted labour: Unemployed persons who are employed as local labour on the project.

C3.1.3.27 Contract participation goals

The contract participation goal is **30%** of the total contract value. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.

The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

C3.1.3.28 Terms and conditions for the engagement of targeted labour

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

C3.1.3.7 Variations to SANS 1914-5

1. The definition for net amount shall be amended as follows:

Financial value of the contract upon completion, exclusive of any value added tax or sales tax, which the law requires the employer to pay the contractor.

The schedule referred to in **C3.3.2.1 (6)** shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

C3.1.3.8 Training of targeted labour

- a. 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.
- b. The cost of the formal training of targeted labour will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically

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possible. The contractor, must access this training by informing the relevant provincial 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 must be furnished with a copy of this request.

- c. A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works – Cinderella Makunike, Fax Number 012 328 6820 or email cinderella.makunike@dpw.gov.za Tel: 083 677 4026.
- d. The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he she is employed for 4 months or more.
- e. The contractor shall do nothing to dissuade targeted labour from participating in training programmes.
- f. An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training.
- g. Proof of compliance with the requirements of items above must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

C3.1.4 Sub-Contracting

C3.1.4.1 Contractor shall appoint such authorities and/or specialist sub-contractors and suppliers as may be designated or nominated by the Employer or the Engineer.

C3.1.4.2 The Contractor shall sub-let to local small sub-contractors appropriate portions of the works that are designated in Clause C3.1.3 as being reserved for labour intensive construction methods.

C3.1.4.3 As required by Clause 4.4.5 of the Conditions of Contract, the Contractor shall be responsible for all work carried out by sub-contractors (whether nominated by the Employer or selected by the Contractor) on his behalf. The Engineer will not liaise directly with any such sub-contractor, nor will he become involved in any problems and/or disputes related to payments, programming, workmanship, etc. unless provided for in the Conditions of Contract. Such problems and/or disputes shall remain the sole concern of the Contractor and his sub-contractors.

C3.1.4.4 The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, and provided always that the Contractor has complied fully and in all respects with the provisions of the Contract pertaining to subletting to local sub-contractors or has utilised his best endeavours to comply therewith, authorise in writing that the Contractor may employ local residents with the sole intent of executing on-the-job training of such local residents to suitable levels of skill that will enable the Contractor to sub-let appropriate portions of the Works to such local residents.

Without limiting the generality of application of this sub-clause, circumstances, which may be considered by the Engineer to warrant such authorization, include:

- a) non-receipt of valid or acceptable tenders/quotations from local sub-contractors;
- b) serious default or failure of appointed local sub-contractors;

The Engineer shall not grant such authority in cases where it may reasonably be concluded on the available evidence that the invitation of further tenders/quotations in accordance with the terms of the Contract, is likely to result in the successful completion of the portions of the Works concerned by local sub-contractors.

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Should the Contractor, after suitable due endeavour, be unable to identify local residents suitable for and desiring to train as sub-contractors for portions of the Works as specified in Clause 3.1.4.2, then the Contractor shall be permitted to undertake the Works in question with his own workforce as provided for in Clause 3.1.3 above.

The Engineer shall monitor progress achieved with sub-contractor training, and successful completion of this training shall be subject to his approval or instruction. The Contractor shall tender rates for the training of sub-contractors and labour.

As specified in Clause C3.1.4, the Contractor shall approach the Labour Desk that is established for purposes of the Contract for assistance and advice regarding conditions of employment, minimum wages, disputes and disciplinary procedures in respect of local sub-contractors.

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C3.1.5 Construction and Management Requirements**C3.1.5.1 General**

The Contractor is referred to SANS 1921: 2004 parts 1, 2, 3 and 5: Construction and Management Requirements for Works Contracts. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

C3.1.5.2 Quality Assurance (QA) (Read with SANS 1921 – 1: 2004 clause 4.4)

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems, which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer's representative to act as foreman or surveyor.

C3.1.5.3 Management and disposal of water (Read with SANS 1921 - 1: 2004 clause 4.6)

The Contractor shall pay special attention to the management and disposal of water and stormwater on the site. It is essential that all completed works or parts thereof are kept dry and properly drained. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

C3.1.5.4 Disposal of spoil or surplus material (Read with SANS 1921 - 1: 2004 clause 4.10)

The Contractor shall dispose all surplus and unsuitable material at a legal and registered landfill sites within the Municipal area. He shall be responsible for all arrangements necessary to obtain such legal and registered landfill sites from the Municipality.

C3.1.5.6 Testing (Read with SANS 1921 – 1: 2004 clause 4.11)

- **Process control**

The Contractor shall arrange for all tests required for process control to be done by a laboratory acceptable to and approved by the Engineer.

The Contractor may establish his own laboratory on site or he may employ the services of an independent commercial laboratory. Whatever method is used, the Contractor must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Engineer. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

- **Acceptance control**

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Engineer for acceptance control. However, before accepting any work, the Engineer may have further control tests carried out by a laboratory of his choice. The cost of such additional tests will be covered by a provisional sum provided in the schedule of quantities, but tests that failed to confirm compliance with the specifications, will be for the account of the Contractor.

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C3.1.5.7 Survey beacons *(Read with SANS 1921 - 1 : 2004 clause 4.15)*

The Contractor shall take special precautions to protect all permanent survey beacons or pegs such as benchmarks, stand boundary pegs and trigonometrical beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs have been disturbed by the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

C3.1.5.8 Existing Services *(Read with SANS 1921 - 1 : 2004 clause 4.17)*

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced.

The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

C3.1.6 Programme to be supplied by the Contractor

The Contractor's programme shall be essentially in accordance with the overall requirements of the project.

The programme shall not be in the form of a bar chart only but shall show clearly the anticipated quantities of work to be performed each month, together with the manner in which the listed plant and other resources are to be used, as well as the anticipated earnings for the various sections of work.

A network-based programme according to the precedence method shall be required by the Engineer. The programme shall be updated monthly in accordance with the progress made by the Contractor. The updated programme shall be submitted to the Engineer at least two working days prior to monthly meetings.

Failure to comply with these requirements will entitle the Engineer to use a programme based on his own assumptions for the purpose of evaluating claims for extension of time or additional payments.

If, during the progress of the work, the quantities of work performed per month fall below those shown on the programme, or if the sequence of operations is altered or if the programme is deviated from in any other way, the Contractor shall, within one week of having been notified by the Engineer, submit a revised programme and network.

If the programme has to be revised by reason of the contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the Works within the time of completion as defined in Clause 5.7 of the General Conditions of Contract or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit the programme or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided in Clause 9.2 of the General Conditions of Contract.

The approval by the engineer of any programme shall have no contractual significance other than the Engineer will be satisfied if the work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right to the Engineer to instruct the Contractor to vary the programme if required by circumstances. The Contractor is also referred to Clause 5.6 of the General Conditions of Contract when drawing up his programme.

Progress in advance of the programme on certain portions or phases of the Works shall not be considered adequate reason for poor progress on another portion or phase.

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C3.1.7 Overhaul

Overhaul has been provided for, provisionally in this contract. Payment for overhaul on this contract shall be made on Engineer's approval only.

C3.1.8 Site Facilities Available**C3.1.8.1 Location of Site and Depot**

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel and labourers. If the Employer can make any specific site available to the Contractor, such site will be pointed out to the Contractor. The Contractor must obtain written permission from the landowner and subsequently from the Engineer for the establishment of his camp.

(a) Contractor's Camp Site/Store Yard

Any clearing of the site that is necessary and the making good after de-establishment will be the responsibility of the Contractor.

In addition to the requirements of SANS 1200A clause 8.3.2.2 the following conditions shall also apply:-

- (i) None of the existing roads shall be damaged in any way.
- (ii) No waterborne sewerage facilities or potable water connection are available on the site. The Contractor shall make his own arrangements in this regard.
- (iii) It shall be the responsibility of the Contractor to make good any damage caused to the campsite area or any improvements on it, including services, and for reinstating it to its former condition when vacated. The standard of reinstatement must be to the satisfaction of the Engineer or the owner. Particular attention should be directed to these requirements and written clearances from the relevant Departments or other owners will be required.

C3.1.8.2 Source of Water Supply

The Contractor shall be responsible under the Contract for the supply and distribution at his cost of all water that he may require for purposes of constructing the Works. Accordingly, the Contractor shall pay all connection fees and consumption charges, and at his cost provide all connections, consumption meters, pipe work, storage tanks, transport and other items associated with the supply of water for the Works.

The Contractor shall, subject to the approval of the Engineer, make any necessary arrangements with the relevant authority for the connection(s), and shall provide in his tender for the payment of all charges and costs that are associated with making water available for purposes of constructing the Works.

C3.1.8.3 Source of Power Supply

The Contractor shall be responsible under the Contract for the supply and distribution at his cost of all electricity that he may require for purposes of constructing the Works. Accordingly, the Contractor shall pay all connection and consumption charges, and at his cost provide all connections, transformers, consumption meters, cables, distribution boards and other items that are associated with the supply of electricity for construction of the Works.

The Contractor shall, subject to the approval of the Engineer, make any necessary arrangements with the relevant authority for the connection(s), and shall provide in his tender for the payment of all charges and costs that are associated with making electricity available for purposes of constructing the Works. The distribution of electricity shall be in accordance with the applicable bylaws and regulations of the supply authority.

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C3.1.8.4 Accommodation of Employees

No employees except for security guards will be allowed to sleep or be accommodated on the site.

No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and to transport them to site.

No informal housing or squatting will be allowed.

The Contractor shall provide the necessary ablution facilities at his campsite and the site of the works for the use of his employees. Chemical toilets only will be allowed where temporary facilities have to be provided.

C3.1.9 Features Requiring Special Attention**C3.1.9.1 Built-up Areas**

The Contractor's attention is drawn to the fact that the Works will be constructed through residential areas. The Contractor shall exercise all necessary precautions and take all necessary steps to ensure the safety and convenience of the public. In addition, the Contractor shall provide access for traffic over and through the works, and for residents to their places of abode, all as described in the Specifications. Allowance must be made by the Contractor in his programming for delays resulting from the aforesaid.

The Contractor shall give residents a minimum of 72 hours written notice of his intent to close access to residential stands. The Contractor shall acquire written confirmation from all owners that they are aware of any intended closures of access. No traffic access to a residential stand shall be closed for longer than 48 hours.

C3.1.9.3 Protection of Buildings and Structures

The Contractor shall give all residents or other parties owning a building or structure within an appropriate radius (not less than 100m) from any point of blasting, a minimum of 48 hours notice of his intent to execute any blasting work.

The Contractor shall note all aspects relevant to the condition of the affected buildings and/or structures prior to blasting and shall acquire the signature of the owners/occupants agreeing to such conditions.

Subsequent to blasting, both the Contractor and the owners/occupants shall sign the form confirming the condition of the buildings and/or structures. In the event of damage to existing buildings and/or structures as a result of blasting, remedial work shall be done to the satisfaction of the owners/occupants at the Contractor's expense.

Compliance with this clause will not relieve the Contractor of any of his responsibilities in terms of the Contract.

C3.1.9.4 Care of the Site

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

C3.1.9.5 Control of Water

The Contractor shall at all times and in all respects be responsible for the handling of stormwater from higher-laying areas above the Works, and for the handling of any sub-surface water that may affect the Works. No separate payment shall be made in this regard, as all costs related thereto shall be deemed to be included in the rates tendered for the various items of work that are included in the Schedule of Quantities.

C3.1.10 Management of the environment

The Contractor shall pay special attention to the following:

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(a) Natural Vegetation

The Contractor shall confine his operation to as small an area of the site as may be practical for the purpose of constructing the works.

Only those trees and shrubs directly affected by the works and such others as the Engineer may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

(b) Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires, which may have been caused by him or his employees.

C3.1.11 Workmanship and Quality Control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and of the Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality-control system and provide experienced engineers, foremen, surveyors, materials technicians, other technicians, technical staff and the user department, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the quality of the Works at all stages of the Contract.

The cost of the Contractor's supervision and process control, including all testing carried out by the Contractor, will be deemed to be included in the rates tendered for the various items of work. The Contractor's attention is drawn to the provisions of the various Standardised Specifications regarding the minimum frequency of process control testing that is to be executed. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control of the quality of the Works at all times.

Upon completion and submission of each portion of the Works to the Engineer for examination, the Contractor shall furnish the Engineer with the results of relevant tests, measurements and levels, thereby indicating compliance with the Specifications.

The Engineer will not examine or inspect any portion of work submitted for approval unless the request for inspection and approval is accompanied by relevant tests, measurements and levels indicating compliance.

C3.1.12 Samples

Materials or work that do not conform to the approved samples, submitted in terms of Clause 7.4 of the Conditions of Contract, will be rejected. The Engineer reserves the right to submit samples for testing to ensure that the material represented by the samples meet the specification requirements.

C3.1.13 Notices, Signs, Barricades and Advertisements

Notices, signs and barricades (required in terms of Clause 8 of the Conditions of Contract) as well as advertisements may only be erected where approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to have any sign, notice or advertisement moved to another location, or to have it removed from the Site of the Works, should it in any way prove to be unsatisfactory, inconvenient or dangerous to the general public.

C3.1.14 Requirements for Accommodation of Traffic**General**

The Contractor will be responsible for the safe and easy passage of public traffic past and on sections of roads of which he has occupation or where work has to be done near traffic.

Access to site includes a rail crossing across an operational railway line. The contractor shall be responsible for ensuring that safety is adhered to and Transnet Rail is informed of such Works prior to undertaking the construction.

Accommodation of traffic, where applicable shall comply with SANS 1921-2: 2004: Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor. The Contractor shall obtain this specification from Standards South Africa if accommodation of traffic will be involved on any part of the construction works.

Basic Requirements

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road. The Contractor shall ensure that all road signs, barricades, delineators, flagmen and speed controls are effective and that courtesy is extended to the public at all times.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Engineer to suspend the work until the road signs, etc, have been repaired to his satisfaction.

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations.

The Contractor shall provide and grant access to persons whose properties fall within or adjoin the area in which he is working.

C3.1.15 Community Liaison and Community Relations

In all dealings with nearby communities and beneficiaries of the project, and in all dealings with workers employed from within such communities, the Contractor shall take due cognisance of the character, culture and circumstances of the specific community and/or any group of beneficiaries, and shall at all times use his best endeavours to avoid the development of disputes and rather to foster a spirit of co-operation and harmony towards the project.

The Contractor shall at all times, keep the Engineer fully informed regarding all matters affecting or negotiated between the Contractor and the community and/or beneficiaries, and he shall attend all liaison meetings as may be arranged by the Engineer and/or the Employer. All matters concerning the community and/or beneficiaries shall be discussed and where possible, resolved at such meetings.

Where any resolution during such negotiations or at such meetings shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect thereto without a prior written instruction from the Engineer. Where the Contractor is of the opinion that any instruction of the Engineer issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and prices and/or that a delay in the progress of the Works will result, he shall be entitled to submit a claim in terms of Clause 10 of the Conditions of Contract, provided always that the period of twenty-eight (28) days referred to in Clause 10 shall be reduced to three (3) normal working days in respect of all claims submitted in terms of this clause.

a. Duties of the Community Liaison Officer

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- i. To be available on site daily between the hours of 07h30 and 16:30 and at other times as the need arises. His normal working day will extend from 07h30 morning until 16h30 in the afternoon.
- ii. To determine, in consultation with the contractor, the needs of the temporary labour for relevant skills training. He will be responsible for the identification of suitable trainees and will attend one of each of the training sessions.
- iii. To communicate daily with the contractor and the engineer to determine the labour requirements with regard to numbers and skill, to facilitate in labour disputes and to assist in their resolution.
- iv. To assist in and facilitate in the recruitment of suitable temporary labour and the establishment of a "labour desk".
- v. To attend all meetings in which the community and/or labour are present or are required to be represented.
- vi. To assist in the identification, and screening of labourers from the community in accordance with the contractor's requirements.
- vii. To inform temporary labour of their conditions of temporary employment and to inform temporary labourers as early as possible when their period of employment will be terminated.
- viii. To attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- ix. To keep a daily written record of his interviews and community liaison.
- x. To attend monthly site meetings to report on labour and RDP matters.
- xi. All such other duties as agreed upon between all parties concerned.
- xii. To submit monthly returns regarding community liaison

b. Payment for the community liaison officer

A special pay item is incorporated in section 1200 of the bill of quantities relating to payment of the liaison officer on a prime cost sum basis. This payment shall only be made for the period for which the duties of the liaison officer are required and not necessarily for the full duration of the contract. The remuneration of the CLO shall be determined jointly by the contractor, engineer and employer.

c. Period of employment of the community liaison officer

The period of employment of the community liaison officer shall be as decided upon

- i. jointly by the contractor, engineer and employer.

C3.1.16 Community Participation.

a. Purpose

In order to give effect to the need for participation and transparency in the process of appointing labour, the community should participate in the decision making process throughout the life of a project. This shall be achieved through structured engagement between those responsible for the delivery of the project and the community.

b. Structure and Composition

A Project Liaison Committee (PLC) may be formed from representatives of the Employer, the Engineer, the Contractor and the Community if the project is such that a specific community can be identified.

c. Procedures

- i. The PLC deals with labour and SMME involvement on the project and shall meet at least once every month until such time as it is of the opinion that it could fulfil its tasks by meeting less frequently.
- ii. The PLC shall make recommendations by consensus. If consensus can not be reached, the decision of the Employer will be final in cases that have no financial implications for the Contractor or where payment is to be made from PC items. Where the financial responsibility for the successful completion of the works rests with the Contractor, the Contractor's decision shall be final. In fulfilling its tasks, the PLC shall be guided by the relevant sections of this specification and the supplementary documents.

d. Tasks of the PLC

- i. To assist with community liaison and resolution of disputes.
- ii. To devise fair and transparent procedures that will assist the Contractor in the engagement of labour and the award of sub-contracts to SMME's.
- iii. To advise on and monitor labour issues.
- iv. To assist in resolving labour disputes.

e. Assistance to the PLC

- i. The Employer may appoint a competent local person as a Community Liaison Officer to assist the Engineer and the Contractor in the day to day liaison with the communities directly affected by the project.

C3.1.17 Open Trenches

Trenches may not be left open during the builder's holidays and shall be safe guarded at all times from danger to the public. Safe trench-crossings shall be provided at all intersections with accesses to properties and with public roads and paths. The length of trench left open at any one time may be restricted by the Engineer, should he consider such restriction to be in the interest of public safety.

C3.1.18 Statutory Regulations

The statutory requirement of the Occupational Health and Safety Act, Act 85 of 1993 (referred to as the Act below), and all regulations promulgated there under as well as the other relevant acts must be adhered to by the Contractor, with specific reference to the safety of all employees and the public, irrespective of whether such employees are employed by the Contractor or by his subcontractors (including local subcontractors). The Contractor, in entering into this Contract, hereby agrees with the Employer in terms of Section 37(2) of the Act, that the Contractor as an employer in its own right and in its capacity as Contractor for the execution of the Works, shall have certain obligations and that the following arrangement shall apply between the Contractor and the Employer to ensure compliance by the Contractor with the provisions of the Act, namely:-

- (a) The Contractor undertakes to acquaint the appropriate officials and the employees of the Contractor with all relevant provisions of the Act, and the regulations promulgated in terms of the Act;
- (b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with; and

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- (c) The Contractor hereby 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 and the Engineer from being obliged to comply with any of the aforesaid duties, obligations and prohibitions in respect of the Works; and
- (d) The Contractor shall be obliged to report forthwith to the Employer and the Engineer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.
- (e) The Contractor shall sign the agreement bound into Section C1.2 of this document.

The Contractor shall comply with all the conditions of the Record of Decision in terms of Section 22(3) of the Environmental Conservation Act, 1989.

A time-related and a fixed-charge item have been provided in Section 1 and Section 2 of the Schedule of Quantities. The contractor shall allow for all obligations imposed by the Environmental Management Plan including the appointment of an environmental manager/control officer.

C3.1.19 Safety

"Pursuant to the provisions of the Conditions of Contract, and without in any way limiting the Contractor's obligations there under, the Contractor shall at his own expense (except only where specific provision (if any) is made in the contract for the reimbursement to the Contractor in respect of particular items), provide the following:

- (a) The Principal Contractor must do a Risk Assessment and compile an OHS Plan to be evaluated and approved by the Safety Agent prior to commencement of Construction.
- (b) The Contractor must ensure that regular safety meetings be held, and that the minutes of such meetings be kept in a Safety File, which must be available on site at all, times.
- (c) Provide to its Employees on the site of the works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational health and Safety Act, 1993 (Act No 85 of 1993) as amended (hereinafter referred to as the Act) at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times;
- (d) Provide, install and maintain all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public;
- (e) Implement on the site of the works, such procedures and systems and keep all records as may be required, to ensure compliance with the requirements of the Act at all times;
- (f) Implement all necessary measures to ensure compliance with the Act by all sub-contractors engaged by the Contractor and their employees engaged on the works;
- (g) Full compliance with all other requirements pertaining to safety as may be specified in the Contract (Also refer to Notice to Tenderers).

The Employer and the Engineer shall be entitled, although not obliged, to make such inspections on the site as they shall deem appropriate, for the purpose of verifying the Contractor's compliance with the requirements of the Act.

For this purpose, the Contractor shall grant full access to the site of all parts of the site and shall co-operate fully in such inspections and shall make available for inspection all such documents and records as the Employer's and/or Engineer's representative may reasonably require. Where any such investigations reveal, or where it comes to the Engineer's attention that the Contractor is in any way in breach of the requirements of the Act or

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is failing to comply with the provisions of this clause, the Engineer shall, in accordance with the provisions of clause 5.11 of the Conditions of Contract, be entitled to suspend progress on the works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Engineer, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the works or any part thereof is suspended by the Engineer in terms of this clause, and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of clause 5.13.1 of the Conditions of Contract should the Contractor fail to complete the Works on or before the specified due completion date in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute grounds for the Engineer to act in terms of subclause 9.2.1 of the Conditions of Contract and for the Employer to cancel the Contract in accordance with the further provisions of the said clause 9.2.”

In addition to all above safety related requirements the Contractor shall take cognisance of the requirements of the Construction Regulations and OHS Specifications.

C3.1.20 Safety Officer

OHS must be provided.

The Contractor is required to ensure compliance with the Occupational Health and Safety Act (Act 85 of 1993) and its regulations, in particular the Construction Regulations 2014, to appoint a Health and Safety Officer for the works.

The safety officer shall have a sound knowledge of the Occupational health and Safety Act. He shall preferably have completed the Safety Management Training Course (SAMTRAC) presented by NOSA. He shall also be registered as a Construction Health and Safety office with SACPCMP. The Contractor shall submit details of the proposed personnel.

C3.1.21 Source of Material/Borrow pit

The contractor will be held responsible for locating legal, licenced and approved sources of all materials complying with the relevant minimum requirements to be used in this contract. No separate payment shall be made for this, as all costs related thereto shall be deemed to be covered by the tendered rates.

Where possible materials manufactured or produced locally shall be procured to promote local enterprise.

C3.1.22 Photographic Record

Prior to the commencement of the work, and during the contract period, a photographic record shall be made of all existing stands and structures to be affected by the construction activities and forwarded to the Engineer prior to the commencement of Works.

No provision has been made in the Schedule of Quantities for this item.

C3.1.23 Requirements for Practical Completion

A Practical Completion Certificate shall be issued to the Contractor by the Engineer once the plant has been commissioned and operated as per the Plant Operator’s Manual provided by the Contractor. for a period of not less than one month. The required plant output and water quality must meet the Engineer’s specification.

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C3.2 Construction**C3.2.1 Works Specifications**

The standard specifications on which this contract is based are the following SANS 1200 Standardized Specifications:

SANS 1200 A	Preliminary and General
SANS 1200 AB	Engineer's Office
SANS 1200 C	Site Clearance
SANS 1200 D	Earthworks
SANS 1200 DA	Earthworks (Pipe Trenches)
SANS 1200 G	Concrete (Structural)
SANS 1200 H	Structural Steel Work
SANS 1200 HA	Structural Steelwork (Sundry Items)
SANS 1200 L	Medium Pressure Pipelines
SANS 1200 LB	Bedding (pipes)
SANS 1200 M	(general)
SANS 1200 ME	Subbase
SANS 1200 MF	Base

C3.2.2 The term "project specifications" appearing in any of the SANS 1200 standardised specifications must be replaced with the terms "scope of work".

C3.2.3 References from, and variations and additions to the Standard Specifications and Particular Specifications are included in section C3.4.2.

C3.2.4 Variations and Additions to Standard and Particular Specifications

The following variations and additions to the Standard and Particular Specifications will be applicable to this Contract.

The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SANS) in Pretoria.

SANS 10396:2003:	Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
SANS 1914-1 to 6 (2002):	Targeted Construction Procurement
SANS 1921-1 (2004):	Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works and where accommodation of traffic is involved.
SANS 1921-2 (2004):	Construction and Management Requirements for Works Contracts; Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor.

The following DWS specifications are also referred to in this document and the Contractor is advised to obtain them from the Department of Water and Sanitation in Pretoria.

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DWS1110	Department of Water Affairs, "Standard Specification for construction of pipelines."
DWS1130	Department of Water Affairs, "Standard Specification for the manufacture and supply of steel pipes, specials and fittings for duties up to 4,6 MPa design pressure."
DWS1131	Department of Water Affairs, "Standard Specification for the lining and coating of steel pipes and specials."
DWS1160	Department of Water Affairs, "Standard Specification for design, manufacture, supply and installation of polyvinyl chloride (pvc)."
DWS1740	Department of Water Affairs, "Standard Specification for plumbing
DWS2510	Department of Water Affairs, "Standard Specification for the supply of valves."

The various documents listed in section C3.2.4 shall be treated as mutually explanatory. However, should any requirement of section C3.2.4 conflict with any requirement of the Standardised Specifications or with any requirement of the Particular Specifications, then the requirement of section C3.2.4 shall prevail.

C3.2.2 Plant and Materials

All materials shall comply with the requirements of the South African Bureau of Standards and shall bear the official standardization mark. Where SANS standard does not exist for a certain material, or a material does not bear the official standardization mark, the Engineers approval of such material must be gained before use thereof.

C3.2.3 Construction Equipment

All equipment on site shall be in a good working order and is to be in such a condition that it can achieve production rates which are typical of the industry standards.

Should any equipment, in the opinion of the Engineer, be substandard or breaks down frequently to such an extent that it affects the progress on the project, the Engineer may instruct the Contractor to replace such equipment.

C3.2.4 Existing Services

The Contractor shall so carry out all his operations as not to encroach on, or interfere with, trespass on, or damage adjoining lands, building properties, roads, structures, places and things in the vicinity of the Works, and he shall free and relieve the Employer of any liability that may be incurred in consequence of his failure to do so.

The services existing on the site will be either shown on the drawings or pointed out on site by the Engineer and / or the Municipality. No excavation work will commence unless a representative of the Municipality and/or the Engineer have been requested to point out existing services in the area under construction. Written confirmation of services that have been pointed out by the Municipality is to be obtained by the Contractor.

All existing services on the site may not be shown on the drawings or be visible on the site. The Engineer may order excavation by hand in order to search for and expose services. An item has been included in the Bill of Quantities to cover the cost of such work if so ordered by the Engineer. Where a service is damaged because of the Contractors negligence he shall be liable for the cost involved in the repair of the services and any other consequent cost that may arise due to the interruption of the damaged services.

The same shall apply to all Communication (Telkom, MTN, Vodacom, CellC, Neotel etc.) services in the area.

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- **Source of water supply**

The Contractor will be responsible for the costs of the connection to the municipal supply as well as the use of water for construction purposes. The Contractor's attention is drawn to the fact that the potable water supply may be erratic in this area. Under no circumstances may potable water be used for construction, unless written permission is granted by the Engineer. The Contractor will be responsible at his own cost for all water that may be required for the purpose of construction of the Works and for human consumption.

- **Sources of power supply**

Electricity is available from the existing network on site, and the Contractor is to arrange with the Local Authority for a connection. The Contractor will be responsible for the costs of electricity consumed as well as the connection costs.

- **Location of camp and depot**

The Engineer shall point out the position of the Contractors camp to the Contractor during the site inspection. The Contractor may assume that the site camp will be within 2 km of the site.

- **Location of borrow pits**

The Geotechnical Investigation has not any indicated borrow pits nearby. The Contractor will be responsible for locating the closest borrow pit.

The Contractor will be responsible to ensure that the material is suitable for use and conforms with the specification required for use. Furthermore, the Contractor shall submit for approval an application to the Employer for the use of the borrow pits. The Contractor shall be responsible for any charges relating to royalties etc.

- **Sanitary facilities**

The Contractor is to provide the necessary sanitary facilities at his camp, all of which will be governed by the requirements of the Local Authority. The contractor shall pay all sanitary fees and charges due. Sanitary facilities shall be regularly services as needed and waste material delivered to approved treatment facility.

It is required that specific sanitary facilities be provided for the Engineer, and these facilities will not be shared with the Contractor. The facilities are, however, to be kept in a clean and hygienic condition by the contractor to the satisfaction of the Engineer. All sanitary facilities are to conform to the by-laws of the Local Authority.

- **Temporary offices**

The Contractor is required to provide x1 (one) furnished office space for the Engineers, the Contractors' offices shall also have adequate space and facilities for the holding of site meetings, and for the Engineer to perform administrative functions on an ad hoc basis.

Neither housing nor shelters will be provided for the contractor's employees, and the Contractor shall make his own arrangements to house his employees and transport them to the Site.

- **Laboratory facilities**

The use of commercial laboratories will be allowed, but the laboratory to be used is subject to the approval of the Engineer.

- **Name Boards**

One name board shall be provided in positions as ordered by the Engineer. The Engineer will provide the lettering required once the tender is awarded.

- **Survey assistant and equipment**

The Contractor will not be required to make any survey equipment available specifically for the use of the Engineer. The Contractor will however make 2 survey assistants available to the Engineer as and when required, as well as the theodolite and/or level plus accessories.

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C3.2.5 Site Usage

- **Ground and access to the works**

The Contractor shall where necessary on or adjacent to roads which carry traffic, provide all the necessary barricades and signs in accordance with the stipulations of the South African Road Traffic Signs Manual.

The Contractor shall further ensure that all public roads that are used for access to the site are kept free of debris at all times. The Contractor shall also take adequate measures to ensure that dust is kept to an acceptable level. The term acceptable is to be deemed as acceptable to the Engineer.

- **Care, damage and protection**

The Contractor shall at his own cost make full provision for all watching and lighting necessary for the protection of all persons, animals, vehicles, etc., from injury by reason of the Works. He shall provide ample warning signs, guard rails, etc., around open excavations, stacks of materials, excavated material, debris or the like, and he shall be held liable for all claims made upon himself or upon the Employer by reason of his neglect of all such precautions and provisions.

During the periods of construction of the Works and the repair of defects, the Contractor shall, at his own cost, to the satisfaction of the Engineer and the relevant Authority, take sufficient and adequate measures to avoid interrupting the use of all roads, footpaths, water courses, drains, pipes, telephones, electric wires and cables, premises, places and works, public or private, which may in any way be interfered with by the operations; and shall also afterwards permanently restore all structures and everything which may have been temporarily displaced or otherwise interfered with, all to the satisfaction of the Engineer and the relevant Authority, without extra charge beyond the Contract price.

- **Survey beacons**

The Contractor shall take care to safeguard any permanent survey beacons such as erf boundary pegs and reference beacons. Should the Contractor disturb any such pegs and beacons, he shall have them replaced at his own cost by a registered Land Surveyor. The Contractor is to provide the Engineer with written confirmation from the Land Surveyor that he has replaced the relevant beacons. The Contractor's attention is drawn to article 35(i) of the Land Surveying Act No. 9 of 1927 (as amended) in this regard.

- **Blasting**

Construction does not take place within a built-up area; however extreme care is to be taken during any blasting operations. No blasting shall be permitted without prior written consent from the Engineer. Written as well as verbal notice will be given to all house / land owners in the affected area 24 hours prior to the blast being set off, and the contractor is to do a survey of all the houses / property (internal and external) in the area prior to blasting.

A full daily report of all blasting operations (in duplicate) is to be completed by the Contractor.

This report shall inter alia contain the following information:

- Date and time of each blast
- Number of holes
- Charge per hole
- Use of relays, etc.

This report is to be submitted to the Engineer on a weekly basis and is to be countersigned by the Engineer.

The contractor is to be noted that he is not to use or permit any person to use an explosive powered tool, unless:

- a) it is provided with a protective guard around the muzzle end, which effectively confines any flying fragments or particles; and
- b) the firing mechanism is so designed that the explosive powered tool will not function unless:

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- i. it is held against the surface with a force of at least twice its weight; and
- ii. the angle of inclination of the barrel to the work surface is not more the 15 degrees from a right angle.

Furthermore, the Contractor will be responsible to acquire the consent of all relevant authorities within the area which may be affected due to blasting activities, the aforementioned activity will be subject to the Engineers approval and written instruction to proceed with the process of acquiring consent.

- **Protection of existing vegetation**

Before any tree is cut down and removed from the site, the Contractor shall confirm the necessity of such action with the Engineer or the Engineer's Representative.

- **Access to individual erven**

Access to all public and private property must be maintained at all times. Where trenches cross the access point to any property, the Contractor is to arrange for adequate and safe vehicular and pedestrian crossings over the trenches.

The Engineer must approve the method of providing access before any excavation commences.

- **Use of construction vehicles and equipment**

The contractor shall ensure that all construction vehicles and mobile plants

- a) are of an acceptable design and construction;
- b) are maintained in a good working order;
- c) are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- d) are operated by workers who-
 - i. have received appropriate training and have been certified / licensed competent and been authorised to operate such machinery; and
 - ii. are physically and psychologically fit to operate such construction vehicles and mobile plant by being in possession of a medical certificate of fitness;
- e) arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- f) are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guardrails, safety signage and crash barriers;
- g) where appropriate, are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- h) are equipped with an electrically operated acoustic signalling device and a reversing alarm;
- i) are on a daily basis inspected prior to use, by a competent person who has been appointed in writing and the findings of such inspection is recorded in a register.
- j) no person rides or be required or permitted to ride on any construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- k) every construction site is organised in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- l) the traffic routes are suitable for the persons using them, sufficient in number, in suitable positions and of sufficient size;

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- m) every traffic route is, where necessary indicated by suitable signs for reasons of health or safety;
- n) bulldozers, scrapers, loaders, and other similar mobile plant are, when being repaired or when not in use, fully lowered or blocked with controls in a neutral position, motors stopped and brakes set;
- o) whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- p) when workers are working on or adjacent to public roads, reflective indicators are provided and worn by the workers.

C3.2.6 Permits and Wayleaves

The Contractor will be responsible for the application and maintenance of any permits and/ or wayleaves that may be required by the relevant regulatory authorities affected by the construction of the works. This includes any permits for gravel prospecting and extraction that shall be applied and obtained from the relevant authority for the purposes of securing borrow pits. Original permits and wayleaves shall be kept on site at all times during construction activities.

C3.3 Management

C3.3.1 Setting out of the works

Generally, the positions of the works have been fixed on the plans according to the existing stand boundaries. The Engineer is to approve all setting out prior to commencement of excavation.

C3.3.2 Excavation of works & safety

The contractor shall ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing. The Contractor will evaluate, as far as is reasonably practicable, the stability of the ground before excavation works begin and he/she shall not permit any person to work in an excavation which has not been adequately shored or braced.

The Contractor will cause convenient and safe means of access to every excavation area in which person are required to work and such access shall not be further than 6m from the point where any worker within the excavation is working.

The Contractor must ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed and shall before the commencement of excavation work that may affect any such service, take the steps that may be necessary to render the circumstances safe for all persons involved.

The Contractor shall cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be:

- adequately protected by a barrier or fence of at least one meter in height and as close to the excavation as is practicable; and
- provided with warning illuminates or any other clearly visible boundary indicators at night or when visibility is poor.

The Contractor shall cause warning signs to be positioned next to an excavation within which persons are working or carrying out inspections or tests.

C3.3.3 Inspection by Engineer

No stage of construction shall be proceeded with until the Engineer or the Engineer's Representative has examined and approved the previous stage. If any work is covered or hidden from view before the Engineer has inspected same, the Contractor shall at his own cost open the covered work for inspection. The Contractor shall also be responsible for making good any work damaged by such uncovering.

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C3.3.4 Employment of local labour

It is specifically required that the Contractor adhere and apply Labour Intensive Construction (LIC) principles as far as possible. In this instance the following procedures must be followed:

- All labour is to be sourced from the Local Municipal area - the Contractor may only import key personnel from elsewhere.
- The fixed rate for the appointment of local labour will be a minimum as specified by law and shall be payable by the Contractor on (at least) a fortnightly basis.
- The Contractor's attention is drawn to Annexure D: Bargaining Council for the Civil Engineering Industry: Wage and Task Grade Collective Agreement published in Government Gazette No: 39294 on 16 October 2015.
- A Monthly labour report on all local labour i.e. payments and labour days should be submitted to the Engineer at the end of each month in order for the Engineer to submit a report to the Employer.

C3.3.5 Site Meetings

Monthly site meetings will be held between all relevant parties to establish the progress and/ or delays and problems that might occur on site. Any problems of delays will be addressed accordingly and the Contractor will receive proper instructions with reference to this matter.

C3.3.6 Daily Records

Daily records of resources (equipment and people employed) must be kept and must be available on site at all times. These records will include i.e. site instruction book, site diary, site visit register, contractual documentation and minutes of all project meetings. Labour information should be kept updated at all times.

C3.3.7 Compliance with applicable laws

The Contractor shall, in performance of the Contract, comply with all applicable laws, regulations and statutory provisions and agreements, and shall in particular, on the request of the Engineer, provide proof that he has complied therewith with regard to amongst others:

- Wages and conditions of work; and
- Safety

C3.3.8 Clearance of site

On completion of the Works, the Contractor shall clear away and remove from the site all Construction Equipment, surplus materials, rubbish and temporary works of every kind and leave the totality of the site and the works clean and in a safe condition.

All streams and watercourses (where applicable) shall be cleaned and restored to the condition as at the commencement of the Works. If the Contractor does not, within a reasonable time, comply with this requirement, the Employer may have the site cleared and recover the cost thereof from the Contractor and/or the contractor's retention moneys.

C3.3.9 Management of the Works

C3.3.9.1 Planning and Programming

The mechanical contractor shall compile and submit to the Engineer, within (2) two weeks, a method statement and bar chart showing the acquiring of materials, manufacturing, delivery, installation and commissioning program.

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Employer

Witness 1

Witness 2

The Contractor is responsible for liaison and arrangements with the Engineer in connection with the finalisation and approval of the construction programme. The programme shall be in the form of a bar chart only, and shall clearly show the anticipated quantities, the production rates and value of work to be performed each month.

A network-based programme according to the precedence method shall also be provided showing the various activities and critical path in such detail as may be required by the Engineer. The programme shall be updated monthly in accordance with the actual progress made by the Contractor.

Failure to comply with these requirements will entitle the Engineer to use a programme based on his own assumptions for the purpose of evaluating claims for extension of time and/or additional payments.

The compilation of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in the contract.

C3.3.9.2 Sequence of the Works

Sequencing of the works shall be agreed to between the Contractor, the Engineer and the Client to prevent unnecessary lapses in the level of water treatment. Sequencing shall generally be determined by the planning and programming referred to above.

C3.3.10 Methods and Procedures

C3.3.10.1 Format of Communications

All communications regarding the contract shall be channelled through the Engineer or his duty authorised representative.

C3.3.10.2 Fabrications / Shop Drawings

The Contractor shall submit fabrication/shop drawings to the Engineer at the earliest possible time. The Contractor must allow five (5) working days for approval of the drawings by the Engineer. Only once the Engineer has approved, signed and returned the drawings may fabrication commence.

C3.3.10.3 Normal Working Hours

Normal working hours shall be between 07:00 and 17:00 on weekdays from Mondays to Fridays and between 07:00 and 13:00 on Saturdays, should the Contractor choose to work on Saturdays, excluding Public holidays.

C3.3.10.4 Interference with Municipal Staff and Operations

The Contractor shall ensure that none of his staff interfere in any way with any municipal staff member or their functions and duties. Any member of the Contractors staff found to be interfering with municipal staff or operations in any way shall be removed from the site and shall not be allowed to return.

C3.3.10.5 Access for Other Contractors

The Contractor shall provide reasonable access to other Contractors carrying out work on the site from time to time, as and when such access is required. The Contractor is entitled to request reasonable notification of at least 24 hrs before access by others is required.

C3.3.10.6 Giving Notice of Work to Be Covered Up

The Contractor shall give the Engineer reasonable time to accommodate examinations in his programme, in which case times for inspections can be agreed on. Requests for examination of work shall be made in the site request book 24 hrs before the examination is required.

If the Engineer attends with the purpose of examining any part or materials of the works at the time and date as agreed upon with the Contractor, and it is found that the works or materials are not yet ready for inspection, the Contractor shall be responsible for the costs of such a visit by the Engineer.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.3.10.7 Cost of Test Specimens and Tests

It is deemed that the Contractor has made provision in his tender for all such services and tests that are required from him. It is the duty of the Contractor to, at his own cost and by means of the necessary tests, prove to the Engineer that the works comply with specifications and regulations.

C3.3.11 Other Contractors on Site

A civil contractor is expected on site during the contract period and close co-operation between the mechanical and civil contractors shall be required to ensure neither delays the other. Given this scenario, the Contractor responsible for delaying any other contractor shall be liable for all costs associated with the delay.

Programming and liaison between contractors in this regard must be taken into account.

C3.3.12 Testing, Completion, Commissioning, and Correction of Defects

Refer to the relevant sections in Part C3: Scope of Works and the Particular Specifications as set out in C3.5.

C3.4 Health and Safety**C3.4.1 Health & Safety Issues**

All work is to be carried out in accordance with the Occupational Health and Safety Act and Regulations (Act 85 of 1993) (a copy of which must be kept on site), the Explosive Material Act of (Act 26 of 1956), the Minerals Act of 1991, and the Factories Machinery and Building Work Act (No 22 of 1941).

The Contractor's notice is drawn to the stipulations of the Construction Regulations 2014, a regulation of the Health and Safety Act 1993 (Government Gazette No 10113 of 07 February 2014). The construction regulation will be applied vigorously on the project.

The Contractor to be appointed must have made provision for the cost of health and safety measures during the construction process. The contractor must have the necessary skills, competencies and resources to carry out the work safely. A proper Safety Plan is to be submitted by the Contractor and a copy thereof is to be made available to all applicable appointed labourers and permanent workers on this project.

Before starting work on site, the Contractor shall present to the Employer his Occupational Health and Safety Plan for approval. He shall also appoint a certified Health and Safety Officer in writing and give a copy of the letter of appointment to the Employer.

The Contractor is to ensure that the legal compliance for the Health and Safety issues are in place. Audits will be carried out to ensure that the Contractor is registered and in good standing with the Workmen's Compensation fund and that the Contractor has affected insurance indemnifying the Employer against penalties levied upon the Employer due to the acts of omissions of the Contractor in failing to comply with the provisions of the OHS regulations 2003. A compliance audit will also be carried out to ensure that the Contractor has appointed a full-time competent person in writing to deal with the issues of the OHS and that a risk assessment has been conducted and a copy of the Safety plan is on site before any work commences.

Operational audits will be carried out on the following important issues:

- That the Safety Plan is on site at all times;
- That the Contractor's Safety file is on site at all times;
- That the Safety Officer is on site at all times;
- That Safety meetings are conducted as per the Safety Plan;
- That employees are working under safe conditions;
- That the public is not placed in danger; and
- That there is no harm to the environment.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

C3.4.2 Accommodation of traffic

It is expected of the Contractor to ensure that the free flow of traffic is possible throughout the construction period.

The Contractor is to provide all necessary barricades, signs and lighting in accordance with the stipulations of the South African Road Signs Traffic Manual, and the Protective Services of the Local Municipality. All work is to be to the satisfaction of the Engineer.

C3.4.3 Reporting of accidents

In addition to any statutory regulations, the Contractor shall, as soon as practicable, report to the Engineer every occurrence on the Works or the site causing damage to property of injury or death of persons. If required by the Engineer, the Contractor will submit a report in writing to the Engineer within 48 hours of such requirement setting out full details of the occurrence.

The Engineer shall have the right to make any enquiries either on the site or elsewhere as to the cause and results any such occurrence and *the* Contractor shall make available to the Engineer the necessary facilities for carrying out such enquiries.

C3.4.4 Protection of the public

The Contractor shall erect fences and employ sufficient security personnel to prevent unauthorised access to the site by members of the public. Notices prohibiting access to the site shall be clearly displayed at all access points.

The notices shall be in English and Zulu.

The Contractor shall at all times ensure that his operations do not endanger any member of the public.

As the area is adjacent to areas with public thoroughfare and civilians the Contractor shall take special precautions to prevent public access to any danger areas on the Works, e.g. by temporary barricades and/or fencing as well as access control.

C3.4.5 Barricades and lighting

All excavations and openings in walls and slabs into or through which a person may fall shall be securely barricaded at all times in accordance with the requirements of the applicable OH&S regulations.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.5 PROJECT SPECIFICATION

The Project Specification forms an integral part of the contract and supplements the standard specifications listed in Part C3.2 Construction under Item C3.2.1 Work Specifications. The Project Specification is made up of three portions as indicated here below.

General / Standard Specifications

This portion of the Project Specification contains general descriptions of the works, the site and the requirements to be met. The standard specifications have been written to cover all phases of work normally required and may cover items not applicable to this particular contract.

Amendments to General / Standard Specifications and Additional Specifications

This portion of the Project Specification contains relevant information pertaining to choices and alternatives provided for in the Standard Specifications i.e. choices of materials or construction methods. It also contains some additional specifications and amendments to the Standard Specifications required for this particular contract.

The number of each clause and each payment item in this portion of the Project Specifications consists of the prefix PS followed by a number corresponding to the number of the relevant clause or payment item in the Standard Specifications. The item number of any new clause or payment item (that does not form part of an existing clause or a payment item in the Standard Specifications) is also prefixed by "PS" followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the Standard Specifications.

Particular Specifications

This portion of the Project Specification contains particular specifications applicable only to this project and consists of the prefix P followed by alphabetical numbering.

Discrepancy between specifications

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

Numbering reference

Where, in the Bill of Quantities, an item from a particular section of the Standard Specifications is used in another section, the item number of the source section is retained but prefixed by the number of the section where the item is used, (e.g. Item 61.03 used in Sect. 22, will be 22/61.03 which means that the provisions of Section 61 in respect of that item remain valid although the item is used in Section 22). This applies to new items introduced in the Project Specifications for a specific section but used in another section.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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 Witness 2

 Employer

 Witness 1

 Witness 2

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 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

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C3.5.1 GENERAL / STANDARD SPECIFICATIONS**PS 1. SITE CONDITIONS****PS 1.1 Location of Site**

The project within Chief Albert Local Municipality (CALLM). CALLM is situated in the north-eastern part of Mpumalanga. The co-ordinates of the project area are taken at the Carolina Water Treatment Works are:

- 26° 05' 39.79" S
- 30° 05' 22.68" E

PS 1.2 Access to Site

The sites are accessible through the gravel road leading to Carolina Water Treatment Works from the Route (R38) at 26° 5' 24.48" S; 30° 5'36.65"E turn-off. The sites are easily accessible as the route is located along a number of road reserves.

PS 1.3 Nature of Materials on Site

The water table may be relatively high during summer months and sufficient provision must be made for effective draining of all excavations. The in-situ material is composed of mainly clayey soils. No additional payments will be applicable to the above-mentioned other than the relevant items in the Schedule of Quantities.

PS 1.4 Excavability and Contractors Liability

Tenderers shall be deemed to have fully satisfied themselves as to the geological, environmental and cultural resource conditions that pertain to the Site of the Works before submitting their tenders.

PS 2. CONSTRUCTION AND MANAGEMENT REQUIREMENTS**PS 2.1 General**

The Contractor shall exercise due diligence and care in constructing the Works, in order to ensure that no damage is caused to public or private property or to the property of the Municipality and that danger to persons, fauna, flora and livestock are limited to the extent that is reasonably possible.

The Contractor shall indemnify the Municipality against any and all claims that may arise from his construction of the Works, as required by the Conditions of Contract. It is the responsibility of the tenderers to acquaint themselves of the geology and soil conditions of the site before submitting a tender.

PS 2.2 Drawings (Read with SANS 1921 – 1: 2004 clauses 4.1.7; 4.1.11 and 4.1.12)

The following reduced drawings which form part of the tender documents shall be “working drawings – not for construction” and will be used for tendering and pricing purposes only.

The following reduced (A3) drawings are enclosed herewith:

Please refer to the relevant Annexure for complete list and attached drawings.

The contractor shall be supplied with three complete paper copies of the construction drawings free of charge. The Contractor shall at his own expense produce all further paper prints required for the construction of the work.

Any information which the Contractor has control over and which is required by the Engineer to complete the drawings of record (As-built drawings) shall be made available to the Engineer before the Completion Certificate is issued.

Only written dimensions may be used. Dimensions are not to be scaled from drawings unless ordered by the Engineer. The Engineer will supply all figures / dimensions which are not shown on the drawings. The levels or dimensions given on the drawings are subject to confirmation on site.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

Any destination names on road signs which may be indicated on the drawings are subject to confirmation by the Engineer before these signs are manufactured.

PS 2.3 Quality Assurance (QA) (Read with SANS 1921 – 1: 2004 Clause 4.4)

The Contractor will be solely responsible for the production of work that complies with the specifications to the satisfaction of the Engineer. To this end, it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) System on site.

The Engineer will audit the Contractor's QA System on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems, which could cause a delay or failure to the works. The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his approved QA System. The Contractor must note that it is not the duty of the Engineer or the Engineer's Representative to act as foreman, site agent or surveyor.

PS 2.4 Site Establishment (Read with SANS 1921 - 1: 2004 Clause 4.14)

This contract is to be executed in an area surrounded by rural settlements and as such, safety will be paramount. Furthermore, all due courtesy must be exercised as far as local resources are concerned (labour and materials).

The Engineer will facilitate all communication with the target community through liaison with the Employer and the CLO.

PS 2.5 Management of the Environment (Read with SANS 1921 - 1: 2004 Clause 4.19)

Respect for the environment is an important aspect of this contract and the Contractor shall pay special attention to the following:

Natural Vegetation

Only those trees and shrubs directly affected by the works and such others as the Engineer may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire, the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires, which may have been caused by him or his employees.

Environmental Management Plan

In addition to the above, all requirements of the Environmental Management Plan (EMP) will be adhered to.

PS 2.6 Submit detail as-built drawings of existing services and adjustments to construction drawings

The Contractor will be responsible for the submission of all as-built information (drawings etc.) of all existing services intersecting pipeline trenches as well as any applicable adjustments to the construction drawings. The lump sum tendered shall include full compensation for all information in the possession of the Contractor as required above in order to complete the as-built drawings.

Any information in the possession of the Contractor, which is necessary for the Engineer's Representative to complete his/her as-built drawings must be submitted to the Engineer's Representative before a final payment certificate and a certificate of completion will be issued.

PS 2.7 Features Requiring Special Attention**PS 2.7.1 Built-up Areas**

The Contractor's attention is drawn to the fact that the portions of the works may be constructed close to built-up areas. The Contractor shall exercise all necessary precautions and take all necessary steps to ensure the safety and convenience of the public. Where applicable, the Contractor shall provide access for traffic over and through the works and for residents to their places of abode, all as described in the Specifications. The Contractor in his programming must make allowance for delays resulting from the aforesaid.

The Contractor shall give residents a minimum of 48 hours written notice of his intent to close access to residential stands. No access to a residential stand shall be closed for a period longer than 48 hours.

PS 2.7.2 Local Products

The Contractor shall use materials manufactured within South Africa and SANS approved where applicable in his Works, provided that such materials conform in all respects to the relevant requirements contained in the Specifications.

PS 2.7.3 Status of Buildings and Structures

The Contractor shall give all residents or other parties owning a building or structure within an appropriate radius (not less than 100m) from any point of blasting, a minimum of 48 hours' notice in the format as approved by the Engineer and/or relevant authority of his intent to execute any blasting work. The Contractor shall note all aspects relevant to the condition of the affected buildings and/or structures prior to blasting and shall acquire the signature of the owners/occupants agreeing to such conditions.

Subsequent to blasting, both the Contractor and the owners/occupants shall sign a form confirming the condition of the buildings and/or structures. In the event of damage to existing buildings and/or structures as a result of blasting, remedial work shall be done to the satisfaction of the owners/occupants at the Contractor's expense. Compliance with this clause will not relieve the Contractor of any of his responsibilities in terms of the Contract.

PS 2.7.4 Care of the Site and Environment

At all times during construction of the works and upon completion thereof, the site of the works and its environment shall be kept and left in a clean and orderly condition. The Contractor shall store all materials and equipment for which he is responsible in an orderly manner and shall keep the site free from debris and obstructions.

Clearing, grubbing, excavation and spoiling of excess and waste materials may only take place in the positions and over the areas shown on the drawings or authorized in writing by the Engineer. The Contractor shall protect fauna and flora at all times and within other areas surrounding the Site of the Works, to the approval of the Engineer, the Municipality and the Employer.

In addition to the above, the following environmental mitigation measures shall be taken during construction of the Works:

- a) The Contractor's vehicle and plant maintenance depot shall be provided with suitable and effective oil disposal facilities. Should an oil, diesel or petrol spillage occur, the Contractor shall remove all contaminated soil to an approved disposal site.
- b) No bins containing organic solvents may be cleaned on Site, unless liquid waste disposal facilities are provided on Site for this purpose, all to the approval of the Engineer.
- c) Dust suppression techniques should be applied during construction of the Works, especially after construction of the top structures has commenced. The Contractor shall water appropriate portions of the Site at suitable intervals as approved by the Engineer in order to achieve this objective.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

Should personnel or sub-contractors of the Contractor not comply with the requirements for environmental protection that are set out above, this shall be considered sufficient cause for the Engineer to order the replacement on Site of such employees or sub-contractors.

PS 2.7.5 Control of Water

The Contractor shall at all times and in all respect be responsible for the handling of storm water from higher-laying areas above the works and for the handling of any sub-surface water especially in excavations for terraces and trenches that may affect the works and for the handling of all spoiled water when disconnecting existing water connections or valves. The contractor shall also take note of the draining and handling of waste water in an appropriate manner and disposal thereof at an approved treatment facility, no raw sewage effluent or waste water will be discharged in an unsafe manner that may negatively impact on the environment or public health and safety.

All payments to be made in this regard and all costs related thereto, shall be deemed to be included in the relevant items that are included in the Bill of Quantities.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.5.2 Amendments to General / Standard Specifications and Additional Specifications

PSA PRELIMINARY AND GENERAL (SANS 1200A)

PSA 1.1: SCOPE

Replace sub-clause 1.1 with the following:

- 1.1 This specification covers requirements, principles and responsibilities of a general nature which are normally applicable to all civil engineering contracts as well as the requirements for the contractor's establishment on site.

PSA 2: INTERPRETATIONS

PSA 2.3: Definitions

(a) General

Add the following definitions:

General Conditions: The General Conditions of Contract specified for use with this Contract and the Special Conditions of Contract.

Specified: As specified in the Standardized Specifications, the Drawings or Project specifications.

(c) Measurement and Payment:

Replace the definitions for fixed charge, time-related and value-related charge, with the following:

Fixed charge: A charge that is not subject to adjustment on account of variation in value of the Contract Amount or the Contract Time of Completion.

Time-related charge: A charge, the amount of which is varied in accordance with the time for completion of the work, as adjusted in accordance with the provisions of the Contract.

Value-related charge: A charge, the amount of which is varied pro rata the final value of the measured work executed and valued, in accordance with the provisions of the contract.

PSA 3: QUALITY OF MATERIALS

PSA 3.1 Add the following:

All materials used in this Contract shall be the official SANS mark where applicable.
All materials shall be new and of the best quality available unless otherwise specified.

PSA 3.3 Ordering of Materials

The quantities set out in the Schedule of Quantities have been determined from calculations based on data available at the time and should therefore be considered to be approximate quantities only. The liability shall rest entirely and solely with the Contractor to determine before ordering, the required types and quantities of the various materials required for the completion of the works in accordance with the Specifications and Drawings issued to the Contractor for construction purposes.

Any reliance placed by the Contractor on the estimated quantities stated in the Schedule of Quantities issued for tendering purposes, or measurements made by the Contractor from Drawings issued for tendering purposes only, shall be entirely at the Contractor's risk and the Employer accepts no liability whatever in respect of materials ordered by the Contractor for construction purposes.

PSA 4: PLANT

PSA4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES (Clause 4.2)

Add the following:

- a) The location of the Contractor's offices, stores and services on site shall be subject to approval by the Engineer.
- b) The Contractor's office (boardroom) is to include an air-conditioned facility with furniture suitable for the use during site meetings, accommodating 15 persons.
- c) The Contractor's designated site agent shall be in possession of a cellular telephone.

No additional payment is made for this service and shall be deemed to be included in the preliminary and general.

PSA 5: CONSTRUCTION

PSA 5.1: SURVEY

PSA 5.1.1: SETTING OUT OF WORKS

Substitute the first sentence of Clause 5.1.1 with the following. The engineer will provide information for setting out of the works.

Add the following:

The Contractor shall be responsible for the true and proper setting out of the Works from the basic control points shown on the Drawings or indicated by the Employer's Agent Representative on site and shall ensure the correct location of the Works in relation to such points. The Contractor has to ascertain himself of the correctness of the pegs and benchmarks in the field. Any discrepancy shall be immediately reported to the Employer's Agent. Any costs arising from failure to do so, shall be the responsibility of the Contractor. The Employer's Agent may alter any part of the works to suit local conditions if necessary.

Setting out the Works will not be measured and paid for directly, and compensation for the works involved in setting out shall be deemed to be covered by the rates and prices tendered and paid for in the various items of works included under this Contract.

PSA 5.1.1 Services (Sub-clause 5.4)

All excavations to expose existing known services shall be excavated by hand in all materials by the contractor. Any existing service in the road reserve or municipal servitude that is damaged as a result of negligence by the contractor will be repaired by the contractor to the satisfaction of the Engineer at his own cost.

PSA 5.2 WATCHING, BARRICADING, LIGHTING AND TRAFFIC CROSSINGS

All open excavations shall be properly demarcated with reflective tape, barricading and any other requirements that the Local Authority has.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The Contractor shall make adequate provision for the supply of temporary warning signs, barriers drums etc to the satisfaction of the Engineer for the entire duration of the contract. Road and traffic signs shall comply with the requirements of the "South African Road Traffic Manual".

PSA 5.3 PROTECTION OF STRUCTURES

Add the following provision to clause 5.3:

The Contractor must contact house owners at least two weeks prior to working in close proximity to existing buildings and to inspect buildings before and after work had been completed.

The Contractor shall note all aspects relevant to the condition of the affected buildings and/or structures prior to blasting and shall acquire the signature of the owners/occupants agreeing to such conditions.

Subsequent to blasting, both the Contractor and the owners/occupants shall sign a form confirming the condition of the buildings and/or structures. In the event of damage to existing buildings and/or structures as a result of blasting, remedial work shall be done to the satisfaction of the owners/occupants at the Contractor's expense. Compliance with this clause will not relieve the Contractor of any of his responsibilities in terms of the Contract.

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

REPLACE THE HEADING AND THE CONTENTS OF SUBCLAUSE 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 his 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 Engineer, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where he intends to work. Neither the Employer nor the Engineer offers 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.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Engineer, 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 further requirements of Sub Clauses 4.4 of GCC 2015 and 5.1.2.2 of SANS 1200 D (as amended) shall apply.

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 the 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 Engineer 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

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Employer

Witness 1

Witness 2

site shall apply. The Contractor shall notify the Engineer immediately when any such service is encountered or discovered on the Site.

Whilst he 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 cognizance 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.

The Contractor shall also be liable for consequential damage in regard to (a) and (b), whether caused directly by the Contractor's operations or by the lack of proper protection.

No separate payment will be made to the Contractor in respect of any costs incurred in preparing and submitting to the Engineer the Drawings as aforesaid. These costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

Payment to the Contractor in respect of exposing services at the positions agreed by the Engineer and as described above will be made under the payment items (if any) as may be provided for 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 Engineer, 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.

Contractor

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Witness 2

Employer

Witness 1

Witness 2

PSA 5.4.3 Alterations and Repairs to Existing Services

Unless the contrary is clearly specified in the Contract or ordered by the Engineer, the Contractor shall not carry out alterations to existing services. When any such alterations become necessary, the Contractor shall promptly inform the Engineer, 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 Engineer, 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 minimize damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor.

PSA 5.7 SAFETY

Add the following:

CONTRACTOR'S RESPONSIBILITIES

For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2014.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) to confirm his status as mandatory (Employer) for the contract under consideration.

The Contractor's attention is specifically drawn to the following Acts, and particularly to the relevant regulations under each Act, copies of which shall at all times be kept by him on the Site:

- The Factories, Machinery and Building Work Act (Act 22 of 1941)
- The Explosives Act (Act 26 of 1956)
- The Mines and Works Act (Act 27 of 1956)
- The Occupational Health and Safety Act (Act 85 of 1993)

The Contractor is also required to comply with the safety precautions set out in the following publications, copies of which shall also be kept by him on the Site:

- The Code of Practice relating to the safety of men in civil engineering inspection pits and small –diameter vertical shafts. (Transactions of the South African Institution of Civil Engineers, Vol. 2, No. 11, November 1960, obtaining from the Secretary, S.A. Institution of Civil Engineers, PO Box 93495, Yeoville, 2143).

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2014 and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

(a) Appointment of a Construction safety officer

 Contractor

 Witness 1

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 Employer

 Witness 1

 Witness 2

- (b) Instituting a Health and safety committee in terms of Sections 17 and 18 of the OHSA)
- (c) Appointment of Health and safety representatives (in terms of Sections 17 and 18 of the Act)
- (d) Confirming the Contractor's position in relation to the Employer (Client) (Regulation 4)
- (e) The Principal Contractor and Contractor (Regulation 5)
- (f) Supervision of construction work (Regulation 6)
- (g) Risk assessment (Regulation 7)
- (h) Fall protection (Regulation 8)
- (i) Structures (Regulation 9)
- (j) Formwork and support work (Regulation 10)
- (k) Excavation work (Regulation 11)
- (l) Demolition work (Regulation 12)
- (m) Tunnelling (Regulation 13)
- (n) Scaffolding (Regulation 14)
- (o) Suspended platforms (Regulation 15)
- (p) Boatswain's chairs (Regulation 16)
- (q) Material Hoists (Regulation 17)
- (r) Batch plants (Regulation 18)
- (s) Explosive powered tools (Regulation 19)
- (t) Cranes (Regulation 20)
- (u) Construction vehicles and mobile plant (Regulation 21)
- (v) Electrical installation and machinery on construction sites (Regulation 22)
- (w) Use of temporary storage of flammable liquids on construction sites (Regulation 23)
- (x) Water environments (Regulation 24)
- (y) Housekeeping on Construction sites (Regulation 25)
- (z) Stacking and storage on construction sites (Regulation 26)
- (aa) Fire precautions on construction sites (Regulation 27)
- (bb) Construction welfare facilities (Regulation 28)

- i) *The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.*
- ii) *The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.*

Should the Contractor fail to comply with the provisions of the Regulations 3 to 28 as listed in Regulation 30, he will be guilty of an offence and will be liable, upon conviction, to the fines or imprisonment as set out in Regulation 30.

1. The Contractor shall provide suitable and safe access by way of ladders, Sluice Gateways, etc. to all parts of the Works as may be required for construction purposes or for inspection by the Engineer or the authorised Inspectors in terms of the above-mentioned Acts.
2. All precautions shall be taken to protect workmen against falling material and/or objects and other dangers whilst they are carrying out their duties. Trenches shall in every way be made and kept safe for persons working therein.
3. All persons working, inspecting or supervising in places where falling material and/or objects could be encountered shall be provided by the Contractor with hard hats (which have not expired) of a type approved by the Inspector of Mines, the use of which shall be strictly enforced.

Contractor

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Witness 2

Employer

Witness 1

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4. The Contractor shall provide a properly equipped first-aid box, which shall be accessible at all times.
5. Where adequate safety precautions are not being observed, the Engineer may order the Contractor to comply with minimum safety requirements at the latter's expense. Compliance with such order will not absolve the Contractor from any of his responsibilities and obligations under the Contract.
6. The Contractor shall display on a prominent place the following emergency information:
 - i. Local Police: Telephone number
 - ii. Local Ambulance: Telephone number
 - iii. Local Fire Brigade: Telephone number
 - iv. Nearest Doctor
 - v. Name
 - vi. Telephone number (office hours)
 - vii. Telephone number (after hours)
 - viii. Consulting room street address
 - ix.

PSA 5.9 ACCOMMODATION OF TRAFFIC (New clause 5.9)

Temporary traffic signs shall be erected at all diversions.

The number and layout of the traffic signs shall comply with the Site Manual entitled "Safety at Roadwork's in Urban Areas", as published by the Department of Transport.

Traffic signs shall have a yellow background with either a red / black border.

PSA 5.10 SITE MEETINGS

The contractor will be required to attend site meetings, normally held fortnightly, to discuss general progress, quality of work, problems, claims, payments, etc.

PSA 6: TOLERANCES

PSA 6.2 General

Add new subclause 6.2:

No guarantee is given that the full specified tolerance 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 then 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 Engineers, without any allowances for the specified tolerances.

If the work is therefore constructed in accordance with the "authorised" dimensions plus or minus the tolerances allowed, 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 Engineers 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

Contractor

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Employer

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than the “authorised” dimensions minus the tolerance allowed quantities for payment shall be based on the actual dimensions as constructed.

PSA 7: TESTING

The onus rests on the Contractor to produce work, which conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings and the Contractor must at his own expense, institute a quality control system and provide experienced engineers, foremen, surveyors, materials technicians and other technical staff, together with all instruments and equipment, to ensure adequate supervision and positive control of the works.

The cost of the all supervision and process control, including testing, so carried out by the Contractor, shall 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 sections of the Specifications regarding the minimum frequency of the testing that will be required for process control. The Contractor shall at his own discretion increase the frequency where necessary to ensure adequate control.

The Contractor shall submit to the Employer's Agent the results of all relevant tests, measurements and levels indicating compliance with the specifications on completion of every part of the work for examination.

Should the results of any of these tests fall below the required standards as specified in the specifications, the cost of any additional tests required by the Employer's Agent will be to the account of the Contractor.

PSA 7.1.1 CHECKING

Add the following:

The Contractor shall be responsible for all control testing required on the project and costs thereof will be deemed to be included in the tendered rates. This clause covers any additional or control testing as may be required by the Engineer. Any such additional testing shall be undertaken by a nominated independent person /laboratory.

PSA 7.2 APPROVED LABORATORIES

Add the following:

A Laboratory for the use of the Engineer Representative is not required on site. A registered commercial laboratory approved by the Engineer and appointed by the Contractor shall do all acceptance control tests required in terms of the Contract. All tests must be done according to the tests prescribed in the SANS 1200 under the relevant sections.

PSA 7.4 STATISTICAL ANALYSIS OF CONTROL TESTS (SUB-CLAUSE 7.4)

Statistical control methods will not be applied under this contract

PSA 8: MEASUREMENT AND PAYMENT

PSA 8.1.2 PRELIMINARY AND GENERAL ITEM OR SECTION

Replace the contents of this sub-clause with the following:

The Contractors tendered sums under Items PSA 8.3 and PSA 8.4 shall collectively cover all charges for:

- Risks, costs and obligations in terms of the General Conditions of Contract and of this Standardized Specification, except to the extent that provision is made in these Project Specifications to cover compensation for any of these items of work;
- Head Office, site overheads, supervision, profit and financing costs;
- Expenses of a general nature not specifically related to any item or items of permanent or temporary work;
- Providing facilities on site for the Contractors personnel, including offices, storage facilities, workshops; ablutions, for providing services such as water, electricity, sanitation and rubbish disposal, for access roads and all other facilities required, as well as for the maintenance and removal on completion of the Works of the facilities and the cleaning-up of the camp site on completion of the Works; and
- Providing facilities for the Engineer and his staff as specified in SANS 1200 A (if applicable) and these Project Specifications.

PSA 8.2.1: FIXED-CHARGE AND VALUE-RELATED ITEMS (Sub-clauses 8.2.1. and 8.3)

The tendered sums for the fixed-charge and value related items in the P&G Section of the Schedule of Quantities shall not be subject to any variation if the actual value of the work done exceeds or falls short of the accepted tendered amount within the limit stated in Clause 6.3 of the General Conditions of Contract 2015, or if extension of time for the completion of the works is granted.

Payment for fixed-charged and value-related items will be done in three separate payments as follow:

40% of total cost after the Contractor has stabilised and equipped the site office and after the Employer's Agent is satisfied that a substantial start of the actual construction work has been made;

40% of total cost after 50% of the actual work (excluding material on site) has been completed and approved by the Employer's Agent;

20% of total cost on issue of practical completion certificate by Employer's Agent, according to the guidelines of the GCC (2015).

PSA 8.2.2 TIME-RELATED ITEMS

Replace the contents of this sub-clause with the following:

Subject to the provisions of 8.2.3 and 8.2.4, payment under Item PSA 8.4.1 (time-related item) will be made monthly in equal amounts, calculated by dividing the sum tendered for the item by

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Employer

Witness 1

Witness 2

the tendered contract period in months, provided always that the total of the monthly amounts so paid for the item is not more than in proportion to the progress of the Works as a whole.

Should the Engineer grant an extension of the time for completion of the Works, the Contractor will be entitled to an increase in the sum tendered for the time-related item, which increase shall be in the same proportion to the original tendered sum as the extension of time is to the original time for completion of the Works.

Payments for such increased amounts will be taken to be full compensation for all additional time-related Preliminary and General Costs that result from the circumstances pertaining to extension of time granted, provided always that the total of the monthly amounts so paid for the item is not more than in proportion to the progress of the Works as a whole.

If the works is completed before the end of the original time period allowed for completion of the works, the tendered amount of a time related item that is influenced by the earlier completion would be reduced similarly.

PSA 8.2.2.1: STANDING TIME COSTS DUE TO RIOT, ETC. FOR THE CONTRACTOR'S TOTAL OPERATION.

Unit: Sum per Working Day

The unit for measurement shall be a working day, and a working week shall be held to consist of five working days and a working day of 9 hours, unless otherwise agreed upon.

The sum per working day tendered under this time-related item shall represent that part of the Contractor's costs for standing time of whatever nature.

This payment item will only be applicable to delays in the execution of the Works and additional costs which in the opinion of the Employer's Agent are incurred as a result of riot, commotion, politically motivated sabotage and acts of terrorism, or disorder outside the control of the Contractor.

The provision of this clause shall in no way prejudice the right of the Employer or the Contractor to terminate the Contract under the provisions of Clause 9 of the GCC (2015).

PSA 8.2.5 PRINCIPLES FOR SAFETY (NEW CLAUSE)

It is a condition of this contract that Contractors who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process.

(a) Safety personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in Clauses PSA 5.7 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

However, should it be necessary to appoint a dedicated Construction Safety Officer in terms of Clause PSA 5.7 on the instruction of the Inspector of the Department of Labour, as ordered by the Engineer, payment will be considered for such appointment.

b) Records and Registers,

The keeping of health and safety-related records and registers as described in PSA 5.7 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS:

Replace the items with the following:

PSA 8.3.1: Contractor's Contractual Requirements.....Unit : Sum

The sums tendered shall include full compensation for all fixed preliminary and general charges as described in SANS 1200 A sub-clause 8.1.2.2 (c). Payment will be made as described in PSA 8.2.1

PSA-8.3.2 ESTABLISHMENT OF FACILITIES ON THE SITE

PSA 8.3.2.1 Facilities for Employer's Agent

The Contractor to provide one furnished, airconditioned site office for the use of the Employer's Agent and his representative sage to the requirements of SANS 1200 AB 3.2 or similar approved. A monthly time-related provisional sum has been included in the Schedule of Quantities to cover the rental costs of accommodation for the Employer's Agent Representative. These amounts shall be payable by the Contractor to the Employer's Agent according to the provisional sums allowed and upon receipt of a tax invoice for such amounts.

The Contractor shall provide and maintain two carports with waterproof roofing for the duration of the Contract for the use of the Employer's Agent. The floor shall consist of crushed aggregate to alleviate dusty and muddy conditions or similar approved.

The Contractor shall further familiarise himself with the Covid-19 Health and Safey Specifications and ensure that the Employer's Agent facilities is compliant with the Disaster Management Act: Regulations relating to Covid-19 and all amendments.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

a) Cellular Telephone

No cellular telephone has to be provided for the Employer's Agent Representative for the duration of the contract. Measurement and payment shall only be made for the relevant time related item.

b) Name Board

Number of name boards as per Bill of Quantity will be ordered by the Contractor according to the Employer's Agent's specifications, complete with dimensions, wording and specifications as prescribed, within one month from the commencement date. The Contractor shall be responsible to transport the name board to site and to erect it at the indicated position on suitable supporting posts. The Contractor shall remove the name board completely from site after construction is completed before the last payment certificate shall be approved. The name board shall display the EPWP logo, indicating that this project is part of EPWP.

Add the following additional sub-item:

a) Furnished Air-Conditioned Engineers Office made Covid 19 Safe.....	Unit:	Sum
b) Name board.....	Unit	Sum
c) Photostatic Facilities to be able to print A3 and A4.....	Unit	Sum
d) Boardroom Made Covid19 safe (15 people)	Unit	Sum
e) Ablution Facilities.....	Unit	Sum
f) Parking Bays, 2 Vehicles.....	Unit	Sum

The sum tendered shall cover all costs as specified in Sub-clause 8.3.2.3 of SANS 1200 A to provide the facility as specified in Clauses PSA 8.3.2.1

PSA 8.3.2.2 Facilities for Contractor: to comply with the Disaster Management Act, Covid 19 Regulations

Add the following additional sub-item:

a) Offices and storage sheds.....	Unit:	Sum
b) Workshops.....	Unit:	Sum
c) Change Rooms, Male and Female with Sanitisers.....	Unit:	Sum
d) Eating Area, Ventilated and Ensuring Social Distancing, with Sanitisers.....	Unit:	Sum
e) Laboratories.....	Unit:	Sum
f) Ablution and latrine facilities with Sanitisers.....	Unit:	Sum
g) Tools and equipment.....	Unit:	Sum
h) Water supplies, electric power and communication.....	Unit:	Sum
i) Dealing with water. (sub 5.5).....	Unit:	Sum
j) Access. (sub-clause 5.8).....	Unit:	Sum
k) Plant.....	Unit:	Sum
l) Laydown and piperack facilities.....	Unit	Sum

PSA 8.3.3 Cost of Survey in Terms of the Land Survey Act

Replace the items in 8.8.3 with the following:

The tendered rate shall cover all costs pertaining to setting out the works and for the provision of as-built survey data by the Contractor, showing coordinated locations and elevations for all items of construction. The Contractor will be responsible for the accuracy of the as-built survey data provided to the Engineering Representative. The as-built survey data is to be provided

 Contractor

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 Employer

 Witness 1

 Witness 2

electronically to the Engineering Representative in a format that has been approved by the Engineer.

Cost of Survey in Terms of the Land Survey Act Unit: Sum

PSA 8.3.3 Public Notices and Warnings to Consumers

The Contractor shall ensure, as far as possible, uninterrupted water supply. However, should this not be the case and sections where connections are required to be isolated to perform the works, and water supply cannot be guaranteed, consumers should be notified via various channels. The rate shall cover the full compensation and cost of supply and delivery of the notices and warnings to customers as per the Employer's requirements at least 3-days before a planned shutdown. Typical channels include:

- The Employer's website;
- Printed media – Local Newspapers etc.;
- Radio; and
- Physical sign and posters at strategic public places such as clinics etc.

Issuing of notices to consumer for water interruptions etc..... Unit: No

PSA 8.3.8 Environmental Management Plan Obligations

The Contractor shall comply with the Environmental Management Plan requirements as compiled by the Environmental Compliance Officer. The Sum shall cover the cost of ensuring compliance with the EMP during Establishment and ensuring that all Specifications have been fulfilled.

Environmental Management Plan Obligation..... Unit: Sum

PSA 8.4 Time-Related Items:

The sum tendered shall include full compensation for all time-related preliminary and general charges as described in SANS 1200 sub-clause 8.1.2.2 (c). Payment will be made as described in PSA 8.2.2.

The Contractor shall tender a lump sum in the Schedule of Quantities to cover his time-related establishment costs. The amount tendered and paid shall be full compensation to the Contractor for:

- (i) The maintenance of his whole organisation as established for this Contract.
- (ii) The maintenance of all insurances, indemnities and guarantees required in terms of the Conditions of Contract or Tender where applicable.
 - (i) Compliance with all general conditions and requirements, which are not specifically, measured elsewhere for payment in these Contract Documents.

The Contractor shall tender a lump sum for the abovementioned items.

Payment of the lump sum shall be made monthly in compliance with the method laid down in Sub-clause 8.2.2 of SANS 1200:A.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

The Contractor will not be paid Time-Related Preliminary and General charges for any Special Non-Working Days, as stipulated in the Appendix, which shall be deemed to have been allowed for in his rates.

Replace the items with the following:

PSA 8.4.1 Contractual Requirements.....Unit: Sum
PSA 8.4.2 Operation and Maintenance of facilities on site for the duration of construction, except where otherwise stated

The tendered sums for the fixed-charge and value related items in the P&G Section of the Schedule of Quantities would not be subject to any variation if the actual value of the work done exceeds or falls short of the accepted tendered amount within the limit stated in Clause 6.11 of the General Conditions of Contract (2015).

PSA 8.4.2.1 Facilities for Employer's Agent

a) Maintaining air conditioned offices

The air conditioned office to be maintenance for the duration of the contract. Rate to include regular cleaning, maintenance of the air-conditioner as well as the office furniture where required .

Maintaining air conditioned office.....Unit: Month

b) Maintaining printing facilities

The A4 & A3 colour printer and copier maintenance for the duration of the contract. Rate to include the purchasing of toner and the relevant printing paper as required for the printing of meeting material or any other project material required by the Employer's representative on site.

Maintaining printing facilities.....Unit: Month

c) Accommodation for the Employer's Agent

These items will include the cost of rented accommodation to the Engineer. The Contractor will be responsible for this prime cost items to the amount as shown in the Bill of Quantities. These services will be provided to the Contractor by the Engineer and will be billed in advance. These items will include all overhead costs, maintenance and insurance with respect to the provision of accommodation facilities. This item shall be payable to the Engineer prior to certification of the second construction payment certificate.

Accommodation for the Employer's Agent.....Unit: Prov Sum

i. Overheads, charges and profit on itemUnit: %

d) Cellphone and internet connectivity min 5Mb/s

No cellular telephone has to be provided for the duration of the contract. However, the contractor is responsible for costs up to R900.00/month all-inclusive.

Cellphone and internet connectivity min 5Mb/s.....Unit: Prov Sum

ii. Overheads, charges and profit on itemUnit: %

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e) Ablution Facilities

This item covers the cost of the maintenance of the Engineer's ablution facility. Cost should cover monthly servicing and maintenance for the duration of the contract.

Ablution Facilities.....Unit: Month

f) SURVEY ASSISTANTS AND EQUIPMENT (Clause 5.5)

Substitute "two or more suitable educated survey labourers" in this paragraph with "one semi-skilled labourer".

The Engineer's Representative will occasionally need the assistance of a survey labourer to help with testing, survey, etc., envisaged at approximately 4 hours (non-consecutive) per week.

The Contractor shall provide the following tested and approved survey equipment on site for the duration of the contract and for the use of the Engineer whenever needed.

- a) One automatic level plus tripod,
- b) One level staff, all graduated metrically and
- c) One 5m and one 25m-tape measure.

The above-mentioned equipment may, by arrangement be shared between the Contractor and the Engineer's Representative. The Contractor shall keep the equipment insured against any loss; damage or breakage and he shall indemnify the Engineer and the Employer against any claims in this regard.

PSAB 8.2.3 Survey Assistant (New Clause)hrs

Payment for the survey assistant shall be at the tendered day work rates for the hours worked in assisting the Engineer's Representative. No payment shall be made for the survey equipment all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities. No payment shall be made for the survey equipment or survey assistant and all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities.

g) Name Boards

Quantity of Name boards as specified in the approved Bill of Quantities shall be maintained for the duration of the Contract.

Name Boards.....Unit: Month

h) Health and Safety Inspections on Site

This item will include the provision of Health and Safety Inspections on Site by a certified Health & Safety Officer under the auspices of the Engineer. The Health and Safety Officer will ensure compliance of the Contractor with the OHS Act and he / she will have the authority to stop construction work in the event of non-compliance. The Contractor will be responsible for this prime cost item to the amount as shown in the Bill of Quantities. This service will be billed in advance and the item shall be payable to the Engineer prior to certification of the second construction payment certificate.

i) Environmental Management Plan Audits

This item will include the provision of Environmental Management Plan (EMP) Audits on Site by an Environmental Control Officer (ECO) under the auspices of the Engineer. The ECO will monitor compliance of the Contractor with the EMP. The Contractor will be responsible for this prime cost

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item to the amount as shown in the Bill of Quantities. This service will be billed in advance and the item shall be payable to the Engineer prior to certification of the second construction payment certificate.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PSA 8.4.6 Additional Obligations

PSA 8.4.6.1 Security services costs.....Unit: Month

The sum shall cover the full compensation and all costs for a sufficient 24 hour guarded services for the duration of the contract.

PSA 8.4.6.2 Monthly EMP ObligationsUnit: Month

The sum shall cover the full compensation and all time related costs for the duration of the contract, for the compliance with the Environmental Management Plan, and all the requirements stipulated in the plan.

PSA 8.4.6. Monthly OHS Obligations Unit: Day

The sum shall cover the full compensation and all time related costs for the duration of the contract, for the compliance with the Occupational Health and Safety plan, and all the requirements stipulated in the plan.

PSA 8.5 SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT

The provisional sums provided for the cost of additional project specific requirements and legal compliance for the duration of the Contract. The sums shall only be expended as required and approved by the Engineer.

PSA 8.8 Temporary Works

PSA 8.8.2 Accommodation of Traffic.....Unit: Lump Sum

Add the following to 8.8.2

The rate shall cover all costs pertaining to the provision, erection, moving, re-erection and maintenance of all temporary barricades, road signs, lights, flagmen, etc. as required for the guarding and protection of the Works as well as all other costs to accommodate the traffic during construction.

PSA 8.9 Construction Monitoring

Construction monitoring costs will be Monitoring Level 3 (Engaging Resident Engineer) and will:

- Regularly visit the site at a frequency which may vary during the course of the project, and such visits may be daily or weekly according to the demand of the project;
- Regularly, review samples of materials and work procedures for conformity to the contract documentation and design specifications. The RE shall review regular samples of important completed work prior to covering up, or on completion as appropriate.
- The Contractor will take ultimate responsibility for quality of work and remains responsible to put in place quality control processes to control its output in terms of the design specifications and requirements whereas the design Engineer will conduct inspections and acceptance testing to confirm conformance to the design specifications prior to certification of the works.

PSA 9.1 SUBMIT DETAIL AS-BUILT DRAWINGS OF EXISTING SERVICES AND ADJUSTMENTS TO CONSTRUCTION DRAWINGS

The Contractor will be responsible for the submission of all as-built drawings of all existing services intersecting pipeline trenches as well as any applicable adjustments to the construction drawings. The lump sum tendered shall include full compensation for all information in the possession of the

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

contractor as required above in order to complete the as-built drawings must be submitted to the Engineer Representative before a certificate of completion will be issued for the works.

PSA 9.2 DETAILED SETTING OUT OF THE WORK

The Contractor will ensure that all the works be set out from existing survey beacons by a registered surveyor. The sum tendered shall be regarded as inclusive of all related survey work on site.

The Engineer will provide survey beacons (of adequate type and in sufficient quantity) as benchmarks. From information provided on drawings issued by the Engineer, the Contractor shall be responsible to provide all positions and levels, of all intermediate points required for proper control of the works.

As benchmarks may be disturbed during the execution of the works, all levels and setting out pegs shall be referred to at least two benchmarks. The Contractor will ensure that all works are set out from existing survey beacons by a professional registered land surveyor. The setting out data, including the elevation (obtain x, y, z coordinates) from these pegs shall be submitted to the Engineer for evaluation of final natural ground levels (NGL) prior to the commencement of excavations. In the case of deviation from the original pipe route for whatever reason, the contractor will at his own cost survey the new proposed route and submit the data to the Engineer for approval.

Preservation and replacement of beacons and pegs will be subject to the Land Survey Act, 1927 (Act No 9 of 1927).

PSA 9.3 COMPILE AND SUBMIT HEALTH AND SAFETY PLAN

The lump sum tendered shall include full compensation for the provision and maintenance of a Health and Safety Plan, risk assessment, permit applications and notifications as called for in the Act and Regulations.

Eighty percent (80%) of this amount will be paid when an approved Health and Safety Plan has been achieved. A further 10% will be paid when the value of work certified by the Engineer exceeds one half of the tender price and the remaining 10% will be payable upon issue of a completion certificate.

Compile and Submit Health and Safety Plan..... Unit: Sum

PSA 9.4 IMPLEMENT HEALTH & SAFETY PLAN INCLUDING COVID-19 REQUIREMENTS

(Including the Construction Regulations 2014).....Unit: Sum

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2014) at all times for the full duration of the Contract inter alia of the following:

- Provision and maintenance of Health & Safety File;
- Provision of construction supervisors and safety officers;
- Health and Safety training for employees and subs;
- Provision of protective clothing;
- Provision of safety fences, signs and barricades; and
- Scheduling of monthly safety meetings and providing monthly reports accordingly, etc.

PSA 9.5 PROVISION OF REALISTIC CONSTRUCTION PROGRAMME

The lump sum tendered shall include full compensation for the compilation and submission of a realistic construction programme for approval by the Engineer:

- Within the stated period after appointment;

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

- Before commencement with any construction activities; and
- As and when so required / instructed by the Engineer.

Compile and submit for approval by Employer's Agent, a realistic construction programme within the stated period and before commencement of construction.....

Unit: Sum

PSC SITE CLEARANCE (SANS 1200C)

PSC 3.1 Disposal of Material

Add the following:

"The Contractor shall obtain his own dumping sites for the disposal of material and all transport costs shall be included in the rates tendered for site clearance."

PS C 5 Construction

PS C 5.1 Areas to be Cleared and Grubbed

Substitute the first sentence of C 5.1 with the following:

Clearing and grubbing shall only be done in areas as instructed in writing by the Engineer. Clearing and grubbing of pipe and cable routes shall be limited to a 8 m wide strip. The Contractor may proceed with clearing and grubbing after hand-over of the site.

Substitute the last paragraph with the following:

The Contractor shall program his work in such a manner that re-clearing will not be necessary. The cost of re-clearing shall be borne by the Contractor.

PS C 5.2 Cutting of Trees

Trees outside the area to be excavated for the new structures must be left standing and undamaged, except when otherwise ordered, in writing, by the Engineer. A penalty of **R2000-00** per tree for trees damaged and/or removed will be charged.

PS C 5.9 Existing Fencing

The fences around the site shall not be removed and shall be repaired immediately after damage to them has occurred.

The Contractor is strongly advised to make sketches and, where applicable, take photographs of existing fences before they are removed so as to avoid, as far as possible, arguments that may arise between himself and the property owner as to the quality of the re-erected fences.

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.2.1 Clear and Grub

The removal of all rocks and boulders on site over 0,15m³ will be paid under sub-clause DB 8.3.2(b).

PSC 8.2.2 Take down existing fences

Add the following:

"The tendered rate shall also include for the re-erection of the fence to an equal or improved condition as prior to dismantling, photographing the fence prior to the removal or dismantling, and temporary fencing where required all as specified."

The removal of existing fences and re-erection of these fences will be measured per linear meter.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PSD EARTHWORKS (SANS 1200 D)

PSD 2 INTERPRETATIONS

PSD 2.3 DEFINITIONS

Replace the definition for "Specified density" with the following:

"Specified density: The specified dry density expressed as a percentage of modified AASHTO dry density."

Replace the definition for "stockpile" with the following:

"Stockpile (verb): The process of selecting and, when necessary, loading, transporting and off-loading material in a designated area for later use for a specific purpose."

Add the following definitions:

"Commercial Source: A source of material provided by the Contractor, and including any borrow pit, provided by the Contractor.

Fill: An embankment or terrace constructed of material obtained from excavations or borrow pits. In roads, it includes the earthworks up to the underside of the selected subgrade level.

Fill (material): Material used for the construction of an embankment or terrace.

Roadbed: The natural in situ material on which the fill, or in the absence of fill, the pavement layers, are constructed."

PSD 3 MATERIALS

PSD 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

PS D 3.3 Selection

PS D 3.3.1 General

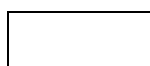
Substitute the second paragraph of D 3.3.1 with the following:

The Contractor shall deal in such a way with materials from all excavations for structures and pipe trenches to ensure that usable material is not contaminated with unsuitable material. If usable material is contaminated, such contaminated material shall be removed and replaced with material of standard at least equal to the in situ usable material, all at the Contractor's expense. No additional payment shall be made in respect of this and all relevant costs shall be deemed to be included in the tendered rates.

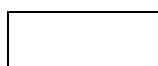
Add the following to D 3:

PS D 3.4 Subsoil Drain under Structures

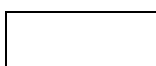
Where subsoil drainage is to be installed, subsoil drainage will be consisting of 110 mm diameter perforated or slotted uPVC pipes, or 100 mm diameter geo pipes in a bed of 19 mm stone, all as specified and shown in the drawings, shall be installed where shown on the drawings. The pipes shall be connected with approved couplings and a gradient as shown in the drawings, or of 1 in 200 must be maintained towards the discharge point.



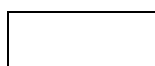
Contractor



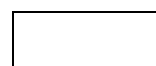
Witness 1



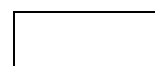
Witness 2



Employer



Witness 1



Witness 2

PS D 3.4.1 Material for Subsoil Drainage**PS D 3.4.1.1 Pipes**

Pipes for subsoil drainage shall be uPVC pipes complying with the requirements of SANS 791, but shall be perforated or slotted.

The size of perforations in perforated pipes shall in all cases be 8 mm in diameter $\pm$ 1,5 mm and the number of perforations per metre shall be not less than 26 for 110 mm pipes and 52 for 160 mm pipes. Perforations shall be spaced in two rows for 110 mm pipes and in three rows for 160 mm pipes.

Slotted pipes shall have a slot width of 8 mm $\pm$ 1,5 mm. The arrangement of slots shall be subject to the Engineer's approval, but the total slot area shall be not less than that presented for perforations.

Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be uPVC pipes as specified above.

PS D 3.4.2 Crushed Stone

Crushed stone in subsoil drains shall be 19 mm single-sized stone complying with the grading requirements of stone for concrete in SANS 1083.

PS D 3.4.3 Geo textile Blanket

The geo textile blanket around subsoil drains shall be a woven polypropylene tape similar and equal to Kaytech Bidim A2.

PS D 3.4.4 Sand

Sand in subsoil drains shall comply with the requirements of PS D 2.3.

PS D 4 Plant

Add the following to D 4:

PS D 4.5 Avoiding Quagmire Conditions

In order to prevent quagmire conditions occurring in the excavations, relatively static plant such as back-actors shall be used combined with hand trimming to complete the excavation to final level. Should the Contractor allow quagmire conditions to develop, he shall, at his own expense, take such steps to rectify the conditions as the Engineer may order.

PSD 5 CONSTRUCTION

PSD 5.1 PRECAUTIONS

PSD 5.1.1 SAFETY

PSD 5.1.1.1 Barricading and Lighting

Replace “Machinery and Occupational Safety Act, 1983 (Act 6 of 1983)” WITH “Occupational Health and Safety Act, 1993 (Act 85 of 1993)”.

PSD 5.1.1.2 Safeguarding of Excavations

Replace “Machinery and Occupational Safety Act” WITH “Occupational Health and Safety Act, 1993 (Act 85 of 1993)”.

PSD 5.1.2 Existing Services

PSD 5.1.2.2 Detection, Location and Exposure

Replace the contents of sub-clause 5.1.2.2 with the following

“The exposure by the Contractor of underground services, as required in terms of Sub-clause 5.4 of SANS 1200 A (as amended) shall be carried out by careful hand excavation at such positions and to such dimensions as are agreed to by the Engineer.

Unless otherwise instructed or agreed by the Engineer, no service shall be left exposed after its exact position has been determined and all excavations carried out for the purposes of exposing underground services shall be promptly backfilled and compacted to the following densities:

- a) In roadways: 93% Mod AASHTO density; and
- b) In all other areas: 90% Mod AASHTO density.

PSD 5.1.2.3 Protection of cables

Replace sub-clause 5.1.2.3 with the following

PSD 5.1.2.3 Protection During Construction

Further to the requirements of Sub-clause 5.4.2 of SANS 1200A (as amended), major excavating equipment and other Plant shall not be operated dangerously close to Known Services.

Where necessary, excavation in close proximity to Known Services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work.

Should any service not being a Known Service be discovered or encountered during the course of the Contract, the Contractor shall, in addition to complying with the requirements of Sub-clause 5.4.2 of SANS 1200A (as amended), immediately notify the Engineer thereof and implement such measures as will prevent damage of such service or, if it was damaged in the course of discovery, will prevent and minimise the occurrence of any further damage occurring.”

PSD 5.1.2.4 Negligence

Delete sub-clause 5.1.2.4.

PS D 5.1.4 NUISANCE

PS D 5.1.4.1 DUST NUISANCE

Add the following to D 5.1.4.1:

The Contractor is responsible for dust control and is liable for all claims that may always result from dust nuisance on all parts of the site and from the date of handing over of the site to the completion date of the contract. No payment regarding the above-mentioned will be made and all costs shall be deemed to be covered by the tendered rates.

PSD 5.2 METHODS AND PROCEDURES

PSD 5.2.2.1 Excavation for General Earthworks and for Structures

Add the following to paragraph (b):

"When the nature of the material precludes the above procedure, additional excavations shall be carried out to provide working space for the erection of formwork. In general, payment will be made for excavating a working width of 600 mm, but the Contractor may excavate a greater working width at no additional cost to the Employer."

Replace the first sentence of paragraph (e) with the following:

"Where excavations have been carried below the authorised levels, the Contractor shall backfill such excavations to the correct level with approved gravel compacted to 90% of modified AASHTO density or to the density of the surrounding material, whichever is the higher density.

Where excavations for structures have been carried out in hard material, the Engineer may direct that over-excavation be backfilled with weak concrete if there is a danger of settlement or differential settlement of the foundations.

Where the sides of excavations against which concrete is to be cast have been over-excavated or have collapsed partially, the Contractor shall re-trim the excavations if necessary and, unless other remedial measures are agreed to by the Engineer, shall cast the concrete for the structure, including the additional concrete that may be required as a result of the over-excavation or partial collapse. The cost of the additional concrete or remedial measures shall be for the Contractor's account."

PSD 5.2.2.3 Disposal

Replace the second sentence with the following:

"The Contractor shall, provide all necessary spoil sites for the spoiling of all surplus and unsuitable materials and shall make the necessary arrangements with the owner of the site where the material is disposed of, and pay all charges and levies as may be applicable for the use of such spoil sites. Transport costs shall be included.

Every spoil site provided by the Contractor shall be approved by the local authority in whose area it is located, and the spoiling shall comply with the applicable statutory and municipal regulations as well as the requirements of the owner of the spoil site.

PSD 5.2.2.4 Selection and Stockpiling

Approval or designation of the material in a particular borrow pit or excavation for a particular purpose does not imply that all the material in the borrow pit or excavation is suitable for the particular purpose for which the said approval or designation relates, nor that all material in the borrow pit or source should be used for the particular purpose. The Contractor shall select suitable material from that borrow pit or source, discard unsuitable material and reserve material for other purposes as necessary.

The Contractor shall organise and carry out its operations in such a manner as will prevent the contamination of suitable embankment and backfill material with unsuitable materials. Any excavated material which becomes, in the Engineer's opinion, unsuitable for use in embankments or backfill as a result of contamination, shall be disposed of in a manner acceptable to the Engineer and shall be replaced by the Contractor with materials acceptable to the Engineer, all at the Contractor's cost.

When required, or when ordered by the Engineer, material shall be stockpiled for later use.

PSD 5.2.2.5 Utilization of excavated material

All excavated material and material obtained from any temporary work shall, in so far it is suitable, be utilized for backfill of trenches or embankments where applicable. Material unsuitable for use as backfill or in excess of the required quantity to complete the backfill shall be spoiled or utilized as directed by the Engineer. Excavated material may be stockpiled or used for temporary earth berms in order to control surface storm water or to prevent flooding of the construction site as applicable. However, any and all such temporary earthworks shall be removed, shaped, compacted, and treated etc. as specified and/or instructed by the Engineer on completion of the original Scope of Work.

PSD 5.2.2.6 Excavation limits for payment purposes

For measurement and payment purposes, the limits of the excavations for structures shall be as shown on the Drawings.

Where no excavation limits are shown on the Drawings and the Engineer has decided that formwork has to be provided for the sides of a concrete member, the limits of the excavation for measurement and payment purposes shall be the vertical planes 0,6 m outside the perimeter of the concrete member for which the formwork is to be provided, and the founding level shown on the Drawings.

PSD 5.2.2.8 Unsuitable material

Any and all boulders, clay, logs, roots or any other unsuitable material identified during excavation, shall be transported and spoiled. Clause PSD 5.2.2.3 shall apply.

Where, in the opinion of the Engineer, any unsuitable material is encountered at foundation level, such material shall be removed up to a level indicated by the Engineer and shall be replaced with suitable foundation fill or mass concrete as instructed or detailed, in accordance with the requirements of clause PSD 5.2.3.4 of this section.

PSD 5.2.2.9 Preparation of the founding surface

Where hard material suitable for founding is encountered at the founding level, it shall be cut and trimmed to a firm surface, either level, stepped or serrated, as may be required.

Where there are indications that the material at the founding level will be soft material or hard material that will deteriorate rapidly on exposure, the excavation of the final layer with a thickness of 150 mm shall be postponed until just before the blinding layer is placed.

Where ordered by the Engineer, excavations shall be extended to a specified depth below the given undersides of the slabs and footings to make provision for the placing of a concrete blinding layer.

PS D 5.2.3.1 Embankments

Add the following to D 5.2.3.1:

Embankments of ponds and terraces shall be constructed of approved material from excavations and shall be compacted to 95 % (100 % for sand) of MAASHTO density, in layers not exceeding 150 mm in depth. Compacted at an optimum moisture content.

PSD 5.2.3.3 Backfill and fill near structures

a) General

When placing backfill and fill, the following precautions shall be taken:

- i. In so far as it is possible, the material shall be placed simultaneously to approximately the same elevation on both sides of a structure or structural member where appropriate. If conditions require that backfill or fill be placed appreciably higher on one side than on the opposite side, the additional material on the higher side shall not be place until authorized by the Engineer and preferably not until the concrete has been in place for 14 days, or until tests show that the concrete has attained sufficient strength to withstand any pressure safely that has been created by the backfill or fill or by the method of construction.

- ii. The material behind structural members restrained at the top by the superstructure, e.g. portal-type structures shall be placed as stated on the Drawings or as directed by the Engineer.
- iii. The material behind the walls of concrete culverts shall not be placed until the top slab has been placed and cured, unless otherwise authorized by the Engineer.

b) Backfill

Excavated areas around structures, between the structure and the vertical walls of the surrounding excavation, shall be backfilled with approved material in horizontal layers not exceeding 150 mm in depth after compaction, to the level of the original ground surface or to the level specified on the Drawings. Each layer shall be moistened or dried to the optimum moisture content for the material and be compacted to a density of not less than 90 % of modified AASHTO density, except that, in a road prism, the material shall be compacted to a density of not less than 93 % of modified AASHTO density. In cases where structures are founded on backfill material, the density shall be as specified in the Project Specifications but shall not be less than 95 % of modified AASHTO density.

c) Prevention of wedge action

Before the fill in the space between a structure and any adjacent sloping fill and the backfill between a structure and the sloping sides of the surrounding excavation is constructed, the slope of the fill and of the sides of the excavation shall be benched or serrated in order to prevent wedge action between the structure and the fill or the sides of the excavation during backfilling and compaction.

The distance between the exposed face of the structure and the toe of the fill of the excavation side shall be sufficient to allow proper compaction.

PSD 5.2.3.4 Foundation fill

If, during the course of excavation, it is found that the material at the indicated founding depth does not have the required bearing capacity, the excavations shall be extended at the discretion of the Engineer until satisfactory founding material is encountered. The Engineer reserves to himself the right to order the Contractor to make up the difference in levels with foundation fill.

Foundation fill consisting of granular material shall be constructed in layers not exceeding 150 mm in thickness after compaction. Each layer shall be moistened or dried to optimum moisture content for the material and be compacted to a density of not less than 95 % of modified AASHTO density.

Mass concrete fill to be used shall be of the class or mix specified or directed by the Engineer.

PS D 5.2.3.5 Filling under floors

Filling under the floors of buildings shall be done with sand from commercial sources, compacted to 100 % of MAASHTO density.

PS D 5.2.4 Finishing

PS D 5.2.4.1 Final grading

Add the following to D 5.2.4.1:

Terraces shall be trimmed to an even grade of 1 in 2.

PSD 5.2.5 Transport for Earthworks

Add the following new sub-clause in 5.2.5:

PSD 5.2.5.1 Freehaul

Add the following new sub-clause in 5.2.5.1:

A Freehaul distance of 5,5km shall apply.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PSD 5.2.5.3 Special Cases Relating to

- a) When material is excavated, and stockpiled on the Engineer's instructions before being reloaded and transported to its point of final use, free-haul shall apply twice, firstly from the point of excavation to stockpile and secondly from stockpile to the point of final use

PSD 7 TESTING

PSD 7.2 TAKING AND TESTING OF SAMPLES

Replace the contents of this sub-clause with the following:

"The Contractor shall arrange with the approved independent laboratory engaged by the Contractor to carry out sufficient tests on a regular basis as agreed between it and the Engineer to determine whether the degree of compaction, and, where applicable, the quality of materials used, comply with the Specifications and shall submit the results of these tests to the Engineer in a form approved by him.

The compaction requirements for fills shall be deemed complied with when at least 75% of the dry-density tests on any lot show values equal to or above the specified density and when no single value is more than five percentage points below the specified value."

PS D 8 Measurements and Payment

PS D 8.1 Basic Principles

Add the following to D 8.1:

The rates for excavation shall also cover the cost of dealing with any stormwater or subsurface water, which may appear in the excavations.

PS D 8.3 Scheduled Items

PSD 8.3.1 Site Preparation

REPLACE SUB-CLAUSES 8.3.1.1 AND 8.3.1.2 WITH THE FOLLOWING:

"Where Site preparation such as clearing, grubbing, the removal of large trees or the removal and stockpiling of topsoil is required, the provisions and scheduled items of SABS 1200 C shall apply."

PSD 8.3.2 Bulk Excavation

Add the following sub items to D 8.3.2:

- a) Extra-over 8.3.2(a) for soil cement backfilling where specifically required by the Engineer (percentage of cement indicated) Unit : m3
- b) The tendered rate for sub item PS D 8.3.2(c) shall be additional to the rates tendered for D 8.3.2(a) and shall cover the cost of all incidentals required for the complete backfilling with soil cement as specified. The rate shall also include for the trimming and compacting of the excavation before placement of soilcrete.
- b) Excavate and dispose of unsuitable material from excavation bottom Unit : m3
The rate shall cover the cost of complying with all the precautions required in terms of D 5.1 in addition to the cost of excavation of the additional depth in any material and the disposal of the unsuitable material as specified in PS D 5.2.2.3.
- c) Extra-over 8.3.2(a) for trimming and compacting terraces Unit : m2
The rate includes for the trimming and compacting of horizontal and sloping sides of the terraces before top soil and grass is placed, including for the removal of large stones and rubble to form a uniform surface.

PSD 8.3.3 Restricted Excavation

Add the following sub items to D8.3.3

Restricted excavation shall be limited to those excavations detailed on the drawings or as agreed to by the Engineer as being restricted.

- a) Extra-over 8.3.3(a) for soil cement backfilling

(percentage of cement indicated) Unit : m³

The tendered rate for sub-item PS D 8.3.3(c) shall be additional to the rates tendered for D 8.3.3(a) and shall cover the cost of all incidentals required for the complete backfilling with soil cement as specified. The rate shall also include for the trimming and compacting of the excavation before placement of soilcrete.

- b) Excavate and dispose of unsuitable material from excavation bottom Unit : m³

The rate shall cover the cost of complying with all the precautions required in terms of D 5.1 in addition to the cost of excavation of the additional depth in any material and the disposal of the unsuitable material as specified in PS D 5.2.2.3.

- c) Extra-over 8.3.3(a) for trimming and compacting terraces Unit : m²

The rate includes for the trimming and compacting of horizontal and sloping sides of the terraces before topsoil and grass is placed, including for the removal of large stones and building rubble to form a uniform surface.

PS D 8.3.5 Extra Excavation In All Materials To Provide Working Space Around Structures

Delete this sub clause and refer to sub clause PSD 5.2.2.4

PS D 8.3.8.1 Excavate by hand in soft material to expose existing service Unit : m3

Add the following to D 8.3.8.1(c):

Excavation by hand to expose existing services shall only be measured and paid for if so ordered in writing by the Engineer.

After the excavation of trial holes to determine the exact position and depth of existing services, at intervals as required by the Engineer, the excavation to a level of 300 mm above such services shall be measured and paid for as normal excavation, independent of the depth of such excavation. Only excavation within 300 mm of the existing services will be measured and paid for as excavation by hand and then only if ordered in writing by the Engineer. The rate shall also include the backfilling of the excavations and compaction thereof.

PSDB EARTHWORKS (PIPE TRENCHES)**PSDB 1: MATERIALS (Clause 3)****PSDB 1.1 CLASSES OF EXCAVATION (Sub-Clause 3.1)**

The excavation of material, for the purposes of measurement and payment shall be classified as specified in PSDA 1.1

PSDB 2: CONSTRUCTION (Clause 5)**PSDB 2.1 SITE CLEARANCE (Sub-Clause 5.4)**

Add the following to the clause:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

"The Contractor shall dispose of all surplus and unsuitable material on a site to be found by him and approved by the Engineer. All costs related to the disposal of surplus material shall be deemed to be included in the tendered rates.

Where pipes are to be laid the Contractor will be allowed to clear and grub a strip 2,5m wide along the centre-line of the trench. No vegetation outside this strip may be damaged without the written approval of the Engineer.

All trees with a girth of 250 mm or a height of 2,5m within this strip, shall be protected and may only be trimmed or removed after a written order by the Engineer."

PSDB 2.2 BACKFILLING (Sub-Clause 5.6)

PSDB 2.2.1 DISPOSAL OF SOFT MATERIAL (Clause 5.6.3)

Add the following to the clause:

Surplus and/or unsuitable excavated material must be disposed of at a site found by the Contractor and approved by the Engineer.

PSDB 2.2.2 DISPOSAL OF INTERMEDIATE AND HARD ROCK MATERIAL (Clause 5.6.4)

Add the following to the clause:

Surplus and/or unsuitable excavated material must be disposed of at a site found by the Contractor and approved by the Engineer.

PSDB 3: TESTING (Clause 7)

PSDB 3.1 Notwithstanding the contents of Clause 7.1, the Contractor shall bear the cost of all quality control tests regardless of whether the tests indicate acceptable compaction or not.

The following are the minimum frequencies for the process control tests to be executed by the Contractor:

- (a) Pipe bedding: one density test on each 10 m of pipe trench.
- (b) Normal trench backfilling: one density test on every second layer for every 30 m of pipe trench.
- (c) Backfilling in areas subject to vehicle loads one test on each layer of 150 mm at each crossing.

The positions of the minimum number of density tests shall be determined randomly by the Contractor and shall be clearly documented with the results. The results of the tests shall be submitted to the Engineer and shall prove to the Engineer that the work as a whole was done satisfactorily.

The Engineer could order additional tests, over and above the minimum tests. Payment for these tests will be made under Item PSA 8.5 if the tests indicate that the density is as specified. If any tests fail, the cost of such tests shall be for the account of the Contractor.

PSDB 8: MEASUREMENT AND PAYMENT

PSDB 8.1 BASIC PRINCIPLES

Disposal of surplus and/or unsuitable material will be as specified in PSDB 5.6.3 and PSDB 5.6.4. No additional payment other than the tendered scheduled rates will be made for such disposal of material.

PSDB 8.3 SCHEDULED ITEMS

PSDB 8.3.1 SITE CLEARANCE

Delete the limitation on the girth of trees. The rate for this item shall cover the cost of the removal of all trees, approved by the Engineer, and all obstructions to be expected.

PSDB 8.3.2 EXCAVATION

- (a) Excavate in all materials for trenches, backfill, compact and dispose of surplus materials

Payment for pipeline excavation will be made in three instalments as follows:
50 % at completion of excavation, 30 % at completion of backfilling and the final 20 % after final approval which will take account of surface finishing, disposal of all unused material and approval and acceptance of all test results including the hydraulic testing of the pipe as specified.

- (c) Excavate and dispose of unsuitable material from trench bottom

Unsuitable material shall be disposed of at a site approved by the Engineer.

PSDB 8.3.4 PARTICULAR ITEMS

- a) Supply and install sack breakers in trenches exceeding 1:6 or 16.7% or where ordered by Engineer on site
- b) Build cross embankments where ordered by Engineer on site
- c) Shore trench opposite structure, service or road

The above particular items

PSG CONCRETE STRUCTURAL (SANS 1200 G)

PSG 2.3 Definitions

PSG 2.3(b) Quality

Recording of all quality control measures must be done on a daily basis in the Site Diary, information regarding batch number position in structure and date casted, must be specified.

PSG 2.3(c) Strength (sub-clause 2.3(c))

The required concrete strength will be the strength specified. Cube tests shall be done and no test result less than 95% of specified 28 days' concrete strength will be accepted. The maximum percentage of tests to fall below the specified level may be 5%.

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PSG 3.2 CEMENT

PSG 3.2.1 Applicable Specifications

Substitute G 3.2.1 with the following:

Only Ordinary Portland Cement (OPC) and Pulverised Fuel Ash (P.F.A.) shall be used in all concrete for this Contract. No other types of cement (e.g. Rapid Hardening cement, PBFC or Milled Granulated Blast Furnace Slag) shall be permitted.

Pulverised Fuel Ash (PFA) shall comply with the following specifications:

- a) PFA shall be obtained from only one Power Station, from which the PFA has been approved for used in concrete by the SABS.
- b) All PFA shall comply with the requirements of SABS 1466.1988.

Pulverised Fuel Ash (PFA) shall be used as a partial replacement of the Ordinary Portland Cement (OPC) in concrete. The maximum percentage of mass of PFA shall be 33% of the total cementitious material in the concrete, which is defined as the total mass of OPC and PFA, and shall be mixed before the delivery to site.

The PFA/OPC Mix shall be stored in the same manner as that specified for OPC. When handled in bulk and stored in silos, the PFA/OPC mix shall require increased silo capacity, more efficient filters and aeration compared to OPC.

Portland cement that conforms to SANS 471, with minimum 42.5 MPa strength shall be used for all in-situ cast works.

PSG 3.2.3 Storage of Cement

Replace this Sub-Clause with the following Sub-Clause:

Cement which is stored on the Site shall be kept under a cover that provides adequate protection against moisture and other factors that may aggravate deterioration.

Where the cement is supplied in bags, the bags shall be closely and neatly stacked to a height not exceeding 12 bags, and they shall be so arranged that they can be used in the order in which they were delivered to the Site. Different brands and/or types of the same brand shall be stored separately.

The storage of cement in bulk in silos or similar containers shall be permitted, provided that the cement drawn for use is measured by mass and not by volume.

Cement shall not be kept in storage for longer than 6 weeks from the date of manufacture without the Engineer's permission. The Engineer may order the removal of cement, which is older than 6 weeks, from the Site or the alteration of the design mix if he does allow its use.

Alternatively, he may allow the cement to be used in concrete of less critical importance, as in blinding layers.

PS G 3.4 Aggregates

PS G 3.4.1 Applicable Specification

Substitute G 3.4.1 with the following:

Both coarse aggregate (stone) and fine aggregate (sand) shall comply with the requirements of SANS 1083, subject to the following:

- a) The shrinkage of both the fine and the coarse aggregate, when tested in accordance with SANS Standard Method 5836, shall not exceed the following limits:

- (i) For use in prestressed concrete, concrete bridge decks and slender columns, the shrinkage of both fine and coarse aggregate shall not exceed 130% of that of the reference aggregate.
- (ii) For use in other reinforced concrete members, the shrinkage of the fine aggregate shall not exceed 175% and that of the coarse aggregate 150% of that of the reference aggregate.
- (iii) For use in mass concrete substructures and unreinforced concrete head walls and wing walls, the shrinkage of both the fine and the coarse aggregate shall not exceed 200% of that of the reference aggregate.

Where there is any doubt about the shrinkage characteristics of aggregates, the Contractor shall submit a certificate from an approved laboratory, indicating the shrinkage characteristics of the aggregate.

- b) The flakiness index of the stone as determined by TMH1 Method B3 shall not exceed 35.
- c) Aggregates shall not contain harmful amounts of organic materials such as grass, timber or similar materials.
- d) Aggregates that may be potentially alkali reactive shall be assessed in accordance with SANS Standard Method 1245 and if there is a potential danger of any alkali aggregate reaction, the Engineer's decision as to the suitability of the aggregate shall be final and binding.
- e) Aggregates for concrete in contact with sewage or sewage gases shall be of dolomitic origin. All concrete for sewers and sewerage works except concrete for the following, shall therefore be made with aggregates of dolomitic origin:
 - Blinding
 - Mass concrete for foundation fill
 - Concrete for encasing and bedding pipes

The quantity of insoluble matter in respect of concrete made with aggregates of dolomitic origin, determined according to the method described in SANS 677, Appendix C, shall not be more than 15%.

PSG 3.5 ADMIXTURES

PSG 3.5.1 Approval of Admixtures Required

Add the following paragraph to this Sub-Clause:

- a) Admixtures shall comply with the requirements of ASTM C-154 or AASHTO M-154 and shall be of an approved brand or type.

PSG 3.5.2 Air-Entraining Agents

Add the following paragraph to this Sub-Clause:

- b) Air-entraining agents shall comply with the requirements of ASTM C-260 or AASHTO M-194.

PSG 4 PLANT

PSG 4.5 Shuttering

PSG 4.5.1 Design

The shuttering must be designed and supplied by an approved supplier, in order to construct the new square, rectangular, circular, cylindrical and conical infrastructure easily and correctly, within specified tolerances. Concrete must be easily poured into and compacted in the erected shuttering, and must be tied and supported well, in order to be able to resist the dead weight of the wet

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concrete, compaction and shuttering as well as the effects of wind force. Shuttering may only be removed after approval of the Engineer.

PSG 4.5.2 Finish

Add the following to this Sub-Clause:

All external corners shall be chamfered by the fixing of fillet strips into the corners of the formwork to form 25 mm x 25 mm chamfers, all at no extra payment.

PSG 4.5.3 Ties

Add the following to this Sub-Clause:

Only patented ties shall be used on water-retaining structures. These ties shall be approved by the Engineer. Permanent metal ties shall have a minimum concrete cover of 40 mm after formwork has been removed. Tie holes shall be filled with an approved non-shrink epoxy grout.

The cost of supplying the special tie-rods as well as of filling the cavities left by the tie-rod cones shall be included in the rates tendered for formwork.

PSG 5 CONSTRUCTION

PSG 5.1.3 Cover

Add the following to this Sub-Clause:

Unless otherwise shown on the drawings, minimum cover to reinforcement shall be as for "severe" conditions (minimum cover shall not be less than 40mm).

PSG 5.2.1 Classification of Finishes

Add the following Sub-Clause 5.2.1

The following surface conditions are required on the various portions of the finished concrete:

- (a) Rough
Concealed surfaces and surfaces more than 150 mm below final ground level.
- (b) Smooth
All surface finishes not classified as "rough" in paragraph (a) shall be classified as "smooth". All exposed arises (i.e. where the angle between adjacent sides is 110° or less) unless otherwise indicated on the drawings, shall be chamfered 20 mm x 20 mm by means of triangular fillets fixed to the formwork.
- (c) Special smooth, repaired and rubbed

This shall be for formed surfaces of structures prominently exposed to public view where appearance is of special importance. Formwork shall only be of approved plywood, approved commercial form board or smooth tongue-and-groove boards, except that in certain cases such as for pre-cast unit's permission may be granted to use steel formwork provided that sufficient vibration is used. After defects have been repaired, as described in paragraph (e), all ridges, nail marks and other projections shall be removed with carborundum stone. After the treatment the surface shall then be kept continuously wet for 10 days after which period of additional curing it shall be allowed to approach surface dryness immediately prior to treatment by sack rubbing in order to secure a degree of suction most favourable for obtaining good bond. A soft mortar consisting of one-part cement and two parts sand passing the 1,18 mm sieve shall be thoroughly rubbed over the entire exposed surface with clean hessian, completely filling all pits and irregularities. The mortar consistency shall be that of thick cream. At a sufficient interval after the sack rubbing to prevent smearing, but before the mortar hardens, most of the excess mortar shall be removed by rubbing with clean hessian. After the mortar has set for several hours,

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curing shall be resumed and continued for at least two (2) days. The surface shall then be allowed to become surface dry and in this condition well sanded with no. 2 sandpaper.

(d) Exposed arises

All exposed arises (i.e. where the angle between adjacent sides is 110° or less) unless otherwise indicated on the drawings, shall be chamfered 20 mm x 20 mm by means of triangular fillets fixed to the formwork.

(e) Repair of concrete

Immediately after the removal of the formwork, the Engineer shall inspect the concrete for defects. Skilled workmen only shall perform all repairs of such defects, by approved methods and to the satisfaction of the Engineer and at the expense of the Contractor.

Repairs shall be carried out as soon as practicable after the removal of the formwork and in any case not longer than twenty-four (24) hours after exposure. Concrete that is damaged from any cause and concrete that is honeycombed, fractured or otherwise defective, and concrete which, because of excessive surface depressions must be excavated and built up to bring the surface to the prescribed lines, shall be removed and replaced with mortar or concrete as hereinafter specified or as otherwise directed by the Engineer.

Concrete filling generally of the same class as the damaged concrete shall be used for holes extending entirely through concrete sections and of such a size as will accept concrete and for holes in mass concrete greater in area than 0,1 m² and deeper than 100 mm and for holes in reinforced concrete which are greater in area than 0,15 m² and which extend beyond the reinforcing. Mortar filling composed of sand and cement in the same proportions as used for the concrete and of a consistency such as will make the mortar sufficiently plastic to be easily placed, shall be used for all other imperfections.

A filling shall be bonded tightly to the surface of the area being repaired and shall be bound and free from shrinkage, cracks and hollow areas after the filling has been cured and dried. Curing of repaired areas shall be performed in such a manner and for such periods as the Engineer may direct.

Particular care shall be exercised to ensure that the colour of the repair work shall match as nearly as possible to the colour of the surrounding concrete. No cement washing or plastering shall be carried out except on the written instruction of the Engineer.

The finish of the concrete shall be accurate to Degree of Accuracy as defined in terms of Clause 6 (see also 5.5.10.3).

PSG 5.2.2 Preparation of Formwork

Add the following to this Sub-Clause:

The joints between continuous formwork elements shall be closely butted and, where necessary, if undue leakage is expected, the joints shall be caulked, taped or packed with a sealing gasket, all at no extra payment. Paper, cloth or similar materials shall not be used for this purpose.

PS G 5.4 Pipes and Conduits

Add the following to G 5.4:

All pipes and specials, which must be installed in the floors and walls of structures, shall be embedded in the concrete during the casting of such concrete. No holes shall be left for the later installation of pipes and specials, without the written approval of the Engineer.

Where such holes have been approved by the Engineer, the Contractor shall be responsible for the grouting-in of such pipes or specials with an approved expansive cementitious grout as specified

in PS G 4.5.3, regardless of whether or not these have been supplied by himself. The Contractor shall provide a smooth, dense and waterproof finish around the pipes or specials.

The clear space between pipes of any kind embedded in reinforced concrete and the clear space between such pipes and reinforcement shall at any point be not less than:

- (a) 40 mm, or
- (b) 5 mm plus the maximum size of coarse aggregate,

Whichever is the greater.

PSG 5.5 Concrete

PSG 5.5.1.2 Consistency

Add the following under Sub-Clause 5.5.1.2(a):

The slump for concrete to be used in water retaining structures shall not be less than 30 mm and not more than 60 mm.

PSG 5.5.1.3 Workability

Add the following to this Sub-Clause:

The concrete mix to be used in water retaining structures shall have a water/cement ratio not exceeding 0,5.

PSG 5.5.1.5 Durability

Add the following to this Sub-Clause:

All water retaining structures shall be deemed to be exposed to severe conditions. The water/cement ratio shall be determined by the strength of concrete specified but shall not exceed 0,5, in order to ensure workability, water reducing admixtures of approved manufactures shall be used in preference to increasing the cement content.

PSG 5.5.1.7 Strength concrete

Add the following to this Sub-Clause:

The concrete mix shall be designed by a specialist organization. No concrete shall be placed until the Contractor's concrete mix design has been approved by the Engineer. The Contractor shall submit to the Engineer a statement of the mix proportion proposed, together with a report from the specialist organization, showing the 28-day concrete strength obtained when using the material proposed for the work. The cost of the concrete mix design shall be borne by the Contractor and shall be deemed to be included in the rates for concrete work.

The grade of strength concrete and the maximum nominal size of coarse aggregate for each portion of the works, unless otherwise indicated on the drawings, shall be as follows:

- i. Mass concrete under floors and foundations 25 MPa/19 mm
- ii. Blinding layers 20 MPa/19 mm
- iii. Encasing of pipes 20 MPa/19 mm
- iv. Strip foundations 20 MPa/19 mm
- v. Benching and screeds 20 MPa/10 mm
- vi. All Reinforced concrete 35 MPa/19 mm
- vii. All water retaining concrete 35 MPa/19 mm

The concrete shall have a minimum cement: water ratio of 2,0 and shall have a minimum cement content of 320 kg/m³. Admixtures may be used to increase the workability of the concrete but only with express approval of the Engineer and when the details of the active ingredients of the

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admixture and their effects are supplied to the Engineer for approval before use. No additives likely to impair low permeability of the concrete will be approved. Calcium chloride or admixtures containing chlorides may not be used in concrete for water retaining structures. Other admixtures and constituents may only be used with the approval of, or as specified by the Engineer.

PS G 5.5.7 Construction Joints

Add the following to G 5.5.7.1:

Construction joints shall be limited to the minimum and shall only be made in positions as shown on the drawings or in positions as specifically approved by the Engineer. Construction joints between tank bottoms, floors, or wall bases, and the walls standing on them shall not be made flush with the supporting surface, but shall be made in the wall 150 mm above the base. The 150 mm high riser wall shall be cast as an integral part of the bottom, floor or base, i.e. the concrete in the riser shall be deposited simultaneously with the concrete in the bottom, floor or base adjacent to it. Where there is a fillet at the bottom of a wall, the construction joint shall be made 150 mm above the fillet.

A PVC water stop without centre bulb shall be installed at all construction joints in walls of water retaining structures. The size of the water stops shall be 150 mm in walls thinner than 200 mm and 200 mm in walls of 200 mm thickness and more, or as indicated on the drawings.

PS G 5.5.7.4 Expansion joints

Expansion joints shall be formed in positions and in accordance with details as shown on the drawings. All expansion joints shall be formed with an approved closed cell polyethylene fill material with a density of not less than 100 kg/m³, or as otherwise specified. Joint sealers shall consist of a two-component polyurethane sealing compound complying with SANS 1077. Rear-guard S-type PVC water stops with centre bulbs shall be installed under floors and Hydrofoil PVC water stops with centre bulbs in walls, as shown on the drawings.

All sealants fill material and water stops shall be installed strictly in accordance with the specification of the manufacturers and to the satisfaction of the Engineer. The sealant shall be installed in one operation and jointing to already hardened sealant will not be permitted.

PS G 5.5.9 Adverse Weather Conditions

Add the following to G 5.5.9.1:

No material having a temperature of below 5 °C shall be used for concrete, and no concrete shall be deposited when the ground or air temperature is below 2 °C. Furthermore, if the air or ground temperature is likely to fall below 2 °C within 12 (twelve) hours after depositing of concrete, no concreting shall be done without the written consent of the Engineer. If such consent is given the Contractor shall heat the aggregate stockpiles and mixing water, and defrost the formwork and reinforcement.

PS G 5.5.10 Concrete Surfaces

Add the following to G 5.5.10.1:

Concrete surfaces under screeds, granolithic floor finishes or benching and surfaces of strip foundations and footings shall be brought up to a plane, uniform surface with a suitable screed board.

PSG 5.5.10.4 Wood-floated finish

Where wood floating is specified or scheduled, the surface shall first be given a finish as specified in G 5.5.10.1 and after the concrete has hardened sufficiently, it shall be floated to uniform surface free from trowel marks. The screeded surface shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface from screed marks.

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PSG 5.5.10.5 Steel-floated finish

Where steel floating is specified or scheduled, the surface shall be treated as specified in PSG 5.5.10.4 except that, when the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, the screeded surface shall be steel-trowelled under the firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

PSG 5.5.11 Watertight Concrete

Add the following to this Sub-Clause:

All structures shall be deemed to be water retaining unless otherwise specified.

PS G 5.5.11.1 Requirements and tests for water tightness of structures

The completed structure shall be watertight, and the quality and finish of the work shall be such that no after-treatment of the work such as plastering or cement wash is necessary to ensure compliance with this requirement.

The works will not be certified complete until the structures enumerated in PS G 5.5.11 has been proved by testing to be watertight.

Upon completion of construction and when so agreed by the Engineer, the structure shall be filled by the gradual admission of water, not exceeding 2,0 m in 24 hours, until the water level reaches the designed maximum level. The water level shall then be carefully noted and recorded by the Engineer in relation to a fixed bench mark, and the structure shall be allowed to remain filled for a period of 2 (two) weeks or such longer time as may be required to permit complete saturation of the concrete. During this period, readings will be taken by the Engineer and the results so obtained will be available for the information of the Contractor.

At the end of this period more water shall be added, if necessary, to bring the water level back to the designed maximum level and the water shall be left undisturbed for a period of at least 4 (four) days during which time the level shall again be recorded by the Engineer at regular intervals. The structure shall be considered to be watertight if the drop-in water level does not exceed 6 mm in 96 (ninety-six) hours in the case of a roofed structure and if no leakage is apparent.

The acceptable drop in level in the case of an unroofed structure shall be such that it allows for normal evaporation during the time of the test.

The evaporation shall be measured by the mean drop in level caused by the evaporation of the water in three flat containers floating in the water, being recorded.

If appreciable leakage is evident at any stage of the filling or testing or if, in the opinion of the Engineer, the degree of water tightness is unsatisfactory, the Contractor shall, when so ordered by the Engineer, discontinue the test immediately and at his own expense take approved steps to rectify the work. The work of rectification shall be continued assiduously until, on repetition of the test procedure, a satisfactory test result is obtained and the degree of water tightness is acceptable.

Backfilling around structures shall not commence until a satisfactory test result has been obtained.

The Engineer shall have the right to retest the structure before the expiry of the defects liability period and the results of these tests will be made available to the Contractor. If these tests indicate to the Engineer that the degree of water tightness is unsatisfactory, the Engineer (before issuing the final certificate) will be entitled to order the Contractor to rectify the work at his own expense in such a manner as will cause least interruption of the water supply to consumers and will ensure that the degree of water tightness of the structure is satisfactory.

PSG 5.5.13 Grouting

Add the following to this Sub-Clause:

PSG 5.5.13.1 Materials

- a) Water. Water for grout shall comply with the requirements given in Sub-Clause 3.3 of SANS 1200 G.
- b) Aggregates. Notwithstanding the requirements of Sub-Clause 3.4.1 of SANS 1200 G, the grading of fine aggregate (sand) and coarse aggregate (stone or pea gravel) shall conform to the grading given in Tables 1 and 2, respectively, below.
- c) Cement. Cement shall be ordinary Portland cement complying with SANS 471.
- d) Admixtures. Admixtures shall comply with the requirements of Sub-Clause 3.5 of SANS 1200 G and shall have a proven record of satisfactory performance under conditions encountered in the Republic of South Africa.
- e) Proprietary grouting materials. Unless otherwise approved by the Engineer, proprietary grouting materials shall be obtained ready mixed in sealed pockets as supplied by the manufacturers.

TABLE 1 - SAND		TABLE 2 - STONE OR PEA GRAVEL	
1	2	1	2
Test sieve nominal aperture size, mm	% Passing (by mass)	Test sieve nominal aperture size, mm	% Passing (by mass)
9,75	100	9,5	100
4,75	95 - 100	4,74	95 - 100
1,18	45 - 65	2,36	0 - 5
0,3 (300 μ m)	5 - 15		
0,15(150 μ m)	0 - 5		

PSG 5.5.13.2 Preparation and Procedures

- a) Before a machine or structural bedplate is placed on the concrete the following steps shall be carried out:
 - 1) All defective concrete, laitance, dirt, oil, grease, and loose material shall be removed from the concrete foundation by bush-hammering, chipping, or other means until sound clean concrete is obtained. The surface of the foundation shall be scabbled, but shall not be so rough as to interfere with proper placing of the grout. All foundation bolt sleeves shall be cut out, or cut off flush if the sleeves cannot be removed. The top of the foundation shall be re-shaped if necessary.
 - 2) The underside of each steel base, particularly in the bearing areas, shall be cleaned and any burrs and ragged edges removed before the base is placed in its final location.
 - 3) All holding-down bolt sleeves shall be thoroughly cleaned of any materials that may prevent the grout from flowing freely to the bottom of the bolt sockets.
- b) The base shall be properly aligned and levelled and shall be maintained in that position during grouting.
- c) After the machine or structural bedplate has been placed the following precautions shall be

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 Witness 1

 Witness 2

observed:

- Shimming shall be kept to a minimum. Steel plates shall be used for packing and shall be ground to the required thickness, where necessary.
- Before grouting starts all loose dirt, oil, grease, and other foreign matter on the surface of the foundation, the undersides of bedplates, and in the bolt holes shall be removed by means of compressed air or other approved measures. The surface of the foundation slab shall be thoroughly saturated with clean water, and all excess water shall be removed from the surface and the bolt holes just before the grout is placed.
- Grouting shall not be carried out until the alignment of all units to be grouted has been checked and approved by the Engineer.
- Special care shall be taken with grouting in hot or cold weather to ensure proper setting and gain of strength and, in the case of proprietary grouting materials, by having ice or hot water available, as the case may be, in accordance with the instructions of the manufacturer. Enclosures shall be provided for the grout such that, until it has set, its temperature will be in the range 15-27°C.
- Shields to protect the grout from the sun and from hot winds shall be provided by the Contractor when so ordered.

PSG 5.5.13.3 Formwork

Formwork for grouting shall comply with the applicable requirements of Sub-Clause 5.2 of SANS 1200 G. Forms shall be caulked where necessary. Adequate clearance between forms and bedplates shall be provided to enable the grout to be worked into place.

PSG 5.5.13.4 Mixing (all free-flowing grouts except epoxy grouts).

The grout shall be mixed to a homogeneous uniform mixture and delivered ready for placing at a temperature between 15°C and 25°C.

Substantial materials and water shall be mixed in a mortar mixer for at least 3 min. For the converse, mixing thoroughly by hand will suffice for smaller tasks, nonetheless the entire mass shall be turned over enough times to ensure even distribution of its components.

Mixing shall be done as close as possible to the place where the grout will be placed. No surplus grout shall be mixed at any one time than that which can be placed in a period of 20 min.

After the grout has been mixed it shall not be re-tempered by the addition of water.

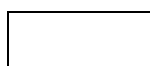
PSG 5.5.13.5 Grouting (all free-flowing grouts except epoxy grouts).

The grout shall be placed quickly and continuously to avoid the undesirable effects of over-working. (These effects are segregation, bleeding, and breaking-down of initial set). The method of placement shall be subject to approval. The means of placing the grout shall be such that the grout will completely fill the space to be grouted, will be thoroughly compacted, will be free of air pockets, and will have evenly distributed contact over an area in excess of 80% or, in the case of expanding grout, 95% of the bearing area of the item to be supported.

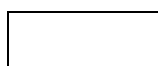
Wherever practical grout shall be placed from one side only and where this is not achievable, care shall be taken to ensure that any entrapped air is released.

After the grout has taken its initial set:

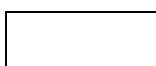
- a) the forms shall be removed;
- b) excess grout shall be so cut away as to leave a smooth and neatly finished job;
- c) except where the grout is intended to provide resistance to side thrust, all edges shall be trimmed at 45° to the vertical, from the bottom edge of the bedplate; and



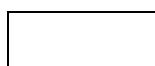
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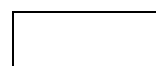
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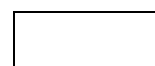
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Witness 2

d) all excess grout on or about the bedplates shall be removed.

Damage to paintwork, if any, shall be repaired within 24 hours. Packing plates, shims, and other levelling devices shall remain in position.

PSG 5.5.13.6 Dry-packed grout (standard dry sand and cement grout).

Dry-packed grout shall have a minimum compressive strength at 28 days of 25 MPa. The quantity of water added after placing shall be kept to a minimum consistent with placing conditions, and the cement, sand and, where applicable, pea gravel proportions by mass shall be as follows:

- a) Where the clearance between bedplate and foundation is 25 mm or less: 1 part of portland cement and 2 parts of sand;
- b) where the clearance exceeds 25 mm: 1 part of portland cement, 1 part of sand, and 1 part of pea gravel.

Dry-packed grout shall be rammed by means of tamping rods against formwork placed along three sides of the bedplate.

PSG 5.5.13.7 Non-shrink grout with metallic aggregate.

The manufacturer's instructions shall be observed when non-shrink grout with metallic aggregate is used. Where the clearance between the bedplate and the foundation is less than 50 mm a sand-based mix shall be used. Where the clearance exceeds 50 mm the Engineer may order a mix with a base of sand plus pea gravel to be used.

PSG 5.5.13.8 Expanding grout with powdered aluminium additive.

The manufacturer's instructions shall be observed when an expanding grout with powdered aluminium additive is used. Where the clearance between the bedplate and the foundation is less than 25 mm, a sand-based mix shall be used. Where the clearance exceeds 25 mm the Engineer may order mix with a base of sand plus pea gravel to be used.

Each batch shall be mixed for at least 6 min. after the powdered aluminium has been added. Where a ready-mixed grout is used, the powdered aluminium shall be added at the placing site and the batch mixed as specified in PSG 9.4. Grout shall be placed within 45 minutes after the addition of the powdered aluminium.

The Contractor shall not use powdered aluminium additive when the ambient temperature is below 5°C.

PSG 5.5.13.9 Epoxy grout (epoxy mortar type only).

The manufacturer's instructions shall be observed when an epoxy grout is used.

PSG 5.5.13.10 Testing (Clause 7)

The Contractor shall, where so ordered, carry out a site test for each grouting procedure and each grouting Sluice Gate to be used. The tests shall be carried out on a dummy bedplate similar in configuration to that which is to be grouted, but not exceeding 1 m in area unless otherwise ordered.

When the dummy bedplate is dismantled, the underside shall show a minimum grout contact area of 80% with reasonably even distribution of the grout over the surface grouted except that, in the case of expanding grout, the minimum grout contact area shall be 95%. The test shall show evidence of good workmanship and materials and the results shall be to the satisfaction of the Engineer.

The Contractor shall, when so ordered, make standard test cubes from various grout mixtures and subject them to compression tests to determine whether the specified strength has been achieved. Test procedures shall comply with the relevant requirements of Sub-Clause 7.2.1 to 7.2.3(f) SANS 1200 G.

PSG 5.5.16 NO-FINES CONCRETE

PSG 5.5.16.1 Materials

Cement, aggregate and water shall comply with the requirements of Clause 3 of this section. Each size of aggregate shall be a single-sized aggregate graded in accordance with SANS 1083.

PSG 5.5.16.2 Classes of no-fines concrete

No fines concrete shall be classified by the prefix NF and the size of the aggregate to be used. Class NF 20 means a no-fines concrete with a 19mm nominal size aggregate.

The volume of aggregate per 50 kg of cement for each class of no-fines concrete shall be as follows:

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

Class	Aggregate per 50 kg cement
NF 40	0,33 m ³
NF 20	0,30 m ³
NF 10	0,27 m ³

PSG 5.5.16.3 Batching and mixing

Cement shall be measured by mass or full bags of 50kg each and aggregate shall be measured by volume in approved measuring boxes or barrows.

The quantity of water added shall be just sufficient to form a smooth grout that will adhere to and completely coat each and every particle of aggregate and to be just wet enough to ensure that, at points of contact of the aggregate, the grout will run together to form a small fillet to bond the aggregate together. The mix shall contain no more than 20l of water per 50 kg of cement.

Mixing shall be carried out in an approved batch-type mechanical mixer, but small quantities may be hand mixed.

PSG 5.5.16.4 Placing

No-fines concrete shall be placed in accordance with the procedure agreed on by the Engineer. It shall be placed in its final position within 30 minutes of mixing.

The no-fines concrete shall be worked sufficiently to ensure that it completely fills the space to be concreted and that adjacent aggregate particles are in contact with one another. Excessive tamping or ramming shall be avoided and under no circumstances may the no-fines concrete be vibrated.

PSG 5.5.16.5 Protection

All no-fines concrete shall be protected from the elements and loss of moisture. Protection against loss of moisture shall be accomplished in one or more of the following ways:

- Retaining formwork in place;
- Covering exposed surfaces with sacking or other approved material kept continuously wet; and
- Covering exposed surfaces with plastic sheeting.

No-fines concrete placed during cold weather shall be adequately protected against frost for at least 3 days.

PSG 5.5.18 Building in of Pipes

The Contractor under this Contract shall be responsible for building-in or caulking and making watertight around all pipes and fittings which pass through walls or under floors of the structures, irrespective of whether the Contractor himself supplies and installs the pipes and fittings, or the Employer purchases the pipes and fittings and the Contractor under this Contract takes delivery and installs them, or some other contractor (e.g. a plant supplier) supplies and installs the pipes and fittings in recesses or through holes left in the various structures for the reception of such pipes and fittings.

Where pipes or specials are required to pass through or be set into concrete work holes shall be left in the concrete.

Before commencing the positioning in holes of any pipes/specials the Contractor shall:

- cut the reinforcement to allow the pipe to be installed;

- b) remove all shuttering and boxing remaining in the holes;
- c) make any alterations required to the position and shape of the holes;
- d) thoroughly clean the sides of the holes so as to obtain a satisfactory bond surface for the new concrete; and
- e) free all surfaces of the pipes/specials of all coatings, and thoroughly scrape and clean the pipes/specials.

After accurately positioning the pipes/specials in their respective holes, the Contractor shall fix the pipes/specials in the holes.

Immediately before grouting is carried out by the placing of mortar and concrete around the pipes, the surface of the existing concrete shall be saturated with water. All surplus water shall be removed and the surface covered with a layer, approximately 12 mm thick, of mortar consisting of 3 parts of concrete sand and 1 part of cement.

The concrete ingredients shall be mixed and placed as dry as possible to obtain a dense, waterproof concrete. Where a watertight seal is required, the concrete shall be carefully worked around the puddle flange, if any, and the pipe barrel or body of the special, and shall be vibrated in layers so as to obviate any falling away from pipe/special surfaces of the concrete already placed. The whole shall, when set, form a dense, homogeneous, and waterproof mass. A spare vibrator with an independent power source shall be kept in readiness to ensure continuity of placing in the event of the breakdown of the duty vibrator.

Smooth formwork that has been suitably strengthened for use with a vibrator shall be provided for facing the concrete around each pipe/special. Alternatively, pipes may be cast into the wall in which case the pipes shall be installed in the required position with the formwork fixed around them and the concrete worked thoroughly into contact.

PSG 5.5.19 Foundations for Mechanical Equipment

The mechanical contractors shall supply the holding down bolts for all mechanical equipment, together with all dimensions and other details necessary for the construction of the pedestals and holding down bolt pockets, or the fixing of the bolts. The Contractor shall either form pockets for the holding down bolts to be installed at a later stage or he shall position the bolts before the concrete is cast as ordered by the Engineer. The mechanical contractor shall fix, align and level the mechanical equipment after which the Contractor shall grout up the units solidly by filling the voids inside and under the base plates as ordered with an approved non-shrink grout.

PS G 5.6 Screed in Clarifiers

No screeding of clarifier floors shall be allowed unless allowed by the Engineer. In this case, the contractor shall consult with the Mechanical Contractor, before application of the screed, to obtain advice on the use of the scraper mechanism for a smooth finish to the screed.

PS G 5.9 Hardening of Top of Clarifier Walls

When the walls of the clarifiers have become dry, but at least twenty-eight (28) days after its completion, the Contractor shall apply a chemical hardening and dust proofing compound, similar to Purigo 5S of Sika, to the top surface thereof. Three coats shall be applied, at a rate of one litre per 6 m² each.

PS G 5.10 Joining New Concrete to Existing

Where partial demolition is required for extension work to existing structures, the contact face shall be cut to predetermined line and level, and any loose and fragmented material shall be removed, and projecting steel cleaned and bent as directed by the Engineer. Where partial demolition is not required but extension work only, the contact surface shall be scabbled and cleaned of all dirt and loose particles.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

If dowels are required, they shall be installed in holes drilled into the existing structure, in accordance with the details shown on the drawings, and secured by means of an approved type of epoxy bonding compound such as Epidermix 372 or similar.

Fresh concrete shall be bonded to the old concrete with an approved type of epoxy bonding compound, such as Epidermix 344 or similar.

PSG 6.3 CONCRETE ELEMENTS

Concrete elements shall be constructed and finished to the following tolerances:

- 1) surface irregularities: 5 mm
- 2) cross section dimensions: ± 5 mm
- 3) level: ± 5 mm
- 4) top of walls: 3 mm

PSG 6.6 FLOOR SURFACES

The flat and inclined floor slabs in the biological reactors and the sloping floor slabs in the cylindrical tanks (clarifiers etc.) shall be constructed and finished to the tolerances as specified under PSG 6.3 above.

In the case of the cylindrical tanks (clarifiers etc.) the scraper mechanisms for the tanks may be used for checking the tolerances but it shall be borne in mind that these mechanisms will only be installed towards the end of the contract. Under no circumstances shall the scraper mechanisms be used for sweeping the concrete to the required grade or thickness. When the mechanisms are used for checking the tolerances it must be done with the approval of the supplier of the mechanism. Grinding may be necessary to obtain the required tolerances of floor slabs in cylindrical tanks and the tenderer's attention is drawn to the various pay items that include for this treatment after installation of mechanical equipment.

PSG 7.2.6 Durability Testing:

Concrete shall comply with the durability parameters defined below:

Water Sorptivity:

Sorptivity is sensitive to surface effects and may be used to assess the effectiveness of initial curing.

Oxygen Permeability:

Permeability is sensitive to changes in the coarse pore fraction and is thus a means of assessing the degree of compaction of concrete. It may be used to quantify the microstructure of the concrete and is sensitive to macro-defects such as voids and cracks. Permeability shall be tested in a manner approved by the Engineer.

Chloride Conductivity:

Chloride conductivity provides a method of characterisation of concrete in the marine environment and may be used to assess the chloride resistance of concrete.

Unlike oxygen permeability and water sorptivity, chloride conductivity is not really a measure of construction quality, but it shall be used for materials selection and design of mixes in aggressive chloride conditions. It will therefore only be used as a check on mix designs during the initial stages of construction.

Concrete Cover:

Concrete cover is a dimensional indicator of cover concrete depth. Cover concrete is the outer concrete layer which protects the internal reinforcing steel, and its depth varies according to the requirements of the different environmental exposure classes.

Test for cover shall be conducted using an approved calibrated electromagnetic cover meter.

This test shall be conducted when instructed by the Engineer to confirm that the specified depth of concrete cover has been achieved. The cover meter tests shall cover at least 1 m² for every 10 m² exposed. The average cover of the 1 m² subjected to the test shall be used to determine the payment, unless the Contractor chooses to carry out additional tests as detailed under clause PSG 7.3.8. The cover meter must be calibrated for each project by drilling and measuring actual cover in at least 3 locations to validate the readings.

Minimum cover to reinforcing for the utility building and guard house shall be as indicated on the drawings.

General:

Durability predictions will be based on the following tests that shall be arranged by the contractor. The durability testing shall be carried out by a laboratory approved by the Engineer.

For testing, water sorptivity, oxygen permeability and chlorine conductivity, cores of 68 mm diameter shall be extracted from the structure when the concrete reaches the age of at least 28 days and tested for the durability criteria set out in PSG 7.3.7. The frequency of the testing at the start of the contract shall be such that there is at least one test (consisting of 2 cores) per discrete concrete element, or per 15 m³ poured (whichever is the lesser), until such time that the Engineer is satisfied that the specified criteria are consistently achievable. Hereafter testing shall be limited to one test per discrete concrete element or maximum concrete pour of 40 m³ (whichever is the lesser), or as directed by the Engineer. Depending on access requirements, the frequency and locations of the tests may be changed to suit site requirements as directed by the Engineer. Note that for decks and walls, the cores shall be taken on the exposed faces of the concrete i.e. the soffit and side wall face, taking care not to cut the reinforcing bars. Where the cores do contain pieces of reinforcing steel, they shall not be used for the tests, particularly in the chloride conductivity test or where bleeding cavities may have formed.

The cores shall be extracted through the cover concrete from the constructed concrete element and a slice (25 mm thick) shall then be cut from the outer surface of this core such that the slice is representative of the middle layer of the cover concrete, i.e. the middle layer being a 25 mm thick slice of concrete, 5 mm from the exposed outer surface extending in towards the reinforcement, and tested. The positions at which the cores shall be extracted shall be as indicated by the Engineer.

Filling of the holes left by the drilling of the cores shall be the responsibility of the contractor and shall be carried out using an approved proprietary non-shrink repair mortar so as to restore structural integrity and durability of the structural element tested. The cost of drilling and filling of the holes shall be included in the rate make-up of pay items for durability testing

PSG 8 MEASUREMENT AND PAYMENT

PSG 8.1.1 Formwork

Delete "or the plan size of the excavation where additional excavation is provided to facilitate erection of forms" in the first sentence of PS G 8.1.3.1(c). Delete the following in G 8.1.1.3(c) "and for different prop heights for beams and slabs".

PS G 8.1.3 Concrete

Delete "or the plan size of the excavation where additional excavation is provided to facilitate erection of forms" in the first sentence of PS G 8.1.3.1(c).

Add the following to PS G 8.1.3.1(d):

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

Strip foundations and encasement of pipes shall be cast directly against the sides and bottoms of excavations. No payment shall be made for additional concrete in over-break.

Delete the full stop at the end of G 8.1.3.3(a) and add the following:

"And special steps necessary before depositing concrete during cold weather, as prescribed in PS G 5.5.9".

PSG 8.1.1.6 Add the following to this Sub-Clause:

The unit rate shall also cover the cost of ties and patented ties as specified in Clause PSG 4.5.3.

PSG 8.5.9 BUILDING IN PIPES INTO CONCRETE OR MASONRY AND/OR GROUTING PIPES

Unit: number (No.)

The rate shall cover the cost of forming the opening for the pipe, scabbling, cleaning and preparing the concrete surface, providing an approved non-shrink epoxy grout, placing and ramming of it solidly into all voids, formwork and finishing to a smooth watertight surface.

PSHA STRUCTURAL STEELWORK (sundry items)**PSHA 2 INTERPRETATION**

PSHA 2.1 Supporting Specifications

c) SANS 1200 H

PSHA 3 MATERIALS

PSHA 3.1 STRUCTURAL STEEL

Replace the reference to BS 4360 with SANS 1431.

The grade of steel shall be S355JR (350W).

PSHA 3.3 BOLTS, NUTS AND WASHERS

PSHA 3.3.1 Bolts and Nuts (Other than Friction Grip)

Add the following to this Sub-Clause:

All bolts and nuts shall be of grade 4,6 steel. Washers shall be provided at each nut and shall be of the same material (or coating where applicable) to match the bolt and nut. Single coil square section spring washers shall be fitted to all nuts subject to vibration. Bolts other than jacking bolts shall project not less than 3 mm and not more than 10 mm from the heads of the nuts after tightening.

Holding down bolts to be built into concrete work as well as bolts to be installed above ground level directly above and under water shall all be of stainless steel grade 304. Bolts for flexible couplings and flanges for underground installation shall be hot-dip galvanized in accordance with the requirements of SANS 763. Bolts to be installed inside buildings shall be hot-dip galvanized in accordance with the requirements of SANS 763 and afterwards painted with the pipework and fittings as specified in the Standardized Corrosion and Painting Specification for Civil Engineering Works.

Suitable plastic sleeves and/or washers shall be used for protection against corrosion by metallic action.

PSHA 3.4 PAINTS AND PROTECTIVE COATINGS

Delete this Sub-Clause and refer to the Standardized Corrosion and Painting Specification in particular specifications PQ.**PS HA 5 CONSTRUCTION****PS HA 5.2 FABRICATION AND ASSEMBLY****PS HA 5.2.6 Handrails**

SUBSTITUTE THE FIRST SENTENCE OF HA 5.2.6 WITH THE FOLLOWING:

Handrails shall be of the tube and sphere type similar to Monoweld and shall be manufactured by an approved firm specialising in such works from grade 304 L stainless steel or hot dipped galvanized (heavy duty coating), as scheduled or shown on the drawings.

Handrails shall be 1 000 mm high and shall consist of a handrail and a knee-rail, both manufactured of steel tubing of nominal thickness 2,6 mm and of nominal outside diameter of at least 34 mm.

Stanchions shall be manufactured pre-formed in one piece and shall be of steel tubing of nominal thickness of 2,6 mm and of nominal outside diameter of at least 42 mm. The bases of the stanchions shall be manufactured of 150 mm x 75 mm x 12,5 mm flat bars and shall be pre-formed to suit the situation in which they are to be installed (i.e. for platform- or side-mounting, and for horizontal- or sloped-mounting on concrete or steel), and the stanchion

 Contractor

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 Employer

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spheres shall be pre-formed to suit right angled or other angled intersections), all as shown on the drawings.

Stanchions shall be spaced at intervals not exceeding 1,5 m and shall be fixed with two M16 bolts, washers and nuts each. All joints shall be welded.

Materials shall be as shown on the drawings or as scheduled.

PS HA 5.2.7 Ladders

ADD THE FOLLOWING TO HA 5.2.7:

Materials shall be as shown on the drawings or as per the following specification if not specified.

Ladders shall be of all welded construction. Materials used shall be as stated on the drawings and shall be manufactured in grade 304 stainless steel or hot dipped galvanized (heavy coating). Stainless steel shall be finished with a No. 1 surface finish. Pickling and passivation shall be carried out in accordance with the requirements of the Standardized Corrosion and Painting Specification for Civil Engineering Works.

Vertical ladders shall comprise stringers at 600 mm centres made of 32 mm nominal bore pipes with 3,56 mm wall thickness and rungs spaced at 300 mm centres made of 16 mm diameter solid round bars. The stringers shall be drilled on one side only to provide a sliding fit for the ends of the rungs which shall protrude through these holes up to the opposite inside face of the stringer and be welded all around where they enter the holes in the stringers.

Lugs for bolting ladders to walls shall consist of 20 mm nominal bore pipes with 2,87 mm wall thickness. Baseplates for stringers and lugs shall be 150 x 60 x 10 mm drilled for 2 No. M12 stainless steel bolts. Where safety cages are specified the hoops shall be made of 50 x 6 mm flat bars and the longitudinals of 40 x 6 mm flat bars, all in accordance with the dimensions as shown on the Drawings.

PS HA 5.2.8 Prefabricated Open Grid Floors

ADD THE FOLLOWING TO CLAUSE 5.2.8.1:

Open grid flooring shall be of square pattern type of approved manufacture with 40 x 4 mm minimum thickness bearer bars spaced at not more than 40 mm centers and shall be manufactured in grade 304 stainless steel or 3 CR 12 steel (as scheduled or as shown on the drawings). The tendered rate shall include for all cutting into the required panels, banding and for frames detailed below.

Open grid flooring shall be provided with welded frames as scheduled, made of 50 x 50 x 5 mm thick 3 CR 12 steel angles to provide a seating for the open grid flooring. The net clearance between the side bars of the open steel flooring and the vertical leg of the frame or strip shall be 5 mm per side. The frames shall be complete with 100 x 40 x 3 mm 3 CR 12 steel anchors fixed at 500 mm centers for building the frame into the concrete work.

Pickling and passivation shall be carried out in accordance with the requirements of the Standardized Corrosion and Painting Specification for Civil Engineering Works.

PSHA 5.2.11 Straps for pipes

Straps for holding down pipes to concrete surfaces shall be manufactured in the material stated on the drawing and to the dimensions as shown on the drawing.

If no dimensions are shown, same shall be 50 mm wide by 3 mm thick. The strap shall be slotted and shall be fixed to the concrete by means of M12 stainless steel self-drilling anchor bolts. The material between the strap and pipe shall be 8 mm thick neoprene sealing material 50 mm wide.

Pickling and passivation shall be carried out in accordance with the requirements of the Standardized Corrosion and Painting Specification for Civil Engineering Works.

PSHA 5.2.12 Access Covers

Access Covers shall be manufactured in grade 304 stainless steel or hot dipped galvanized (heavy coating), in accordance with the details as shown on the drawings.

The DWA manhole covers shall be manufactured as per drawing and shall comply with DWA standards. Access covers in open grid flooring shall be manufactured as shown on drawings.

Pickling and passivation shall be carried out in accordance with the requirements of the Standardized Corrosion and Painting Specification for Civil Engineering Works.

PS HA 8 MEASUREMENT AND PAYMENT

PS HA 8.3 SCHEDULED ITEMS

PS HA 8.3.2 Handrail assembly completeUnit : m

Delete the reference to "details given" and add: as specified in Sub-Clause PS HA 5.2.6 (state material to be used).

The tendered rate shall include handrails comprising hand and knee rails installed complete as specified.

PSHA 8.3.4 Flooring, complete and installed with framesUnit: Square metre (m²)

Delete the reference to "details given" and add: as specified in Sub-Clause PSHA 5.2.8 (state material to be used).

PSL MEDIUM PRESSURE PIPELINES (SANS 1200 L)**PSL 2 INTERPRETATION****PSL 2.4 ABBREVIATIONS**

Add the following to this Sub-Clause:

AC or FC - (Fibre reinforced cement)

HDPE – High-density polyethylene

PSL 3 MATERIAL**PSL 3.1 GENERAL**

Add the following paragraph:

"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 Engineer, 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 3.3 CI PIPES, FITTINGS AND SPECIALS

Add the following to this Sub-Clause:

All cast iron pipes and fittings shall comply with the requirements of BS 2035 and unless otherwise specified, pressure class K9 and shall be of class D quality for straight pipes and of class CD quality for fittings. Materials used shall comply with the requirements of SANS 1034 grade 300 for "Grey Iron Castings".

PSL 3.7 Other types of pipes (Sub-Clause 3.7)**PSL 3.7.1 uPVC Water Pipes**

Water pipes that have to be supplied shall be Class 16 uPVC spigot and socket or similar approved pipes unless otherwise specified, complying with SANS 996-1-2010 and diameters as set out in the Schedule of Quantities.

PSL 3.7.2 Galvanised Pipes

Galvanised steel pipes shall be supplied for inside isolation valve and bulk water meter boxes (diameters as indicated), unless otherwise indicated on drawings. Materials to be in accordance of SANS 62.

PSL 3.7.3 PVC-O

PVC-O pipes as specified in specification drawings and BOQ shall be supplied. Pipe material to be in accordance with SANS 16422.

PSL 3.8.3 Flanges and Accessories

Add the following to this sub clause:

The dimensions and drilling of standard flanges shall comply with the requirements of SANS 1123 table 16 for pipes and fittings with a diameter of 150 mm and smaller and in accordance with table 10 for diameters exceeding 150 mm unless stated otherwise. Flanges shall be machined flat, i.e. without a raised joint face. Puddle flanges shall have the same dimensions as standard flanges but shall be undrilled.

Faces of flanges which will be in contact with jointing gaskets shall receive a protective coating similar to the corrosion protection specified for the internal surface of the pipes and fittings of such thickness and consistency as will not impair the air/gas/water tightness of the joint.

The jointing gaskets shall comply with the requirements of BS 3063 and shall be cut to the full width of the flange and holed for bolts.

PSL 3.9 CORROSION PROTECTION

PS L 3.9.2.1 Steel pipes of nominal bore up to 150 mm

Add the following to L 3.9.2.1:

The requirements of PS L 3.9.2.2 shall apply mutatis mutandis.

PS L 3.9.2.2 Steel pipes of nominal bore over 150 mm

Add the following to L 3.9.2.2:

All mild steel pipes under this contract shall be treated in accordance with L 3.9.2.2(b)(2) on the inside and the outside, with a polyamide-cured epoxy system similar and equal to Copon EP 2300 or Amercoat 385. The Contractor shall furnish the Engineer with certificates of tests in accordance with L 7.4.

Substitute "250 µm" in L 3.9.2.2(b)(2) with "300 µm".

PSL 3.9.5 Joints, Bolts, Nuts and Washers

Add the following to this sub clause:

Bolts and nuts for standard flanges shall comply with the requirements of SANS 1123 for a working pressure as specified for the flanges in conjunction with which they are to be used.

The jointing gaskets shall comply with the requirements of BS 3063 and shall be cut to the full width of the flange and holed bolts.

All other bolts and nuts shall comply with the requirements of SANS 136 and shall be of grade 4,6 steel. Washers shall be provided at each nut and shall be of the same material (or coating where applicable) to match the bolt and nut.

Bolts shall project not less than 3 mm and not more than 10 mm from the heads of the nuts after tightening.

Bolts to be installed above ground level directly above and under water shall all be of stainless steel grade 304. Bolts for flexible couplings and flanges for underground installation shall be hot-dip galvanized in accordance with the requirements of SANS 763. All other bolts shall be hot-dip galvanized in accordance with the requirements of SANS 763 and afterwards painted with the pipework and fittings as specified in Clause 3.9.

Suitable plastic sleeves and/or washers shall be used for protection against corrosion by metallic action.

PSL 3.10.1 Gate Valves

All gate valves shall be standard waterworks pattern comply with the requirements of SANS 664 and shall be suitable for a working pressure of 2.5 MPa (Class 25) and 1.6 (Class) as specified. All gate valves must be supplied with a square spindle nut, suitable to be used with a valve key. One valve key per nut size must be provided and will be included in the rate for valves.

Gate valves shall be clockwise closing. The direction for opening and closing shall be permanently displayed on the valves. Valves shall have non-rising spindles.

Compression shut-off valves with rubber protected gate and smooth finish without recess inside, may be used. The body and bonnet shall be epoxy coated internally and externally.

The spindle seal shall consist of at least two O-rings located in a corrosion resistant housing. A wiper ring to prevent ingress of dirt shall be provided. The spindle nut may be loose or fixed in the gate.

The valves shall be provided with a straight, unobstructed body passage without any pocket and the gate shall be completely clear of the waterway in the fully open position. The sealing and gate guide areas shall be designed to eliminate deposits in the valve body. The gate guide areas shall be designed to eliminate deposits in the valve body. The gate guides shall be of substantial design to support the gate until the point of closure.

All components shall be interchangeable between valves of one size. The rated working pressure shall be 16 or 25 bar as specified. The valve shall be capable of being opened and closed under an unbalanced pressure equal to the rated working pressure.

All flanged gate valves shall be drilled according to SANS 1123 Table 1600/3 or 2500/3.

Pipes shall not be tested against a closed valve. Thrust blocks for test sections shall be approved by the Engineer prior to testing of pipes.

PSL 3.10.2 Air Valve

Air valve for potable water shall have a pressure rating as specified on the drawings. All air valves shall be double action air valves of Vent-o-mat RBX, or similar approved.

The branch of the tee on the main pipe shall be minimum 0.67 (2/3) of the diameter of the main pipe.

Double-acting air valves shall have large as well as small orifices. The large orifice shall have a rubber bed, and the small orifice a brass bed on which the balls can shut. Double-acting air valves shall be flanged and supplied with flanged isolating valves. Air valves shall be designed into remain open until all the air has escaped and shall not close due to the speed of the escaping air.

The valve shall incorporate an integral "Anti-Shock" orifice mechanism which, during the pipeline filling operation and when a separated water column proceeds to re-join, shall operate automatically to limit transient pressure, rise induced by large orifice closure to a maximum of 2 x valve rated working pressure

PSL 3.10.4 Reflux Valves (Non-Return)

Reflux valves shall have a class 16 pressure rating as specified and, unless otherwise indicated, shall be flanged, drilled to SANS 1123, Table 1600/3 or 2500/3. The casing and flap shall be manufactured from close-grained cast iron with a brass face on the flap that close onto a corresponding brass plane in the casing.

The hinge pin shall swivel freely in bearings on both sides of the casing. Cone-shaped rubber-seal reflux valves with stainless steel may be used if approved by the Engineer.

PSL 3.10.5 Bulk Water Meter

Mechanical Flow Meters

New Mechanical bulk water meters shall be installed as shown on drawings.

Functional Requirement of Bulk Water Meters

DESCRIPTION	METER
1. Detail of pipeline	Varies
2. End connections	Flanged, SANS 1123 (Class 1600/3)
3. Permanent flow rate	Varies m ³ /h

4. Size of meter	Varies
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Technical Requirements for the Meters

The bulk water meters shall be combination cold water meters (type C3200 by ABB, Kent or similar as approved by Engineer) and flanged on both sides. A distance of 5 times the diameter of the pipe before and 3 times the diameter after the water meter must be kept free of any obstructions such as bends, reducers, etc. unless it is approved by the Supplier that above conditions is not required, to be approved by Engineer.

The flow reading shall be given on a dial face and totalizing shall occur by means of a roller counter and shall be accurate within $\pm 2\%$. The body shall be manufactured from spheroidal graphite iron.

The meter shall be manufactured in such a way that all moving parts can be removed and replaced from the top without removing the whole meter. Replacement parts should be freely available. Each water meter installation shall be supplied with a gate valve on the upstream side of the water meter. This gate valve shall be provided for under the relevant item in the schedule of quantities. The water meter shall have provision to log the records manually and electronically (Data Logging).

Installation of Meter

The meter shall be installed by a person approved by the supplier in order to validate the guarantee.

All accessories for the complete installation shall be supplied by the Contractor.

All metal work shall be painted according to specifications after the testing and completion of the installation. Each meter must be supplied with a blind flange. The meter mechanism may only be installed after the pipeline has been completely constructed, flushed and tested.

Electromagnetic Flow Meters

New Electromagnetic bulk water meters shall be installed as shown on drawings.

Technical Requirements for the Meters

The bulk water meters shall be of the magnetic flow type cold water meters (Siemens / Khrono or similar as approved by Engineer) and flanged on both sides. A distance of 5 times the diameter of the pipe before and 3 times the diameter after the water meter must be kept free of any obstructions such as bends, reducers, etc. unless it is approved by the Supplier that above conditions is not required, to be approved by Engineer.

The flow reading shall be given on a digital transmitter face indicating the instantaneous flow and totalized volume and shall be accurate within $\pm 2\%$.

The meter shall be manufactured in such a way that all moving parts can be removed and replaced from the top without removing the whole meter. Replacement parts should be freely available. Each water meter installation shall be supplied with a gate valve on the upstream side of the water meter. This gate valve shall be provided for under the relevant item in the schedule of quantities. The water meter shall have provision to log the records manually and electronically (Data Logging).

Installation of Meter

The meter shall be installed by a person approved by the supplier in order to validate the guarantee.

All accessories for the complete installation shall be supplied by the Contractor.

All metal work shall be painted according to specifications after the testing and completion of the installation.

 Contractor

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 Employer

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 Witness 2

The meter mechanism may only be installed after the pipeline has been completely constructed, flushed and tested.

PSL 3.10.6 Control Valves

Surge Anticipating Valves shall open to a high and low pre-set pressure regardless of fluctuating demand or varying upstream pressure.

Level control valves shall be hydraulically controlled by modulating vertical float, diaphragm actuated control valve controlling reservoir filling to maintain a constant water level regardless of fluctuating demand.

Main Valves: The main valve shall be a centre guided, diaphragm actuated globe valve of either oblique (Y) or angle pattern design. The body shall have a replaceable, raised, stainless steel seat ring. The valve shall have an unobstructed flow path, with no stem guides, bearings, or supporting ribs. The body and cover shall be ductile iron. All external bolts, nuts, and studs shall be Duplex® coated. All valve components shall be accessible and serviceable without removing the valve from the pipeline.

Actuators: The actuator assembly shall be double chambered with an inherent separating partition between the lower surface of the diaphragm and the main valve. The entire actuator assembly (seal disk to top cover) shall be removable from the valve as an integral unit.

The stainless-steel valve shaft shall be centre guided by a bearing in the separating partition. The replaceable radial seal disk shall include a resilient seal and shall be capable of accepting a V-Port Throttling Plug by bolting.

Control System (Surge Anticipation): The control system shall consist of two 2-Way adjustable, direct acting, pressure reducing pilot valves, needle valves, isolating cock valves and filters. All fittings shall be forged brass or stainless steel. The assembled valve shall be hydraulically tested and factory adjusted to customer requirements.

Control System (level control): The control system shall consist of a 4-way adjustable, last position bi-level vertical float and sensing line (extended rod to be balanced by counterweights installed on the lever system according to rod length and system pressure and to be installed in a stilling basin), needle valves, isolating cock valves, and strainers. All fittings shall be forged brass or stainless steel. The assembled valve shall be hydraulically tested and factory adjusted to customer requirements.

Quality Assurance: The valve manufacturer shall be certified according to the ISO 9001 Quality Assurance Standard. The main valve shall be certified as a complete drinking water valve according to NSF, WRAS, and other recognized standards.

PS L 3.11 Manholes and Surface Boxes

PS L 3.11.4 Step Irons

Substitute L 3.11.4 with the following:

Step irons shall consist of polypropylene coated 12 mm high tensile steel such as Calamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.

PS L 4 Plant

PS L 4.3 Testing

Add the following to L 4.3:

The Contractor must ensure that the test equipment is in good working order and that it is calibrated.

PSL 5 CONSTRUCTION**PSL 5.1.4 Covering Required**

The minimum covering measuring from the soffit of the pipe to the final prepared ground level shall not be less than 1000mm. Where applicable (Road Crossings etc.) the Engineer may order pipe encasing to protect shallow pipelines.

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".

PSL 5.11 MARKER BLOCKS

Marker blocks shall be manufactured and positioned as shown on the Drawings.

PSL 5.12 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 7.3.1.2 Test Pressure**

The test pressure shall be 1,5 times the maximum allowable working pressure for the class of pipe being tested.

PSL 8 MEASUREMENTS AND PAYMENT**PSL 8.2 SCHEDULED ITEMS****PS L 8.2.11 Anchor/Thrust Blocks and Pedestals**

Unit : m3

Substitute L 8.2.11 with the following:

The concrete shall be measured net volume to the specified width and depth in excess of the external volume of the pipe (i.e. the volume of the pipe will be deducted). The rate shall cover the cost of formwork and concrete.

Insert "concrete" before "and" in the last line of the last paragraph.

Add the following:

The tendered rates shall also include the wrapping of uPVC pipes and fittings with Densopol 80 or a similar approved material where the pipes and fittings come into contact with concrete."

PS LB : BEDDING (PIPES)**PS LB 1 SCOPE**

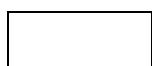
Add the following to LB 1.1:

This specification also covers the bedding required for electric cables.

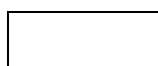
PS LB 3 MATERIALS**PS LB 3.1 SELECTED GRANULAR MATERIAL**

Substitute LB 3.1 with the following:

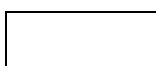
Selected granular material shall be an aggregate, sand or granular material, all of a non-cohesive nature and free from any organic material, of which the grading analysis shows



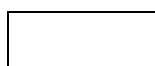
Contractor



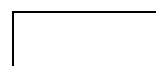
Witness 1



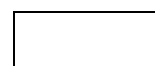
Witness 2



Employer



Witness 1



Witness 2

100 % passing a 13,2 mm sieve and not more than 5 % passing a 0,075 mm sieve. In very wet conditions and if so ordered by the Engineer, a non plastic crushed material with the specification as stated underneath should be used for bedding cradle.

a) Grading

Sieve size (mm)	% going through		
19,0	100		
13,2	84	-	100
9,5	70	-	84
4,75	45	-	65
2,36	29	-	47
1,18	19	-	33
0,600	13	-	25
0,300	10	-	18
0,150	6	-	13
0,075	4	-	10

b) Crusher value

The aggregate crushing value, calculated at minus 13,2 mm plus 0,5 mm fraction, may not exceed 29.

PS LB 3.2 Selected Fill Material

Substitute LB 3.2 with the following:

The requirements of PS LB 3.1 shall apply mutatis mutandis.

PS LB 3.3 BEDDING

Add the following to LB 3.3:

All pipes shall be classified as rigid pipes and shall be laid on a Class C bedding except water connections, which shall be classified as flexible pipes. Cable bedding is specified separately.

PS LB 3.4.1 Suitable Material Available From Trench Excavations

Substitute LB 3.4.1 with the following:

The provisos of PS D 3.3.1 shall apply mutatis mutandis.

PS LB 3.5 Bedding in Waterlogged Conditions

In waterlogged conditions, the Engineer may instruct the Contractor in writing to use a bedding cradle comprising single sized 6,7 mm crushed stone complying with SANS 1083.

PS LB 5 Construction

PS LB 5.1 General

PS LB 5.1.4 Compacting

Substitute "90 %" in LB 5.1.4 with "93 % (100 % for sand)".

PS LB 5.5 Placing and Bedding of Cables

Bedding and backfilling for cables shall be executed under this contract. Cables shall be installed by the mechanical contractor. Machine compaction shall not be carried out directly over cables, unless the cables are covered by at least 300 mm of fill material.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PS LB 8 Measurements and Payment

PS LB 8.1 Principles

PS LB 8.1.5 Disposal of Displaced Material

Add the following to LB 8.1.5:

The requirements of PS D 5.2.2.3 shall apply mutatis mutandis.

PS LB 8.2 Scheduled Items

Add the following to LB 8.2:

PS LB 8.2.6 Supply and Place Bedding Material for Cables, from

a) Trench excavations Unit : m³

b) Other excavations Unit : m³

c) Borrow pits Unit : m³

d) Commercial sources Unit : m³

Bedding and selected fill for cables shall not be measured separately.

No differentiation shall be made between trenches, bedding and backfilling for cables to be installed by the Contractor or the mechanical contractor.

The rate shall cover the cost of acquiring, regardless of the distance of bedding and selected fill material that complies with the requirement of PS LB 3.3, of delivering it to points alongside the trench spaced to suite the Contractor's methods of working, placing it in layers and compacting, as specified, and of disposing of displaced material. No additional payment will be made for co-operating with the mechanical contractor during the laying of cables and the cost related thereto shall be deemed to be included in the rate for supplying and placing the bedding material.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

B OHSA 1993 HEALTH AND SAFETY SPECIFICATION**PB 1 SCOPE**

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2003, and all other safety codes and specifications referred to in the said Construction Regulations.

In terms of the OHSA Agreement in Section C1.2.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHSA 1993 and the Construction Regulations 2003.

This safety specification and the Contractor's own Safety Plan as well as the Construction Regulations 2003, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risks associated with this project:

- Children and other uneducated people playing or entering dangerous work areas and the need to take pro-active steps to inform residents of the dangers and the adequately protect the works. The ISD consultant will assist the Contractor in communicating these issues to the target community however the responsibility for ensuring that adequate steps are taken in this regard remains that of the Contractor;
- Work at heights including the danger of falling from a height (eg whilst erecting steel portal) or heavy objects falling from above;
- Steps are to be taken to warn local residents of the dangers relating to the work especially in so far as children are concerned. The Employer will make the services of an ISD consultant available to the Contractor;
- All workmen are to be given proper training in the safe use of their tools, the tools used by others on the Contract and the dangers associated therewith;
- Dangers associated with the handling and lifting of heavy items; and
- The Contractor's plant shall be left in a safe and managed environment when not in use.

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessary covered in the above.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

PB 2 DEFINITIONS

For the purpose of this contract the following shall apply:

Employer where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as **client** as defined in the Construction Regulations 2003. **Employer** and **client** is therefore interchangeable and shall be read in the context of the relevant document.

- (a) **Contractor** wherever used in the contract documents and in this specification, shall have the same meaning as **Contractor** as defined in the General Conditions of Contract.

In this specification the terms **principal contractor** and **contractor** are replaced with **Contractor** and **subcontractor** respectively.

For the purpose of this contract the **Contractor** will, in terms of OHSA 1993, be the mandatory, without derogating from his status as an employer in his own right.

- (b) **Engineer** where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

PB 3 TENDERS

The Contractor shall submit the following with his tender:

- (a) A documented Health and Safety Plan as stipulated in Regulation 5 of the Construction Regulations. The Safety Plan must be based on the Construction Regulations 2003 and will be subject to approval by the Employer;
- (b) A declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2003;
- (c) A declaration to the effect that he made provision in this tender for the cost of the health and safety measures envisaged in the Construction Regulations; and
- (d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

PB 4 NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

After award of the contract, but before commencement of construction work, the Contractor shall, in terms of Regulation 3, notify the Provincial Director of the Department of Labour in writing if the following work is involved:

- (a) The demolition of structures and dismantling of fixed plant of height of 3,0m or more;
- (b) The use of explosives;
- (a) Construction work that will exceed 30 days or 300 person-days;
- (b) Excavation work deeper than 1,0m; or
- (e) Working at a height greater than 3,0m above ground or landings

The notification must be done in the form of the pro forma included on page T.53 (Forms to be completed by Successful Tenderer) of the tender document.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

PB 5 RISK ASSESSMENT

Before commencement of any construction work during the construction period, the Contractor shall have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 7 of the Construction Regulations 2003).

The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified.

The risk assessment shall be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be monitored and reviewed periodically by the Contractor.

PB 6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

PB 6.1 Health and Safety plan

The Contractor shall appoint his employees and any subcontractors to be employed on the contract, in writing, and he shall provide them with a copy of his documented Health and Safety Plan, or relevant sections thereof. The Contractor shall ensure that all subcontractors and employees are committed to the implementation of his Safety Plan.

PB 6.2 Health and safety induction training

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo a health and safety induction training course by a competent person before commencement of construction work.

No visitor or other person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety training pertaining to hazards prevalent on site.

The Contractor shall ensure that every employee on site shall at all times be in possession of proof of the health and safety induction training issued by a competent person prior to commencement of construction work.

PB 7 APPOINTMENT OF SAFETY PERSONNEL

PB 7.1 Construction Supervisor

The Contractor shall appoint a full-time Construction Supervisor with the duty of supervising the performance of the construction work.

He may also have to appoint one or more competent employees to assist the construction supervisor where justified by the scope and complexity of the works.

PB 7.2 Construction safety officer

Taking into consideration the size of the project and the hazards or dangers that can be expected, the Contractor shall appoint in writing a full-time or part-time **Construction Safety Officer** if so decided by the Inspector of the Department of Labour. The Safety Officer shall have the necessary competence and resources to perform his duties diligently.

Provision shall be made by the Contractor in his rates, to cover the cost of this dedicated construction safety officer appointed after award of the contract.

PB 7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 100 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

PB 7.4 Health and Safety Committee

In terms of Sections 17 and 18 of the Act (OHSA 1993) the Contractor (as employer), shall establish one or more health and safety committee(s) where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

PB 7.5 Competent persons

In accordance with the Construction Regulations the Contractor has to appoint in writing **competent persons** responsible for supervising construction work on each of the following work situations that may be expected on the site of the works.

- (a) Risk assessment and induction training as described in Regulation 7 of the Construction Regulations;
- (b) Fall protection as described in Regulation 8;
- (c) Formwork and support work as described in Regulation 10;
- (d) Excavation work as described in Regulation 11;
- (e) Demolition work as described in Regulation 12;
- (f) Scaffolding work as described in Regulation 14;
- (g) Suspended platform operations as described in Regulation 15;
- (h) Material hoists as described in Regulation 17;
- (i) Batch plant operations as described in Regulation 18;
- (j) Explosive powered tools as described in Regulation 19;
- (k) Cranes as described in Regulation 20;
- (l) Construction vehicle and mobile plant inspections on a daily basis by a

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

- (m) Competent person as described in Regulation 21(1);
- (n) Control of all temporary electrical installation on the construction site as described in Regulation 22;
- (o) Stacking and storage on construction sites as described in Regulation 26; and
- (p) Inspections of fire equipment as described in Regulation 27.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with **all** requirements of the Construction Regulations.

PB 8 RECORDS AND REGISTERS

In accordance with the Construction Regulations the Contractor is bound to keep records and registers related to health and safety on site for periodic inspection by inspectors, the Engineer, the Employer, trade union officials and subcontractors and employees. The following records and registers must be kept on site and shall be available for inspection at all times.

- (q) A copy of the OHS 1993 Construction Regulations 2003;
- (r) A copy of this Health and Safety Specification;
- (s) A copy of the Contractor's Health and Safety Plan (Regulation 4);
- (t) A copy of the Notification of Construction Work (Regulation 3);
- (u) A health and safety file in terms of Regulation 5(7) with inputs by the Construction Safety Officer (Regulation 6(7));
- (v) A copy of the risk assessment described in Regulation 7;
- (w) A full protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 8;
- (x) Drawings pertaining to the design of structures (Regulation 9(3)) and formwork and support work structures (Regulation 10(d)) must be kept on site;
- (y) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 11(3)(h));
- (z) A copy of the certificate of the system design for suspended platforms (Regulation 15(3));
- (aa) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 7(5));
- (bb) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 17(8));
- (cc) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 18(9));
- (dd) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 19(2));
- (ee) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 21(1)(j)).

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

PB 9**CONTRACTOR'S RESPONSIBILITIES**

For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2003.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) to confirm his status as mandatory (employer) for the contract under consideration.

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2003, and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

(a) Contractor's position in relation to the Employer (Client) (Regulation 4)

In accordance with Section 4 of the Regulations, the Contractor shall liaise closely with the Employer or the Engineer on behalf of the Employer, to ensure that all requirements of the Act and the Regulations are met and complied with.

(b) The Principal Contractor and Contractor (Regulation 5)

The Contractor is in terms of the definition in Regulation 2(b) the equivalent of Principle Contractor as defined in the Construction Regulations, and he shall comply with all the provisions of Regulation 5.

Any subcontractors employed by the Contractor must be appointed in writing, setting out the terms of the appointment in respect of health and safety. An independent subcontractor shall however provide and demonstrate to the Contractor a suitable, acceptable and sufficiently documented health and safety plan before commencement of the subcontract. In the absence of such a health and safety plan the subcontractor shall undertake in writing that he will comply with the Contractor's safety plan, the health and safety specifications of the Employer and the Construction Regulations 2003.

(c) Supervision of construction work (Regulation 6)

The Contractor shall appoint the safety and other personnel and employees as required in terms of Regulation 6 and as set out in paragraph 7 above. Appointment of those personnel and employees does not relieve the Contractor from any of the obligations under Regulation 6.

(d) Risk assessment (Regulation 7)

The Contractor shall have the risk assessment made as set out in paragraph 7 above before commencement of the work and it must be available on site for inspection at all times. The Contractor shall consult with the health and safety committee or health and safety representative(s) etc. on a regular basis to ensure that all employees, including subcontractors under his control, are informed and trained by a competent person regarding health hazards and related work procedures.

No subcontractor, employee or visitor shall be allowed to enter the site of works without prior health and safety induction training, all as specified in Regulation 7.

(e) Fall protection (Regulation 8)

Fall protection, if applicable to this contract shall comply in all respects with Regulation 8 of the Construction Regulations.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

(f) Structures (Regulation 9)

The Contractor will be liable for all claims arising from collapse or failure of structures if he failed to comply with all the specifications, project specifications and drawings related to the structures, unless it can be proved

That such collapse or failure can be attributed to faulty design or insufficient design standards on which the specifications and the drawings are based.

In addition the Contractor shall comply with all aspects of Regulation 9 of the Construction Regulations.

(g) Formwork and support work (Regulation 10)

The Contractor will be responsible for the adequate design of all formwork and support structures by a competent person.

All drawings pertaining to formwork shall be kept on site and all equipment and materials used in formwork, shall be carefully examined and checked for suitability by a competent person.

The provisions of Regulation 10 of the Construction Regulations shall be followed in every detail.

(h) Excavation work (Regulation 11)

It is essential that the Contractor shall follow the instructions and precautions in the Standard Specifications and Project Specifications as well as the provisions of the Construction Regulations to the letter as unsafe excavations can be a major hazard on any construction site. The Contractor shall therefore ensure that all excavation work is carried out under the supervision of a competent person, that inspections are carried out by a Professional Engineer or Technologist, and that all work is done in such a manner that no hazards are created by unsafe excavations and working conditions.

Supervision by a competent person will not relieve the Contractor from any of his duties and responsibilities under Regulation 11 of the Construction Regulations.

(i) Demolition work (Regulation 12)

Whenever demolition work is included in a contract, the Contractor shall comply with all the requirements of Regulation 12 of the Construction Regulations. The fact that a competent person has to be appointed by the Contractor does not relieve the Contractor from any of his responsibilities in respect of safety of demolition work.

(j) Tunneling (Regulation 13)

The Contractor shall comply with Regulation 13 wherever tunneling of any kind is involved.

(k) Scaffolding (Regulation 14)

The Contractor shall ensure that all the provisions of Regulation 14 of the Construction Regulations are complied with. [Note: Reference in the Regulations to "Section 44 of the Act" should read "Section 43 of the Act"].

(l) Suspended platforms (Regulation 15)

Wherever suspended platforms will be necessary on any contract, the Contractor shall ensure that copies of the system design issued by a Professional Engineer are submitted to the Engineer for inspection and approval. The Contractor shall appoint competent persons as supervisors and competent scaffold erectors, operators and inspectors and ensure that all work related to suspended platforms are done in accordance with Regulation 15 of the Construction Regulations.

(m) Boatswain's chain (Regulation 16)

Where boatswain's chains are required on the construction site, the Contractor shall comply with Regulation 16.

(n) Material Hoists (Regulation 17)

Wherever applicable, the Contractor shall comply with the provisions of Regulation 17 to the letter.

(o) Batch plants (Regulation 18)

Wherever applicable, the Contractor shall ensure that all lifting machines, lifting tackle, conveyors, etc. used in the operation of a batch plant shall comply with, and that all operators, supervisors and employees are strictly held to the provisions of Regulation 18. The Contractor shall ensure that the General Safety Regulations (Government Notice R1031 of 30 May 1986), the Driven Machinery Regulations (Government Notice R295 of 26/2/1988) and the Electrical Installation Regulations (Government Notice R2271 of 11/10/1995) are adhered to by all involved.

In terms of the Regulations, records of repairs and maintenance shall be kept on site.

(p) Explosive powered tools (Regulation 19)

The Contractor shall ensure that, wherever explosive-powered tools are required to be used, all safety provisions of Regulation 19 are complied with.

It is especially important that warning notices are displayed and that the issue and return of cartridges and spent cartridges be recorded in a register to be kept on site.

(q) Cranes (Regulation 20)

Wherever the use of tower cranes becomes necessary, the provisions of Regulation 20 shall be complied with.

(r) Construction vehicles and mobile plant (Regulation 21)

The Contractor shall ensure that all construction vehicles and plant are in good working condition and safe for use, and that they are used in accordance with their design and intended use. The vehicles and plant shall only be operated by workers or operators who have received appropriate training, all in accordance with all the requirements of Regulation 21.

All vehicles and plant must be inspected on a daily basis, prior to use, by a competent person and the findings must be recorded in a register to be kept on site.

(s) Electrical installation and machinery on construction sites (Regulation 22)

The Contractor shall comply with the Electrical Installation Regulations (Government Notice R2920 of 23 October 1992) and the Electrical Machinery Regulations (Government Notice R1953 of 12 August 1993). Before commencement of construction, the Contractor shall take adequate steps to ascertain the presence of, and guard against dangers and hazards due to electrical cables and apparatus under, over or on the site.

All temporary electrical installations on the site shall be under the control of a competent person, without relieving the Contractor of his responsibility for the health and safety of all workers and persons on site in terms of Regulation 22.

(t) Use of temporary storage of flammable liquids on construction (Regulation 23)

The Contractor shall comply with the provisions of the General Safety Regulations (Government Notice R1031 of 30 May 1986) and all the provisions of Regulation 23 of the Construction Regulations to ensure a safe and hazard-free environment to all workers and other persons on site.

(u) Water environments (Regulation 24)

Where construction work is done over or in close proximity to water, the provisions of Regulation 24 shall apply.

(v) Housekeeping on Construction sites (Regulation 25)

Housekeeping on all construction sites shall be in accordance with the provisions of the environment Regulations for workplaces (Government Notice R2281 of 16 October 1987) and all the provisions of Regulation 25 of the Construction Regulations.

(w) Stacking and storage on construction sites (Regulation 26)

The provisions for the stacking of articles contained in the General Safety Regulations (Government Notice R1031 of 30 May 1986) as well as all the provisions Regulation 26 of the Construction Regulations shall apply.

(x) Fire precautions on construction sites (Regulation 27)

The provisions of the Environmental Regulations for Workplaces (Government Notice R2281 of 16 October 1987) shall apply.

In addition the necessary precautions shall be taken to prevent the incidence of fires, to provide adequate and sufficient fire protection equipment, sirens, escape routes etc. all in accordance with Regulation 27 of the Construction Regulations.

(y) Construction welfare facilities (Regulation 28)

The Contractor shall comply with the construction site provisions as in the Facilities Regulations (Government Notice R1593 of 12 August 1988) and the provisions of Regulation 28 of the Construction Regulations.

(z) Non-compliance with the Construction Regulations 2003

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.

Should the Contractor fail to comply with the provisions of the Regulations 3 to 28 as listed in Regulation 30, he will be guilty of an offence and will be liable, upon conviction, to the fines or imprisonment as set out in Regulation 30.

The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PB 10 MEASUREMENT AND PAYMENT**PB 10.1 Principles**

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

(a) Safety Personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 7.1 to 7.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

(b) Records and Registers

The keeping of health and safety-related records and registers as described in 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.

PC ENVIRONMENTAL MANAGEMENT SPECIFICATIONS**PC 1 General**

In order to ensure that the construction works is carried out in an environmentally sensitive matter, strict compliance to the Environmental Management Plan (EMP) guidelines is required. The purpose of the EMP is to:

- Encourage good management practices through planning and commitment to environmental issues,
- Provide rational and practical environmental guidelines to:
 - i. Minimise disturbance of the natural environment,
 - ii. Prevent pollution of land, air and water,
 - iii. Prevent soil erosion and facilitate re-vegetation.
- Adopt the best practicable means available to prevent or minimise adverse environmental impact,
- Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of wastes,
- Train employees and contractors with regard to environmental obligations.

PC 2 Training and Induction of Employees

- The Contractor has a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes sub-contractors, casual labour, etc.). The CMP shall be part of the terms of reference for all contractors, sub-contractors and suppliers.

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

PC 3 Complaints Register and Environmental Incident Book

Any complaints received by the project team from the public will be recorded. The complaint should be brought to the attention of the site manager, who will respond.

The following information must be recorded:

- Time, date and nature of the complaint,
- Type of communication (telephone, letter etc),
- Name, contact address and telephone number of the complainant,
- Response and investigation undertaken and
- Actions taken and by whom.

All complaints received will be investigated and a response given to the complainant within 14 days.

All environmental incidents occurring on the site will be recorded. The following information will be provided:

- Time, date, location and nature of the incident,
- Actions taken and by whom.

PC 4 Site Cleanliness and Neatness

- Location of a construction camp is to be approved by the Engineer and is to be restored to its previous condition after completion of construction.
- The construction camp should preferably be fenced with a 1.8m bonnox fence or similar approved.
- All materials, equipment, plant and vehicles must be stored within the construction camp.

A dedicated area must be made available for construction staff to change and store their personal belongings and linings of the "Single Wire" type.

PC 5 Access

Access to existing roads, schools, buildings, shops and residential properties must not be impeded during construction.

Access roads utilised by the Contractor must be maintained in good condition.

PC 6 Borrow Pits

- Mining authorisations (permits) for borrow pits must be obtained from the Department of Minerals and Energy (DME) in consultation with the Department of Water Affairs and Forestry (DWAF).
- Spoil dumps resulting from borrow pits must not interfere with any natural surface drainage.
- Borrow pits must be rehabilitated after use in accordance with the requirements of DME and DWAF.

PC 7 Dust Control / Air Quality

- Dust suppression measures must be implemented during construction by ensuring that all surfaces prone to dust generation are kept damp. (e.g. use of water tanker)
- Ensure that vehicles and equipment are in good working conditions and that emissions are not excessive.
- Ensure that vehicles and equipment are in good working conditions and that emissions are not excessive.

- Special care must be taken in areas where the route passes close to schools and residential areas.
- The speed of construction vehicles must be reduced.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PC 8 Fauna

- Contractor staff may not chase, catch or kill animals encountered during construction.

PC 9 Fire Prevention and Control

- Smoking is prohibited in the vicinity of flammable substances.
- The contractor must ensure that fire-fighting equipment is available on site, particularly where flammable substances are being stored or used, and that construction staff are aware of where it is kept and how it is operated.
- Fires started for comfort (warmth) are prohibited, due to the risk of veld fires and risk to adjacent property owner's lands.

PC 10 Grave Sites

- Gravesites in close proximity to the road must not be disturbed during construction.

PC 11 Materials Handling and Spills Management

- Any hazardous materials to be used during construction (e.g. lime, fuel, paint, etc) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel/petrol tanks) must be placed on an impermeable surface and surrounded by a bund wall, in order to ensure that accidental spillage does not pollute the environment.
- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g. smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals
- Any spill of potentially hazardous materials must be cleaned up immediately (Potentially hazardous materials on site include paint, oil, grease, fuel, turpentine, etc).
- The area of contaminated soil or spill must be deposited into the hazardous waste container(s).
- The contractor should keep Peat Sorb or a similar absorbent on site to clean up any spills. The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

PC 12 Noise

- Noise generating activities must be restricted to between 07h00 and 17h00 Monday to Friday, unless otherwise approved by the appropriate competent person in consultation with adjacent landowners/affected persons.
- All equipment, vehicles and machinery must be in good working condition and be equipped with sound mufflers if necessary.
- Construction staff must be trained and made aware of not creating unnecessary noise such as hooting and shouting.

PC 13 Pollution Control

- Soil and water pollution through usage of fuel, oil, paint, bitumen or other hazardous substances must be avoided.
- All construction vehicles are to be maintained in good working order so as to prevent soil or water pollution from oil, fuel or other leaks, and to reduce noise pollution.

PC 14 Rivers and Streams

- During construction of bridge structures, there must be no obstruction of the water flow of rivers and streams.
- Excavated material must not be stockpiled on or near riverbanks, in order to prevent sedimentation occurring.
- Erosion control measures must be employed both during and after construction.
- No impediments to natural surface water flow, other than approved erosion control measures, must occur.

PC 15 Safety

- Safety measures, such as detour signs, must be implemented during construction to ensure the safety of workers, pedestrians and drivers/passengers in vehicles in the vicinity of construction work.
- Special care must be taken in the vicinity of schools to ensure the safety of children wishing to cross the road under construction.
- The relevant signage (e.g. speed control signs) must be erected alongside the road during the operation phase in order to control traffic.
- Accommodation must be made for pedestrian pathways alongside the road during the construction and operation phases.

PC 16 Soil Management

- Stormwater drainage pipes must be installed alongside the road in all areas susceptible to soil erosion.
- Erosion should be minimized by the construction of meadow drains and the planting of indigenous vegetation on the side slopes and drains to reduce flow velocity of stormwater.
- Spoil from cuts may be used in existing erosion galleys.
- Stone pitching and gabions should be constructed at pipe culvert outlets.

Accidental spills of contaminants onto the ground e.g. oil, concrete, fuel and chemicals should be removed together with the contaminated soil.

- If necessary an absorbent such as Peat Sorb should be used the aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and re-fuelling of vehicles must only be carried out at construction camp.

PC 17 Worker Conduct

Code of Conduct for Construction Personnel:

- Do not leave the construction site untidy and strewn with rubbish which will attract animal pests.
- Do not set fires.
- Do not cause any unnecessary, disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
- Do not drive a construction-related vehicle under the influence of alcohol.
- Do not exceed the national speed limits on public roads or exceed the recommended speed limits on the site.
- Do not drive a vehicle which is generating excessive noise or gaseous pollution (noisy vehicles must be reported and repaired as soon as possible).
- Do not litter along the roadsides, including both the public and private roads.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Do not pollute any water bodies (whether flowing or not).
- No member of the construction team is allowed to enter the areas outside the construction site.

PC 18 Traffic Disturbances and Diversions

- Any traffic diversions must be undertaken with the approval of all relevant authorities and in accordance with all relevant legislation.
- Wherever possible, traffic diversion must only take place on existing disturbed areas and remain within the existing road reserve.
- Traffic diversion routes must be rehabilitated after use.

PC 19 Vegetation

- Only vegetation falling directly on the route must be removed where necessary.
- Alien vegetation within the road reserve must be eradicated, and management measures must be implemented for future control of these species.
- Vegetation that has been removed from large areas (e.g. on traffic diversion routes) during construction must be replaced with indigenous vegetation after construction has been completed.

PC 20 Waste Management

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The contractor is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, paint, empty lime bags, contaminated wash water, etc) must be stored in leak proof containers and disposed of at a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.
- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimize the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Project Manager.
- Each working area must be cleared of litter and building waste (e.g. rubble, wood, concrete packets etc) on completion of the day's work.

Any spill around the container(s) should be treated as per Section C11 and C16.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

THE CONTRACT
PART C3: SCOPE OF WORKS

Particular Specifications

Particular Specifications

**Occupational Health and Safety Specification for
Principal Contractors and Contractors for Construction
Work**

Contractor

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THE CONTRACT

PART C3: SCOPE OF WORKS

Particular Specifications

PORTION A

Occupational Health and Safety Specification for Principal Contractors and Contractors for Construction Work

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Witness 2

Section	Title	
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Appendices

Contractor

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Employer

Witness 1

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- Annexure:
- A Notification of Construction Work
 - B Appointment Form [Example]
 - C Recording and Investigation of Incidents
 - D Agreement with Mandatories

1. Introduction

In terms of Construction Regulation 7 this document describes the health and safety specifications required for any principal contractor whom is making a bid for or whom has been appointed to perform construction work on behalf of the client. [Ref. CR 5(1)(a)]

- A principal contractor is required to compile their Health and Safety Plans based on these specifications detailed and referred to, in this document.
- In other words, the Health and Safety Plan must specify how the Principal Contractor will control and manage all health and safety aspects on the construction site.
- The Health and Safety Plan must be relevant to the construction work being carried out and if possible refer to the numbering system of this document.
- A principal contractor is to ensure that these specifications are communicated to all contractors under his/her agreement.

2.Reference Documents

The following documents are referred to:

- 2.1.** Occupational Health and Safety Act, (Act No. 85 of 1993) - [OHSA] and Regulations.
- a. The Construction Regulations 2014
- b. Civil Drawings as below:

The following tender drawings (Working Drawings – Not for Construction) are bound with this document for use as a base of planning the project:

2.3 Compensation for Occupational Injury and Diseases Act – [COIDA]

3. Scope of Work

Detailed Description of work to be carried out

- Earthworks
- Excavations
- Work @ Height
- Pressure Testing
- Vehicle & Mobile Plant
- Concrete Works
- Support and Formwork
- Structures
- Electrical Works

List of plant, machinery and tools to be used during the project:

- Construction & Mobile Plants
- Hand Tools
- Portable Electrical Tools
- Ladders
- Further Information to be provided by contractor

List of Major hazards identified in the design risk assessments:

- Working at Heights
- Earth Works & Excavation
- Construction vehicles and Mobile plants
- Pouring Concrete
- Use of Power Tool
- Structures / False Work
- Shuttering
- Steel work

4. Definitions

The following definitions apply. (Abbreviations and legal references in brackets where applicable):

Construction Work

Means any work in connection with –

- a) The erection, maintenance, alteration, renovation, repair, demolition or dismantling of or an addition to a building or any similar structure;
- b) The installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- c) The construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- d) The moving of earth, clearing of land or making of an excavation or work on any similar type of work.

Hazard Identification, Risk Assessment and Risk Control (HIRA)

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

Site

Means the area in the possession of the Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Contractor, and approved for such use by the client.

Hazard

Means a source of or exposure to danger (source which may cause injury or damage to persons, or property)

Risk

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

Construction Supervisor [CR 8(7)]

Means a full time, competent employee appointed in writing by the Contractor to supervise construction work. The appointment, as required by the OHSA, shall stipulate health and safety responsibilities, area of responsibility and the proposed duration of the project.

Construction Plant

Encompasses all types of plant including but not limiting to, cranes, piling frames, boring machines, and excavators, dewatering equipment and road vehicles with or without lifting equipment

Contractor

Means an employer who performs construction work and includes principal contractors and sub- contractors.

Health and Safety Plan (HSP)

Means a documented plan, which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified.

The plan shall be applied from the date of commencement of and for the duration of construction work.

Health and Safety File (HSF)

The file holding all documentation and records on health and safety for the project, which shall be available at all, times for evaluation, and a copy of which will be forwarded to the client upon completion of the project.

Disabling Injury Frequency Rate (DIFR)

The number of disabling injuries (DI"s) multiplied by a constant (man hours relative to period worked) divided by total man hours worked over a rolling period (usually 12 months, but can be less)

Disabling Injury Severity Rate (DISR)

The number of days lost due to DI"s multiplied by a constant (man hours relative to period worked) divided by total man hours worked over a rolling period (usually 12 months, but can be less)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Confined Space

An enclosed, restricted or limited space in which, because of its construction, location or contents, or any work carried on therein, a hazardous substance may accumulate or an oxygen deficient atmosphere may occur, and includes any chamber, tunnel, pipe, pit, sewer, container, valve, machinery or object in which a dangerous liquid or dangerous concentration of gas, vapour, dust or fumes may be present

5. Responsibilities of Contractors for Construction Work**5.1. Notification of Intention to Commence with Construction Work**

The principal contractor shall notify the Provincial Director of the Department of Labour before any work commences, in accordance with the following requirements:

- The demolition of a structure exceeding a height of 3 meters; or
- The use of explosives to perform construction work; or
- The dismantling of fixed plant at a height greater than 3 meters; or
- The work exceeds 30 days or will involve more than 300 person days of construction work; and
- Includes excavation work deeper than 1 meter; or
- Includes working at a height greater than 3 meters above ground or a landing.

The notification must be completed in the **Annexure A** form and a copy of the proof of fax or delivery to the Department of Labour to be kept in the Health and Safety File for inspection by an inspector, the client or an employee.

5.2. Principal Contractor's Responsibilities

- **Compile a Health and Safety Plan**
- **Ensure co-operation between all contractors to comply to the Act and the Regulations 2014**
- **Ensure compliance to the Act in terms of:**
 - a) Provide relevant sections of these specifications to contractors as required
 - b) Appoint each contractor in (a) above in writing. Only contractors who have the necessary competencies and resources may be appointed
 - c) Ensure each contractor's Health and Safety Plan is implemented and maintained on site
 - d) Stop any contractor from work which is not in accordance with Health and Safety Plan's or which pose a threat to health and safety of persons
 - e) Sufficient information is provided to contractors where there are changes to design and construction
 - f) Ensure every contractor is registered and in good standing with the Compensation Commissioner.
 - g) Ensure potential contractors have made provision for the cost of health and safety measures. Negotiate and approve the Health and Safety Plan of each contractor.
 - All Health and Safety Files including the principal contractor's to be available on site.
 - A consolidated Health and Safety File to be handed over to the client on completion of construction including records of drawings, designs etc.

Contractor

Witness 1

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Employer

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Witness 2

- Health and Safety File to include updated list of all contractors, the agreements and their type of work.

5.3 Contractor's Responsibilities (including sub-contractors)

- Provide their Health and Safety Plan to the principal contractor.
- Where a contractor appoints another contractor (sub-contractor) it is the responsibility of that contractor to apply 4.2 above as if he were the principal contractor.
- No contractor to appoint another contractor (sub-contractor) unless the latter has the necessary competency and resources to perform the required work.
- To provide any information which affects the health and safety of any persons at work to the principal contractor.

5.4 Legal Appointments

The principal contractor shall ensure copies of the appointment letters of all responsible persons appointed on site will be kept in the Health and Safety File. All legal appointments shall be conducted in accordance with the requirements set out in the OHSA and as per this specification. The tables below set out the appointment protocols for CR and OHSACT. It should be noted that these represent a complete list and not all these appointments may be required:

Construction Regulations

Reg.	Appointment	Appointee	Competency Required
CR 7 (1)	Principal Contractor	16(2) for the company	Curriculum Vitae on file and Supervisor training (legal liability)
CR 5 (3b)	Contractor	Competent person	Proof of induction
CR 8 (1)	Contracts Manager	Competent Person	Certificate & CV
CR 8 (2)	Assistant Construction Manager	Competent Person	Certificate & CV
CR 8 (7)	Construction Supervisor	Competent person	Curriculum Vitae on file and Supervisor training (legal liability)
CR 8 (8)	Assistant Construction Supervisor	Competent person	Curriculum Vitae on file and Supervisor training (legal liability)
CR 8 (5)	Safety Officer	Competent person	Curriculum Vitae on file and SAMTRAC and registration with Professional Body
CR 9 (1)	Risk Assessor	Competent person	Curriculum Vitae on file and HIRA or similar
CR 10 (1)	Fall Protection Planner	Competent person	Curriculum Vitae on file and Fall Plan Developer
CR 12 (1)	Temporal Works	Competent person	Curriculum Vitae
CR 13 (1)	Excavation Work Inspector	Competent person	Curriculum Vitae on file and Supervisor training (legal liability)
CR 23 (1j)	Construction Vehicle Inspector	Competent person	
CR 23 (1d)	Construction Vehicle Operator	Competent person	Certificate of Competency for relevant construction vehicle
CR 28 (a)	Stacking and Storage Supervisor	Competent person	
CR 29 (h)	Fire Equipment Inspector	Competent person	
CR 29 (i)	Fire Team Members	Competent person	Fire Fighting Certificate

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

OHS Act

Reg.	Appointment	Appointee	Competency Required
OHSA 17 (1)	Health & Safety Rep	Nominated employee	Health and Safety Representative Certificate
OHSA 19 (1)	Health & Safety Committee Member	Management representative	Curriculum Vitae on file and Supervisor training (legal liability) and IRCON or similar
GAR 9 (2)	Incident Investigator	Competent person	Curriculum Vitae on file and RCAT or similar
GSR 3 (4)	First Aider	Competent person	First Aid Certificate
GSR 13	Ladder Inspector	Competent person	In house Training
DMR 18 (11)	Lifting Equipment Operator	Competent person	Code 1, 2, 3, 32, 33, 35 or 46
DMR 18 (5)	Lifting Equipment Inspector	Competent person	
	Hand Tools Inspector	Competent person	In house Training
	Pneumatic Tools Inspector	Competent person	In house Training
EMR 9(4)	Portable Electrical Equipment Inspector	Competent person	

The responsibilities of each appointment are detailed in the relevant form, which are signed by both the authorised person and the appointee and kept in the Health and Safety file. An example of an appointment form for a Construction Supervisor can be found under

Annexure B.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

5. Documentation and Procedures

All required documentation for the construction work, shall be kept in the Health and Safety File, which shall be available on site. The Construction Supervisor shall be responsible for the file on site and the Project Manager shall ensure that documentation is valid and up to date.

It is required that the documentation is filed in an orderly fashion for easy access. The following sections are suggested:

1. Company insurances and information

- Letter of good standing
- Public liability
- Emergency contact numbers
- Notification of construction work
- Company organogram
- Health and Safety policy
- HIV & Aids Policy
- Drug & Alcohol policy
- Personal Protective Equipment Policy

2. Health and safety plan and specifications

3. Appointments

4. Inspection registers and checklists

5. Risk assessments

- Risk matrix
- Risk assessments
- Method statements
- Record of internal training
- Review of risk assessments

6. Safe work procedures

- Safe Working procedure training
- Planned task observations
- Emergency procedures
- Fall protection plan
- Permits to work

7. Incident management

- WCL2 forms
- Annexure 1 forms
- Injury on duty reporting and investigation procedure
- Resumption reports

8. Training records and medical fitness certificates

- Certificates of formal training
- Induction training records
- Medical fitness certificates for all employees

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

9. Audits

- Client's Health and Safety audits
- Site inspection reports
- Site safety instructions

10. Contractor control

- List of contractor's and type of work
- Contractor appointments
- 37 (2) agreements

11. Health and safety communication

- Toolbox talks to be held weekly
- Health and Safety notice board
- Schedule D
- Memo's to employees

12. OHS Act and Regulations 2014

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

6. Application of COIDA and OHSA to Construction Work

6.1 Compensation of Occupational Injuries and Diseases Act, Act No. 130 of 1993 (COIDA)

Every contractor shall provide proof of registration and an updated letter of good standing with the Compensation Commissioner or a licensed compensation insurer.

6.2 Occupational Health and Safety Policy

- Every contractor's Occupational Health and Safety Policy statement should be available for scrutiny and as evidence of their commitment their employees' occupational health and safety and the environment.
- Every contractor's Occupational Health and Safety Policy statement is to be signed off by the Chief Executive Officer.
- Proof of communication to all is to be available on requests.

6.3 Health and Safety Training and Competency

Training of personnel is a necessity and a legal requirement when required. A record of all training shall be kept and provided on request.

6.3.1 Induction Training

- The principal contractor shall be responsible to co-ordinate all inductions on site to ensure that no contractor allows or permits any employee/s or person/s to enter any construction site , unless such employee, visitor or person has undergone induction training which is pertinent to the hazards prevalent on the site at the time of entry.
- Every employee, visitor or person on site shall be in possession of proof of the Health and Safety induction.
- Records of attendance shall be kept on the Health and Safety file for the duration of the contract.

6.3.2 Awareness Training

- Awareness training to be carried out weekly in the form of Toolbox Talks on relevant topics e.g. manual lifting, wearing PPE, safe use of portable electric tools etc.
- All attendees are to be made to sign an attendance register and such register is to be held on the Health and Safety file for the duration of the project.

6.3.3 Competency and CV's

- All supervisors and where applicable, valid copies of certificates of competency of appointed personnel to be provided and kept in the Health and Safety file. (Reference can be made to pages 10, 11 and 12 of this document).
- Other training requirements such as those identified through the High-risk Assessment process, to be completed and proof of that training also kept in the Health and Safety File.
- Where competency is achieved through experience, a brief CV will be required.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

6.3.4 Specific OH&S training

- Valid certificates of training from registered service providers preferably accredited by the appropriate SETA are required for First Aiders, H&S reps, Fire Fighters etc.

6.3.5 Medical Fitness

- All work in elevated positions [tower crane operators, workers on elevated structures requiring fall protection, suspended platform workers and;
- Operators of construction vehicles and mobile plant require certificates of physical and psychological fitness carried out by an occupational medical practitioner.
- All employees who are employed in a construction site must have medical Fitness done by an Occupational Health & safety Practitioner before commencement of work.
- No employee will be allowed to perform any duties except deemed to be medical fit to do so.

6.4 Health and Safety Reps [OHSA 17 and 18]

- Where 20 or more employees are employed at a workplace, one health and safety representative shall be appointed in writing.
- The Principal Contractor shall ensure that a minimum of one health and safety representative is appointed for ratio of each 50 employees employed.
- Each health and safety representative shall be in possession of a certificate of competency.
- The employer is to ensure that a delegation process has been followed and recorded in term of the requirement of General Administrative Regulation 6
- Monthly checks are to be conducted by the appointed representatives in their designated areas and all finding are to be recorded in a register. Such register is to be held on the health and safety file for the duration of the project.
- Health and Safety Representative are to investigate any staff complaints and ensure that documented feedback is forwarded to the respective managers.

6.5 Health and Safety Committee [OHSA 19 and 20]

- Where two or more representatives have been appointed the employer shall ensure that a health and safety committee is formed.
- The number of management representatives shall not outweigh the number of representatives.
- Meetings shall be held at a minimum of three monthly.
- Minutes of such meeting shall be kept and place on the health and safety file for the duration of the project.
- A register of attendance is to be kept of attendees at such meetings; such a register is to be attached to the minutes.

6.6 General Record Keeping

All contractors shall ensure that all Health and Safety records, required by OHSA and Regulations are kept up to date for reference purposes and auditing.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

6.6.1 Inspections

- All contractors shall keep all records of inspections undertaken during the duration of the project.
- An example of the total list of minimum legally required inspections can be found under **Annexure C**.
- An assessment list must be draft of what inspections are required and their frequency.
- The principal contractor is responsible to ensure compliance to this requirement by all contractors.

6.6.2 Audits

- The client's agent shall carry out regular audits on the principal contractor at least once per month.
- Principal contractors shall be responsible for carrying out regular audits on their contractors at least once per month
- The Principal contractor is to draft a table which reflects contractors company name, description of work, dates of audits and scores achieved.
- The results shall be tabled for action and discussed at the Health and Safety Committee meetings or the site meetings, as appropriate.

6.7 Incident management and emergency plans

- The principal contractor shall create an Emergency Plan for the construction site.
- The plan is to be clearly displayed in conspicuous locations around the site.
- The plan shall be clearly laid out for all types of emergencies including responsibilities, evacuation routes, siren, emergency no."s etc.
- The plan shall be fully explained to all personnel during the induction training.
- All contractors will become completely familiar with the requirements of the plan and will participate in any evacuation drills that may take place

6.7.1 First Aid [GSR 3]

- Where an employer has 5 or more employees in his employment, he/she shall ensure that at least one first aid box is made available in the workplace.
- Such first aid box is to be stocked covering the 18 items addressed in the Annexure attached to the General Safety Regulations as a minimum requirement.
- Where an employer has 10 employees or more in his/her employment, he/she shall ensure the at least one person readily available at the workplace whom is in possession of a valid first aid certificate.
- Every employer shall ensure that a minimum of one trained persons is made available for every 50 person in the workplace.
- All identified hazardous chemical are to have a material safety data sheet which is to be kept for first aid emergencies in the first aid box.
- All special needs addressed in the Material Safety Data Sheets are to be made available in addition to stock required in the Annexure.

6.7.2 Incidents and Injuries

Incidents

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- A record of all incidents which have occurred shall be opened and held open until the handover of the project.
- All incidents such as near misses, unsafe situations, first aid injuries, etc shall be investigated fully and the result of such investigation shared with the Health and Safety Committee.
- The employer shall ensure that an investigation team is formulated which will consist of management representative, safety representative and an employee representative as a minimum requirement.
- All incidents that occur shall be filtered into a statistic format which is to determine the sites Incident Rate. Such rate is to be shared with all employees and all contractors on a monthly basis.
- Exclusion of incidents in record keeping shall result in fines being issued.

Injuries

- A first aid register is to be held in the first aid box as to record all first aid injuries that may occur.
- An injury on duty procedure is to be created which detail the process of treating an injured and methodology which may be use in order to ensure their safe arrival at a local hospital.
- All injuries are to be recorded in an Annexure 1

6.7.3 Accident and Incident Reporting and Investigation

Should an incident or accident investigation need to be conducted, the appointed incident investigator (competent person with a valid certificate of training on file) shall conduct the said investigation. The procedure to be followed will be in accordance with Annexure 1 of GAR 9 – “Recording and Investigation of incidents”. A copy of this annexure can be found under **Annexure D** in this document.

Particular attention is also drawn to OHSA 24, the reporting of certain incidents to an inspector of the Department of Labour.

The principal contractor shall ensure that the investigations are kept for record purposes and he shall ensure that the outcome of the investigation is communicated to all affected parties as required i.e. the client and contractors.

The client reserves the right to participate in all investigations into accidents or incidents and to conduct their own investigation if required.

6.8 Contractors and suppliers [OHSA 37(2)]

The client shall enter into an “Agreement with Mandatory” in terms of Section 37(2) of the Occupational Health and Safety Act, 85 of 1993, with all appointed principal contractors, a copy of which can be found under **Annexure B**. Likewise all principal contractors shall enter into a similar agreement with all contractors, sub-contracted to them for any period of the contract. Please note that if contractors hire any construction vehicles or mobile plant, the companies from which the equipment is hired must provide any maintenance and test certification as required. In addition, if operators are hired with the equipment, proof of competence and medical certification must be provided.

The principal contractor shall ensure that all contractors are issued with this safety specification where reasonably practicable including any contractor pack for the project, should they not be contained in the safety specification.

The principal contractor shall assist and ensure that contractors engaged comply with all of these requirements and adhere to the requirements set out in the OHSA. Contractors will be stopped from working in the event of unsafe conditions and activities being observed.

All contractors shall be subject to the requirements specified in the HSP and will be issued with a copy of the plan. If the contractor is not able to comply with the requirements set out in the plan, he shall not be appointed as contractor.

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

6.9 Personal Protective Equipment, Intoxication, Signage and Access Control [GSR 2]**6.9.1 Personal Protective Equipment (PPE) [GSR 2]**

- The principal contractor shall through the Risk Assessment process identify all specific PPE needs per each activity. Such identified PPE shall be captured in the form of a PPE matrix and displayed in the site office. Such matrix is to make reference to the task and the specific PPE requirements required to do the task.
- All Contractors will be responsible for the issuing of the required PPE as identified by the matrix.
- Should PPE be lost or stolen, then the employee will be issued with new PPE.
- No person/s shall be permitted entry into the site unless they are properly equipped with the required PPE as identified in the matrix.
- Should PPE be worn out or damaged, the user shall return the worn or damaged PPE and will be issued with a replacement.
- Training in the use, care and limitation of such PPE is to be provided and proof of such training is to be held in the health and safety file.
- Visitors shall be informed of PPE requirements **prior** to their visit so that they may make necessary arrangements to ensure their arrival well equipped with the correct PPE.

6.9.2 Intoxication [GSR 2A]

The principal contractor shall be responsible to ensure that no persons may enter or remain at the construction site if under or apparently under the influence of intoxicating liquor or drugs. It may become necessary from time to time for contractors and their workers could be required to do a breathalyser test before entering the site.

6.9.3 Display of signs [GSR 2B]

The principal contractor should make use of signage to assist in enforcing compliance to any requirement specified in this document or as required by law. Standard symbolic signs are acceptable for conveying these requirements where applicable.

6.9.4 Access control [GSR 2C]

The principal contractor shall be responsible to ensure control of access to all persons entering the construction site. The reasons for this are as follows:

- The principal contractor is the „employer“ on the site and for all intents and purposes is responsible for section 8 of OHSA for employees and contractors and section 9 for any other person on site such as visitors and inspectors
- All persons entering the site must undergo induction training to inform them of the hazards present on the site. This includes contractors, visitors, inspectors etc
- The construction supervisor will be aware of who is on site and their function
- The construction supervisor will be able to control tasks that may impact on other work being carried out on the site by a permit to work system
- The number of people and their purpose on the site must be known in case of emergency and evacuation security reasons

The principal contractor shall post conspicuous notices at the site informing all those entering the site of these requirements

6.10 Ladders [GSR 13A]

The following requirements shall be complied with regarding Ladders and Ladder work:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- A competent person shall be identified and appointed as the ladder inspector.
- Where aluminium ladders cannot be used, then wooden ladders shall be straight grained, unpainted to allow for proper inspection of the grain for cracking.
- Ladders shall be secured at the top and chocked at the base to prevent slipping.
- Where chocking of the base is not possible, then the user shall ensure that the ladder is held in position by another employee when ascending the ladder.
- No person is permitted to work longer than 15 minutes on a ladder. Should work take longer than 15 minutes to complete then alternative means of elevation is to be used.
- Ladders shall be inspected a minimum once per month and results recorded in a register by the person appointed as the ladder inspector.
- Proper storage shall be provided for all ladders when not in use.

6.11 Portable Electrical Tools [EMR 9]

This regulation shall be complied to as a minimum requirement. Regular inspections of all Portable Electrical Tools such as drills, angle grinders etc, shall be carried out. In particular:

- Only trained personnel shall operate such equipment.
- The Construction Supervisor shall ensure operation of the equipment is in accordance the HRA requirements and Safe Working Procedure (SWP).
- All users shall undergo regular awareness training (toolbox talk) to ensure compliance.
- The Construction Supervisor shall ensure the required PPE is used.

6.12 Permit to work

The permit holder shall be responsible to ensure that:

- All work being carried out on the site has been approved through the necessary project control system
- All work is being done in compliance with the issued permits.
- Permits required from third parties such as town councils for utility and water services are in place
- A permit system is operational so that work consisting of many tasks related to the construction on site, can be carried out without endangering the health and safety of personnel on site, neighbours and the public surrounding the site and/or causing damage to property.
- In particular, attention is drawn to GSR 9, which details the requirements for welding, flame cutting, soldering and similar operations (hot work)

6.13 Work in confined spaces

The permit holder shall be responsible to ensure that:

- All work being carried out on the site has been approved the necessary project control system
- All work is being done in compliance with the issued permits.
- Permits required from third parties such as town councils for utility and water services are in place

7. Application of the Construction Regulations [CR]

[Please note: this is not the complete list. Item 7.1 is compulsory and the rest are applicable if relevant to the work being carried out]

7.1 Hazard Identification, Risk Assessment and Risk Control (HIRA) [CR 9]

- The contractor shall prior to the commencement of any construction work perform a HIRA exercise, which will form part of the HSP for the project.

- A copy of the HIRA shall be made available for viewing to the client's agent and shall be kept in the Health and Safety File.
- The contractor shall ensure that the outcome of all HIRA exercises will be conveyed to all relevant employees with respect to the hazards and the related control measures before any work commences.

The control of several of these risks may be specified in the OHSA does not mean that the HIRA exercise does not have to be carried out.

6.2 Fall Protection [CR 10]

Section 1 (a) of this regulation states that a contractor shall cause the designation of a competent person, responsible for the preparation of a fall protection plan. The control of several of these risks may be specified in the OHSA or the CR but this does not mean that the HIRA exercise does not have to be carried out.

6.3 Structures [CR 11]

The appointed civil contractor shall meet the requirements of this regulation. Attention is drawn, which requires the designer to inspect the structure at appropriate times and the record of these inspections to be available on site.

6.4 Excavations [CR 13]

Section 1 of this regulation states that this work must be carried out under the supervision of a competent person who has been appointed in writing. All the requirements of CR 13 shall be met. For inspection of excavations, attention is drawn to section 3 (h), the records of which must be available on site.

6.5 Construction vehicles and mobile plant [CR 23]

It will be the responsibility of each contractor on site to ensure compliance of their vehicles and mobile plant to these regulations. This includes vehicles to be used for transporting personnel to and from site, which will be subject to relevant requirements such as licensing and roadworthiness checks. In addition the following will apply:

- Safe transport for personnel working on the project to and from the workplace, which shall include proper seating, side restraints and cover.
- Road safety principles shall be adhered to on and off staff.

If a mobile crane or other mobile plant is hired, only approved hire companies shall be contracted to provide such equipment. The Construction Supervisor shall ensure compliance of the provider to these regulations. In particular, attention is drawn to the competence and fitness of the operator [section 1 (d)] and the inspection of the equipment [section 1 (j)]

6.6 Temporal Electrical installations[CR 24], including [EIR] and [EMR]

The requirements of these regulations shall be met as required, by the appointed electrical contractor. A competent person will be appointed for inspection and control of all temporary electrical installations as per CR 24 (d) and (e) respectively.

6.7 Water Environments [CR 26]

The requirements of this regulation shall be met.

6.8 Housekeeping [CR 27] including [ERW(6)]

All contractors shall ensure that housekeeping standards as per these regulations shall be maintained at all times.

6.9 Stacking of Materials [CR 28] including [GSR (8)]

All contractors shall ensure that materials are only stored in defined and allocated storage areas and that materials being stored are stacked in accordance with sound stacking principles as per these regulations.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

6.10 Fire Precautions [CR 29]

All contractors on site will comply fully with the requirements of this regulation. In particular, the principal contractor will be responsible for the evacuation plan (section (I)) the details of which will be imparted to contractors, visitors etc through the site induction.

6.11 Construction welfare facilities [CR 230]

The principal contractors shall be responsible for implementing this regulation and shall ensure that adequate facilities are provided for the personnel on site in terms of the following:

- Change room facilities
- Sheltered eating area
- Adequate toilets
- Hand wash facility
- Potable water.

No food preparation shall be conducted on site. Eating and drinking will only be permitted in the designated eating areas, which must be provided with adequate seating. Waste bins shall be strategically placed and clearly regularly.

8 Site-specific and Design Risks

Please note: this is not a complete or exhaustive list. The principal contractor is expected to assess all risks to which his employees may be exposed during the construction and/or demolition process, as well as the hazards identified and listed below.

The following jobs or activities are classified as High

- Confined Space Entry
- Excavation
- Construction vehicles and mobile plant
- Traffic accommodation
- Pouring Concrete
- Working at Heights

8.1 Hazard Identification and Risk Assessment Methodology**8.1.1 Baseline Risk Assessment**

A Baseline Hazard Identification and Risk Assessment must be carried out during the preliminary stages of the construction/demolition project for the purposes of attempting to reduce the possibility of accidents or ill health occurring.

Taking into account the constraints of time and resources, every effort must be made to identify the hazards and recommend possible solutions. It is not reasonably practicable to expect the baseline risk assessment to identify all hazards, which is why task risk assessments are carried out on site.

8.1.2 Task risk assessment

Once on site, every contractor shall perform task risk assessments, using the baseline risk assessment as a guide.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The Risk Assessment should be reviewed once on site and thereafter after any incident or every one-year period, whichever occurs first. Additional hazards highlighted or a change in the risk factor should have a separate risk assessment carried out and filed.

The Risk Assessment is based on the combination of the CONSEQUENCE and PROBABILITY associated with each hazard.

8.1.3 Definitions

<i>Term</i>	<i>Meaning</i>
HAZARD:	Anything that can cause harm
RISK:	The chance, great or small, that someone will be harmed by the hazard
CONSEQUENCE:	The possible outcome of an accident / incident, e.g. broken leg, explosion
PROBABILITY:	The possibility of the accident / incident occurring

8.1.4 Risk assessment

The following evaluation must be used to determine risk:

Probability X Consequence = RISK

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Risk Matrix:

Risk Matrix:

Consequence (Impact)	(3) Critical (Fatal/Permanent Disabling Injury)	(3) Medium risk	(6) High risk	(9) CRITICAL
	(2) Major (Temporary Disabling Injury)	(2) Low risk	(4) Medium risk	(6) High risk
	(1) Manageable (Minor/first aid)	(1) Low risk	(2) Low risk	(3) Medium risk
		(1) Remote (<10%)	(2) Possible (10-50%)	(3) Likely (>50%)
		Probability (Likelihood)		

RED = High Risk (6 – 9)

ORANGE = Medium Risk (3 – 4)

GREEN = Low Risk (1 – 2)

Activity	Hazard	Risk Eval.	Precautions and Control Measures
			1. Eliminate the risk 2. Control the risk at its source 3. Follow a safe working procedure 4. Provide PPE
1. Describe task	Hazard 1	9, 6, 4, 3, 2, or 1	• Precaution 1 • Precaution 2 • Etc.
	Hazard 2		• Precaution 1 • Precaution 2 • Etc.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

8.2 Site-specific risks

The following site-specific risks have been identified for this project. These must be catered for in the contractor's health and safety plan (that which is applicable to their scope of work), and included in the site-specific risk assessment:

8.2.1 Traffic – restrictions, existing systems, site traffic

Traffic accommodation must be arranged with the principal agent.

8.2.2 Site security and access –

This is controlled by the individual contractor responsible.

8.3 Design risks

The following design risks have been identified by the designer for this project. These must be catered for in the contractor's health and safety plan (that which is applicable to their scope of work), and included in the site-specific risk assessment:

8.3.1 Excavations

8.3.2 Traffic Accommodation

8.3.3 Vehicle and mobile plants

9 Fines and Penalties

9.1 Minor Health or Safety Transgression

Not wearing PPE; e.g. safety helmet, eye protection, high visibility vests or foot protection. Fine: R1000-00 will be issued to the contractor.

9.2 Serious Health or Safety Transgression

Not contributing to good housekeeping practices, improper stacking and storage, lack of supervision on site, failure to carry out risk assessments for tasks or activities, failure to carry out toolbox talks, failure to train employees in risk assessments and/or safe work procedures, failure to issue PPE to employees. Fine: R2000-00 will be issued to the contractor

9.3 Major Health or Safety Transgression

A life-threatening activity, condition, act or contribution by an employee in creating an unsafe working environment for himself or herself or other persons, failure to wear critical PPE (safety harness, eye protection, respiratory equipment, or as stipulated in the risk assessment).

Fine: Up to R3000.00 will be issued to the contractor

9.4 Repeat Offences

A contractor that receives more than three (3) major transgressions for the same offence and may, at the discretion of the project manager, be required to leave site

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ANNEXURE A (Notification of Intention to Commence Construction Work)

NOTIFICATION OF CONSTRUCTION WORK
Regulation 4 of the Construction Regulations, 2014

1. (a) Name and postal address of principal contractor:
 (b) Name and telephone number of principal contractor's contact person:
2. Principal contractor's compensation registration number:
3. (a) Name and postal address of client:
 (b) Name and telephone number of client's contact person or agent:
4. (a) Name and postal address of designer(s) for the project:
 (b) Name and telephone number of designer's contact person:
5. Name and telephone number of principal contractor's construction manager on site appointed in terms of regulation 8(1):
6. Name/s of principal contractor's sub-ordinate manager on site appointed in terms of regulation 8(2):
7. Exact physical address of the construction site or site office:
8. Nature of the construction work:
9. Expected commencement date:
10. Expected completion date:
11. Estimated maximum number of persons on the construction site:
 Total _____ Male _____ Female _____
12. Planned number of contractors on the construction site accountable to principle contractor:
13. Name(s) of contractors already chosen:

 Principal contractor

 Date

 Client

 Date

 Contractor

 Witness 1

 Witness 2

 Employer

 Witness 1

 Witness 2

ANNEXURE B (Example: Appointment - Construction Supervisor)

APPOINTMENT OF A CONSTRUCTION MANAGER

CONSTRUCTION REGULATION 8 (1)

8(1) The contractor shall appoint a full time, competent employee in writing as the construction supervisor with the duty of supervising construction work

APPOINTMENT

I, _____ (contractor's name), having been appointed in terms of section 16 (2) of the Occupational Health and Safety Act (85 of 1993) to ensure full compliance with the Act, do hereby appoint:

_____ (name of appointee), being a full-time employee, as the **Construction Manager** responsible for:

_____ (site address)
,to supervise construction work for the duration of the project/ contract or until you are relocated to another site/ project or leave the employ of the company.

You are reminded that you are required to be conversant with all relevant statutory provisions and regulations of the Occupational Health and Safety Act (85 of 1993) in the regard to carrying out of construction work.

Signature _____ Date _____

Designation _____

ACCEPTANCE

I, _____ (name of appointee)
hereby accept and understand the requirements of this appointment as **Construction Manager** and confirm that I have the necessary competence required and that I am conversant with all the relevant statutory provisions of the Occupational Health and Safety Act (85 of 1993).

Signature _____ Date _____

Designation _____

Certificate(s)
Training & CV _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ANNEXURE C Inspection List

Inspections Required

No.	Inspection	By who	Frequency	Record
1	Excavations	Appointed Person	Daily before shift, plus other	Checklist
2	Construction Vehicles and Mobile Plant	Appointed Person	Daily	Inventory/ checklist
3	Electrical Installations (temporary)	Appointed Person	Weekly	Inventory/ checklist
4	Fire Equipment	Appointed Person	Manufacturer's spec	Inventory/ checklist
5	First Aid Box Contents	First Aider	Monthly	Inventory
6	Ladders	Competent Person	Monthly	Inventory/ checklist
7	Lifting Tackle	Appointed Person	3- monthly	Inventory/ checklist
8	Hand Tools	Appointed Person	Monthly	Inventory/ checklist
9	Portable Electrical Equipment	Appointed Person	Monthly	Inventory/ checklist
10	Health & Safety Rep	H&S Rep/ Safety Officer	Monthly	Checklist
11	Good Housekeeping	H&S Rep/ Safety Officer	Monthly	Report
12	Stacking and Storage	Appointed Person	Monthly	Report
13	Change Rooms and Toilets	H&S Rep/ Safety Officer	Monthly	Inventory/ checklist
14	Pneumatic Tools	Appointed Person	Monthly	Inventory/ checklist

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ANNEXURE D (Recording and Investigation of Incidents)

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
(ACT NO 85 OF 1993)
REGULATION 9 OF THE GENERAL ADMINISTRATIVE REGULATIONS
RECORDING AND INVESTIGATION OF INCIDENTS
A. RECORDING OF INCIDENT

1. Name of Employer _____
2. Name of affected person _____
3. Identity Number of affected person _____
4. Date of incident _____ 5. Time of Incident _____

6. Part of the body affected*

Head or neck	Eye	Trunk	Finger	Head	
Arm	Foot	Leg	Internal	Multiple	
Sprains or strains	Contusions or wounds	Fractures	Burns	Amputation	
Electric Shock	Asphyxiation	Unconsciousness	Poisoning	Occupational Diseases	
0-13 days	2-4 weeks	>4-16 weeks	>16-52 weeks	>52 weeks or permanent disablement	Killed

7. Effect on the person. *

8. Expected period of disablement.*

9. Description of Occupational disease** _____

10. Machine/ process involved/ type of work performed/ exposure* _____

11. Was the incident reported to the Compensation Commissioner and Provincial Director?

Yes	No
-----	----

Make a cross in the appropriate square

12. Was the incident reported to the Police?

Yes	No
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13. SAPS office and reference _____

•*To be completed in case of a fatal incident

•**in case of a hazardous chemical substance, indicate substance exposed to.

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Contractor

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Witness 1

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Witness 2

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Employer

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Witness 1

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Witness 2

B. INVESTIGATION OF THE ABOVE INCIDENT BY A PERSON DESIGNATED THERETO

1 Name of investigator _____ 2 Date of investigation _____

3 Designation of investigator _____

4 Short Description of
incident _____

5 Suspected cause of
incident _____

6. Recommended steps to prevent a
recurrence _____

Signature of investigator _____ Date _____

C. ACTION TAKEN BY THE EMPLOYER TO PREVENT THE RECURRENCE OF A SIMILAR INCIDENT

Signature of investigator _____ Date _____

D. REMARKS BY HEALTH AND SAFETY COMMITTEE

Remarks _____

Signature of chairperson of
health and safety committee _____ Date _____

WRITTEN AGREEMENT ENTERED INTO AND BETWEEN

(Hereinafter referred to as the Company) AND

CONTRACTOR

(Hereinafter referred to as The Contractor)

Compensation Fund Number:

**AGREEMENT WITH MANDATORY TO BE COMPLETED IN BLACK INK. INITIAL
EACH PAGE AND ANY CHANGES.**

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Definition of MANDATORY

Includes an agent, a contractor or sub-contractor for work, but without derogating from his status in his own right as an employer or user.

Occupational Health and Safety Act (No. 85 of 1993)

1. You are requested to, as far as you reasonably can, comply with the requirements of the OHS ACT and Regulations.
2. Your attention is drawn to “**General Duties of Employers to their Employees**” as required by Sect 8 of the Act.
3. You are required to:
 - 3.1 Sign a written “**Agreement with Mandatory**” as required by Sect 37(1)(2) of the Act with us before you commence any work on my / our premises / site.
 - 3.2 Provide the **client / principal contractor** with a documented health and safety plan.
 - 3.3 Provide the **client / principal contractor** with written appointment of the person who is going to supervise the construction work as per Construction Regulation 6(1).

Note: Electrician to provide copy of certificate of registration as per Elect. Install Reg. 9(3).
 - 3.4 Provide the **client / principal contractor** with written designation of your nominated Health and Safety Representative as per Sect 17(1).
 - 3.5 If you employ more than five (5) persons, you are required to provide your own First Aid Box. (General Safety Regulation 3 (2).)
 - a. If you employ more than ten (10) persons, you are required to provide your own qualified First Aider as per General Safety Regulation 3(4).
 - 3.7 When working with hazardous chemical substances, comply with Hazardous Chemical Substances Regulation
3. Note: Asbestos and Lead regulations are separate.
 - 3.8 When using a Materials Hoist , comply with Construction Regulation 17.
 - 3.9 When using Lifting Machines and Lifting Tackle, comply with Driven Machinery Regulation 18.
 - 3.10 When using Explosive Powered Tools, comply with Construction Regulation 19.
 - 3.11 When using Scaffolding, Formwork and support work, comply with Construction Regulation 10 and 14.
 - 3.12 When Excavating or Demolishing, comply with Construction Regulation 11 and 12.
 - 3.13 When Welding, Flame Cutting, Soldering, comply with General Safety Regulation 9.
 - 3.14 When working in confined spaces, comply with General Safety Regulation 5.
4. You are responsible for providing your own **legal safety documents and registers** to comply with the Act's requirements. *A copy of the OHS Act of 1993 should be available in the main contractors office.*
5. You are required to comply with General Safety Regulation 2(1) to (7) and provide employees with: personal protective equipment which will allow them to carry out their work in a safe manner, e.g. hard hats, safety belts, gloves, safe footwear, eye protection, ear protection, waterproof clothing etc.
5. Reporting of Incidents and Occupational Diseases shall be done as per General Admin. Regulation 6. (Also see Sect 24 of the Act.)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Compensation for Occupational Injuries and Diseases Act (No 130 of 1993)

You are required to provide the **client** proof of registration with the Compensation Commissioner/Federated Employer's Mutual within seven (7) days after signing this agreement. Failure to do so would result in the **client** notifying the agent of the Commissioner to investigate and make an assessment of your wage return and the applicable levy you have to pay, which will be liable for a deduction from your monthly progress payments and paid over to the Commissioner. (Copies of proof of payment will be provided to the contractor) **See Section 89(1) of the COID**

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The requirements of this clause do not relieve the Contractor of any obligations as detailed under the General Conditions of Contract or the Special Conditions of Contract.

THE CONTRACT
PART C3: SCOPE OF WORKS

Particular Specifications

PORTION B

**Occupational Health and Safety Specification for
Principal Contractors and Contractors for
Construction Work - COVID 19**

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

COVID 19 ADDITIONAL HEALTH AND SAFETY

SPECIFICATIONS

South Africa's state of national disaster can remain in force as long as Parliament is willing to renew it, and under it the executive branch of the government has the power to make such rules as it deems necessary to save lives. But even after the state of disaster ends, existing laws and regulations on workplace safety, preventing communicable disease can be used to enforce measures to slow the spread of the novel coronavirus.

1. HOW CAN WE PREVENT INFECTION?

The following can provide protection against infection from Coronaviruses and many other viruses that are more common in South Africa:

- Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, use an alcohol-based hand sanitiser.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Avoid close contact with people who are sick.
- Stay at home when you are sick and try and keep a distance from others at home.
- Cover your cough or sneeze with a flexed elbow or a tissue, then throw the tissue in the bin.
- Clean and disinfect frequently touched objects and surfaces.

These are some of the rules and regulations that should be adopting after the hard Covid-19 lockdown ends.

2. TAKING STAFF TEMPERATURES, AND KEEPING A LOG OF VISITORS

Clients, Staff and visitors will be required to check every person who enters premises, staff and visitors alike, for fever. (An elevated temperature is one of the early signs of Covid-19.) We will be required to keep a log detailing when everyone comes and goes, to make for easier tracing of contacts in the event that one of those people tests positive for SARS-CoV-19 later.

3. AT LEAST 1.5 METRES OF SPACE BETWEEN EACH WORKSTATION – AND EVERYWHERE ELSE

- The standard for the distance between people seems to have settled down to 1.5 metres which will be adopted.
- That is the distance likely to be required between workstations in offices, and also in settings such as meeting rooms.

- Some sectors have argued they simply cannot maintain such distances, for instance on Construction sites, but they may have to explain that to labour inspectors empowered to investigate unsafe working conditions.

4. A CLEAR PLAN ON WHAT TO DO IF SOMEONE SHOWS SYMPTOMS WHILE AT WORK

Workplace safety policies and procedures will be updated on what happens if someone starts showing symptoms of Covid-19, such as a cough or fever, including:

- The responsibility of managers to detect such symptoms and take appropriate action.
- Where personal protective equipment is kept, for use by colleagues assisting the ill person.
- Where an ill person can be isolated from everyone else.
- How the immediate workspace used by an ill person will be sanitised.

See also: South Africa is getting a special three-digit phone number for Covid-19 emergencies

5. STOPPING THE SHARING OF HARDWARE, OR SANITISING PROTOCOLS BETWEEN USERS

Shared computer keyboards or phones in offices, and shared tools in our engineering context is strongly discouraged.

Where equipment is unavoidably in common use, that hardware will have to be sanitised between uses, with employees being held responsible for sanitising both and before each use.

6. EDUCATION ON COUGHING, HAND WASHING, AND OTHER PERSONAL MEASURES

Companies are expected to have a specific obligation to educate workers on measures to slow the spread of viral infection, including coughing into the crook of the elbow and washing hands regularly for at least 20 seconds. Refer to Item No.1 for additional measures.

7. LOTS AND LOTS AND LOTS OF DISINFECTANT

Because environments may differ from office to office, we will be expected to:

- Provide hand-sanitising stations, or better yet soap and water, at entry points.
- Ensure the constant and uninterrupted availability of soap and running water in bathrooms.
- Add sanitising agents to cleaning routines, using the likes of bleach or alcohol-based sanitizers (minimum 60% Alcohol Content) to clean everything from laptops and stand-alone machines (keyboards and screen), mice, desks and other items in constant contact, at least once every hour.

8. CLOTH MASKS AND GLOVES

South Africa's policy of encouraging the wearing of masks (reusable cloth ones rather than the medical equipment in desperate short supply in the health care environment) may have a firmer incarnation in workplace rules after the hard lockdown ends.

Customer-facing businesses like ours, would require us to have visors, masks, or plastic partitions between staff and customers. There is also some debate on requiring mask wearing in office environments, for the duration of South Africa's traditional winter flu season. We would recommend that all staff adhere to this rule post lockdown and for the foreseeable future, until such time that the epidemic has been contained.

Gloves, however, do not feature prominently South Africa's policy; other than keeping gloves around for special use, such as in dealing with an ill colleague. However, we will be adopting a rule where every employee must wear gloves to limit the possible spread of the virus.

9. CONSTRUCTION SITES

The Protocols below will apply at all times where a main Contractor is responsible for Capital Works, Maintenance Works or EPWP Projects. Save for the possibility that the site may not be fenced off as in the case of a traditional site, all OHS Act responsibilities remain together with COVID 19 Health and Safety Measures which should be conducted at the meeting or assembly points generally required for employees and sub-contractors performing Maintenance or EPWP type work.

HAZARD AND RISK CONTROLS

Resumption of operations

- The Security will record the reading of the temperatures taken for individuals. Persons performing these duties shall wear masks at all times whilst doing so.
- Security taking temperature readings will use a clipboard and disposable pens – only receptionist will record the readings of temperature readings at access points
- If temperature is above 37°, wait 5 minutes and retake temperature. If temperature is above 37.3° do not allow access, report to management for further action
- Take every person's temperature entering the premises
- Ensure queue control at access points – stand 2m apart from each other
- Management to conduct COVID-19 induction screening and awareness program, together with PPE training before allowing employees to proceed to their workstations
- Allocate hand sanitizer stations at access points – every person must sanitise their hands prior entering the premises
- Each person entering the premises will be required to sign the COVID-19 declaration and assessment form
- Conduct COVID-19 induction program
- Issue all employees with additional PPE
- Face masks.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- PPE aligned to risk

Premises access control

- All other safety monitoring equipment employed such as alcometers etc. shall be the contactless type or be fitted with disposable mouthpieces. Such equipment shall be sanitized after every use.
- Security will ensure that non-essential visitors are not allowed access to a construction site.
- Contractors will monitor site access points to enable social distancing – contractors may need to change the number of access points, either increase to reduce congestion or decrease to enable monitoring.
- Allow plenty of space (two metres) between people waiting to enter site.
- Remove or disable entry systems that require skin contact e.g. fingerprint scanners or biometric system.

Food handling processes and canteen service

- Management must ensure that different lunch and teatime breaks allocated – to minimise the amount of people accessing canteen areas at a time. Social distancing must be enforced at all times
- Measure and monitor the implementation of the requirements for canteen service providers
- Canteen areas will be disinfected at least twice a day
- Canteen service provider must provide management with a detailed awareness and training, health and hygiene program
- Disinfecting stations must be allocated cash points
- Food service staff must be issued with masks and disposable surgical gloves
- Self-service food stations must not be allowed
- Employees will not be permitted to buy food outside of the premises during working hours and shall bring their own lunch if they do not plan to use the canteen facilities
- Break times should always be staggered to reduce congestion and contact.
- Workers should sit 2 metres apart from each other whilst eating and avoid all contact.
- Disposable plates and cutlery must be used at all times.
- Workers should be asked to bring pre-prepared meals and refillable drinking bottles from home to the extent possible.
- All rubbish should be put straight in the bin by each user.
- All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.

Employees required to travel

- Employees
- Delivery Staff
- Critical business travel (locally)
- Employees using public transport to commute between home and work are to adhere to the strict rules determined for such travel by the Minister of Transport. Such employees shall be issued with masks by the employer as well as hand sanitiser that will be used according to the training provided at the place of employment.
- In the event that the employer provides transport, this will be done in accordance with the same regulations that apply to that for public transport providers.
- Employees using company vehicles shall be limited to two per bakkie and 3 per sedan. Employees exceeding one in number shall use masks when travelling in company vehicles.
- Hand sanitiser shall be provided for each company vehicle.
- Communication plans such as skype, Zoom, Telephone conferences, WhatsApp video calls or Google workplace video calls will be used to limit the amount of business travel requirements
- Delivery staff and truck drivers will be issued with hand sanitisers – this must be kept in their vehicle
- Non-alcoholic swabs will be issued to truck drivers in the event of testing requested by clients
- Truck drivers shall declare any symptoms that might be linked to the COVID-19 virus to

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- management
- Trucks will be decontaminated after deliveries and at the end of each shift – decontamination can be done with soap and water
- Drivers will be scanned by security with infrared temperature devices every time they enter the premises
- In the event that critical business is required for local traveling via flights – this will only be done by approval of the CEO. A traveling kit will be provided to the individual for business-critical travel upon approval When such individuals return, his/her symptoms shall be monitored daily for 14 days. In the event where the individual shows any symptoms of COVID-19 he/she will self-isolate for 14 days
- International traveling will not be allowed, until further notice (Outside the borders of South Africa).
- If you were exposed to a person who travelled internationally. You will be required to self-isolate for 14 days. Suppliers, customers and sub-contractors.
- Management will make a decision on what level of interaction is required and limit access to premises for work purposes.
- Site premises shall be entered for emergency maintenance of equipment when a Contractor/Service provider needs to access equipment on site requiring attention or when a supplier of materials is required to access the premises. Premises access control measures shall apply in these cases
- Sub-contractors that are on site full time will be required to comply with all protocols as those that are applicable to employees
- Management will communicate the Company emergency response plans to clients, suppliers and service providers
- The aim is to maintain a relationship and understanding of the benefits of the implemented mitigation
- Limit sites visits and face to face to meetings
- Meetings to be held via Skype, Zoom, Conference calls or other Similar means
- Where critical business meetings are required, the premises access control measures shall apply in these cases

Workplace hygiene

- Rest room facilities will be limited as a measure of control to ensure that facilities are effectively disinfected
- Rest room facilities will be disinfected at least twice a day
- Office environments will be disinfected at least twice a day – this includes offices, meetings rooms, staircase handrails, doorknobs and lift buttons
- Hand disinfecting stations will be provided at every entrance into the building including rest room facilities
- Workplace stations will be disinfected with soap and water after every tea and lunch break
- Any touch system computerised screen will be disinfected with a 60% alcohol-based sanitiser
- Changeroom and washroom facilities for employees will be disinfected at least twice a day.
- Employees will always be required to place personal belongings in personal lockers provided in change rooms
- Workplace stations in production areas will be disinfected at least twice a day.
- Parental control (Applicable to Office Based Staff Only on Sites)
- Employees will not be allowed to bring their children to work during the closure of schools.
- Employees will not be allowed to bring their child to work in the event of any ill health effects or symptoms The parent of such a child must report the matter to HR and management
- The parent must make other arrangement to accommodate the child
- In the event where no arrangements can be made, the parent must consult with HR regarding the relevant leave policy specifically aligned to the COVID-19 disaster management plan

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Employees may also elect to work from home if they have the requisite equipment and facilities in the absence of any childcare services being available
- Awareness and training programs
- Only internal programs of this nature will be allowed and limited to small groups of no more than 15 people per session.
- People must stand or sit at least 2m apart from each other
- The area will be well ventilated and must have enough space for the purpose of awareness programs
- Hand sanitisers must be available in the area and people must wear masks
- Where tables and chairs are used for such sessions, these shall be disinfected after every session.
- Technical/Site/Quarterly Meetings
- Office meetings will be kept to a limit of 4 people at a time
- People must sit at least 2m apart from each other
- Hand sanitisers must be available in during the meeting
- Office tables and chairs will be disinfected after every meeting.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Part C4: Site Information**C4.1 Nature of Ground**

The Geological data of Silobela site shall be furnished after tender closing. The existing founding conditions exhibit evidence of hard rock and boulders. It is envisaged that excavations by method of blasting shall be required.

The Tenderer will be permitted to excavate trial holes in the area of the works at his own expense provided that they are properly safeguarded and reinstated. Should the Tenderer wish to excavate his own trial holes; he shall first ascertain, in conjunction with the Engineer, the position of any underground services, which may exist in the area. The Tenderer shall indemnify the Municipality against the cost of repairing any underground services damaged by the Tenderer or his agents, while carrying out such excavations.

C4.2 Spoil Material

No indiscriminate spoiling of material will be allowed. All unsuitable or surplus material shall be spoiled off site to a spoil site/municipal dump, chosen by the Contractor.

C4.3 Finishing – off the Site

The site shall be finished-off in accordance with the specifications as well as to the requirements of all applicable environmental standards.

C4.4 Existing Services

Although every effort has been made to depict existing services (water mains, electric cables, telephone cables etc.), as accurately as possible on the contract drawings, insofar as they are known, variations do arise and the Contractor shall exercise extreme care when working in the area. Items have been allowed in the Schedule of Quantities for dealing with and protecting services.

The Contractor shall take whatever precautions are required to protect these services from damage during the period of the Contract.

C4.5 Proving of Underground Services

It is stressed that all services in a particular area must be proven before commencing work in that area.

Insofar as bulk earthworks are concerned, where services are indicated on the drawings or where from site observations can reasonably be expected that such services are likely to exist where excavations are to take place, the Contractor shall without instructions from the Engineer carefully excavate by hand to expose and prove their positions.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Engineer who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly.

Should any service be damaged by the Contractor in carrying out the works, and should it be found that the procedure laid down in this clause has not been followed than all costs in connection with the repair of service will be to the Contractors account.

Proving of services shall be completed at least two weeks in advance of the actual programmed date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Engineer's representative.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ANNEXURES

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Annexure A: Tender Drawings

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Annexure B: GEOTECHNICAL INVESTIGATION REPORT



GEOTECH & GEOHYDROLOGY CONSULTING SERVICES

**CONSTRUCTION OF CAROLINA
BULK WATER SUPPLY TO SILOBELA,
EXTENSION 5, MPUMALANGA**

MARCH 2025

OUR REFERENCE: BAV/GEOTECH/034

Prepared For:

KUFANIKIWA CONSULTING



VERIFICATION PAGE	Rev 00
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TITLE:

CONSTRUCTION OF CAROLINA BULK WATER SUPPLY TO SILOBELA, EXTENSION 5, MPUMALANGA.

BAV CONSULTING REF. NO.

BAV/GEOTECH/034

DATE:

19/05/2025

DOCUMENT:

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SYNOPSIS

CONSTRUCTION OF CAROLINA BULK WATER SUPPLY TO SILOBELA, EXTENSION 5, MPUMALANGA.

Commissioned by:	Capacity	Signature	Date
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M Nkwane	Geologist (Pr.Sci .Nat)		19/05/2025

CONSTRUCTION OF CAROLINA BULK WATER SUPPLY TO SILOBELA, EXTENSION 5, MPUMALANGA.

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1 INTRODUCTION

BAV Consulting was appointed by KUFANIKIWA CONSULTING to conduct a geotechnical investigation for CONSTRUCTION OF CAROLINA BULK WATER SUPPLY TO SILOBELA, EXTENSION 5, MPUMALANGA. A materials investigation was undertaken for the proposed upgrade, located in Silobela area Extension 5, which is under, Chief Albert Luthuli Local Municipality, Gert Sibande District Municipality.

This report presents the results of material investigation undertaken for the proposed upgrade works, the detailed design of the pipeline, entailing an assessment of the subsurface conditions along the pipeline route and excavation conditions. The investigation comprised of a desk study of available information such as geological maps covering the area, site walk-over and test pitting, collection of samples for laboratory testing and reporting.

The fieldwork was conducted from the 27th of March 2025 with the following objectives:

- To describe the investigation procedure.
- To provide an overview of the geology of the site.
- Discuss the soil profiles encountered.
- Comments on the groundwater conditions.
- To characterizes the soil properties based on the results of laboratory testing.
- Comment on the excavatability of the subsoil.
- Identify and discuss potential problematic geotechnical considerations (if any).

Twelve (No.12) test pits were mechanically excavated on site and profiled by an engineering geologist in accordance with acceptable South African standards such as the SANS 633:2009, Profiling, and percussion and core borehole logging in Southern Africa for engineering purposes.

Disturbed subsoil samples were recovered and submitted to a commercial laboratory for testing to determine the properties of the materials. Tests conducted included:

- Foundation Indicator (Grading, Atterberg Limits and Linear Shrinkage and hydrometer).
- Maximum Dry Densities (AASHTO) and Optimum Moisture Contents.
- California Bearing Ration (CBR).
- PH

The objectives of the investigation are to characterize the subsurface conditions in terms of excavation conditions, stability of excavations, subgrade conditions, groundwater as well as material usage and founding conditions along the proposed pipeline route.

2 AVAILABLE INFORMATION

The information available comprised of the following:

- Site location provided by KUFANIKIWA.

3 SITE SETTING

3.1 Site Location and Description

Silobela is a township located just outside Carolina in the Mpumalanga province of South Africa. It falls under the jurisdiction of the Albert Luthuli Local Municipality within the Gert Sibande District. Its proximity to Carolina suggests access to various services and amenities available in the larger town. Carolina serves as a regional hub, providing educational institutions, healthcare facilities, and commercial centres that likely benefit residents of Silobela. The Chief Albert Luthuli Local Municipality is the Water Services Authority for the area. A simple illustration of the location is shown in figure below.

The area characterized by gently rolling terrain with elevations typically ranging between 1,500 and 1,700 meters above sea level.



Figure 1: Locality Map

3.2 Published Geology

According to the 1:250 000, 2630 Geological Map, the regional geology of the area comprises of sedimentary rocks of the Karoo Supergroup. Common rock types include sandstone, Siltstones, shale, and coal seams. Dolerite sills and dykes are common in the region due to extensive igneous activity during the breakup of Gondwana. These are overlain by Quaternary sands which are predominant in this area. Typical of regions with weathered Karoo sediments. The site under investigation is dominated by Silty residual sands. Figure 2 shows the geological map of the area.

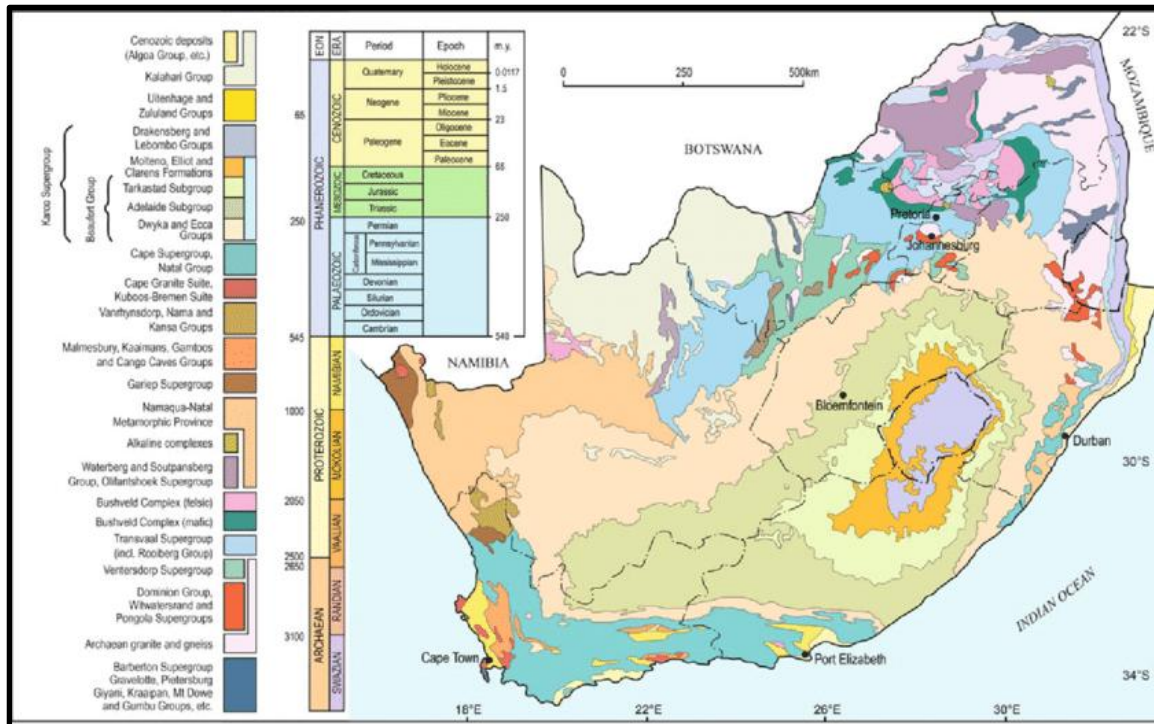


Figure 2: Geological Map of the area

3.3 Climate

Summer (October–March)

- Warm to hot during the day, with cooler nights. Average daytime highs: 24°C to 30°C. Thunderstorms are frequent in the afternoon and early evening. Most of the annual rainfall occurs during this period with 80–120 mm in peak months (Dec–Feb)

Winter (May–August)

- Dry and cold, especially at night. Daytime temperatures: 16°C to 22°C. Nighttime lows: Often fall below 0°C, with frost common. Clear skies and low humidity dominate.

Annual Rainfall

- Ranges between 700 mm and 1,000 mm, mostly from November to March.

Wind and Air Quality

- Moderate winds throughout the year, stronger in spring.

Air quality is affected by nearby coal mining operations, especially during dry, still winter months, when particulate matter can accumulate. This climate is conducive to agriculture and outdoor activities, although water resources may be affected during extended dry periods in winter. Based on the macro-climatic regions as depicted in Figure 3, the site can be classified as **moderate to wet climate** with an approximate Weinert N-value of 2-5.

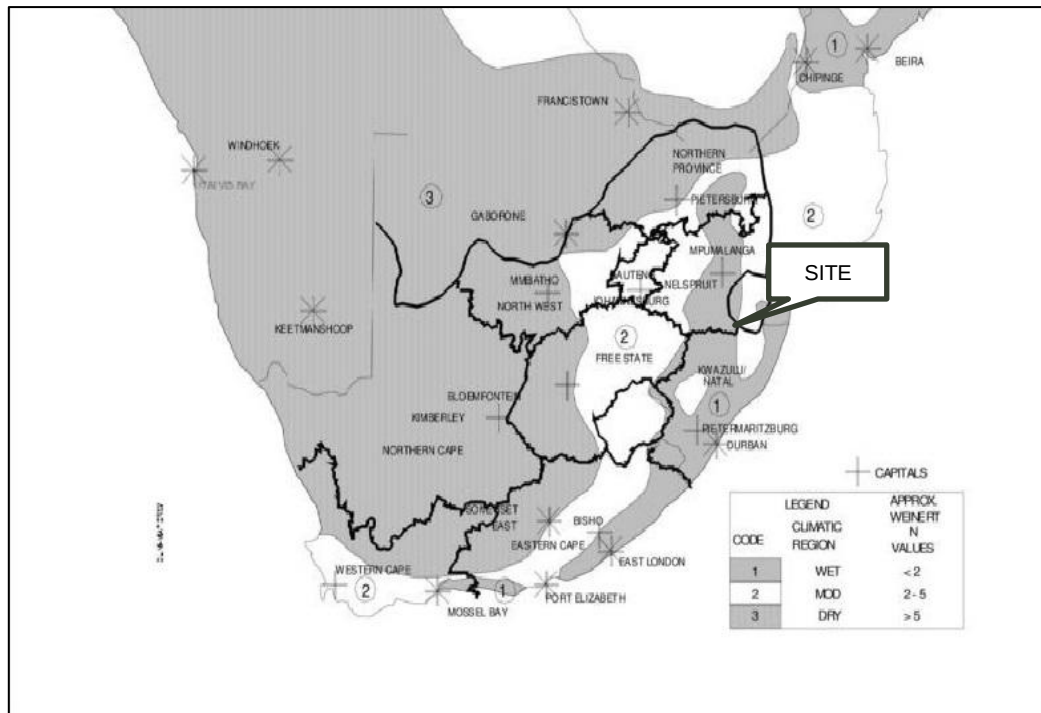


Figure 3: Macro-climatic regions of southern African (Weinert, 1980)

3.4 Proposed Development

- CONSTRUCTION OF CAROLINA BULK WATER SUPPLY TO SILOBELA, EXTENSION 5.

4 SITE INVESTIGATION METHODOLOGY

The investigation carried out on the 27th of March 2025 comprised the excavation of Twelve (No.12) test pits across the site. All test pits were excavated on the Client's suggested positions. These were excavated to 1m/or refusal depth for Pipeline route and 1.6m for Reservoir Positions.

The position of each test pit was recorded using a hand-held GPS. Soil profiling was conducted by an engineering geologist in accordance with acceptable standards such as SANS 633:2009, Profiling, and percussion and core borehole logging in Southern Africa for engineering purposes. Representative samples were recovered from the test pits and taken to a commercial laboratory for testing. Table 1: below shows the summary of the test pits. Refer to Annexure B for Logs.

4.1 Test Pit Positions

Table 1: Summary of test pits positions

Site	Position	Depth(m)	Seepage	Sidewall Collapse	Latitude	Longitude
Carolina Bulk Water Supply to Silobela Extension 5	TP1	1.00	NO	NO	-26.093592°	30.089516°
	TP2	1.00	NO	NO	-26.090532°	30.092785°
	TP3	1.00	NO	YES	-26.088541°	30.096778°
	TP4	1.00	NO	NO	-26.090387°	30.101358°
	TP5	1.00	YES	NO	-26.092355°	30.105923°
	TP6	1.00	NO	NO	-26.094253°	30.110584°

	TP7	1.00	NO	NO	-26.096256°	30.115081°
	TP8	1.00	NO	NO	-26.098202°	30.119647°
	Reservoir TP1	1.60	YES	YES	-26.099095°	30.120779°
	Reservoir TP2	1.60	YES	YES	-26.099169°	30.120728°
	Reservoir TP3	1.60	YES	YES	-26.099107°	30.120941°
	Reservoir TP4	1.60	YES	YES	-26.099177°	30.120899°

4.1.1 DCP Test Results

DCP tests were conducted at each test pit site and the results are summarised below. An 8kg DCP test machine was used to evaluate the subsoil consistency and the in-situ California Bearing Ratio (CBR). It should be noted that the results of the DCP tests are affected by the moisture content of the soil profile, as well as any rock pebbles or cobbles below that promote DCP refusal. Full DCP results are included in Annexure C of this report.

Table 2: Summary of DCP test results

DCP Number	CBR values (%)				
	200	400	600	800	1000
TP1 DCP	3	4	5	2	2
TP2 DCP	3	3	3	6	4
TP3 DCP	2	2	2	7	7
TP4 DCP	6	8	15	22	45
TP5 DCP	2	6	4	7	7
TP6 DCP	8	8	8	7	11
TP7 DCP	3	6	11	8	8
TP8 DCP	5	1	1	2	2
RTP1 DCP	6	1	1	2	2
RTP2 DCP	4	1	1	2	2
RTP3 DCP	3	3	1	3	3
RTP4 DCP	6	6	1	3	3

The DCP results show CBR values that are very low throughout the investigated route. Very low CBR values can be associated with pockets of soil material. The results are attached on **Annexure C**.

5 GROUNDWATER & SIDEWALL COLLAPSES

Groundwater Seepages and Side wall Collapses were encountered on TP3 and TP4 together with all four reservoir test pits during this investigation.

6 LABORATORY TEST RESULTS

Disturbed subsoil samples were taken to a commercial laboratory for:

- Foundation/road indicator tests (grading and Atterberg limits including hydrometer);
- Compaction tests (Maximum Dry density, Optimum Moisture Content and California Bearing Ratio)
- PH

Table 3: Summary of foundation indicator test results

Pit No	Depth (mm)	Particle Size %				Atterberg Limits %			GM	AASHTO/USCS classification
		Clay & Silt	Fine Fine Sand	Medium Fine Sand	Coarse and Coarse Fine Sand	LL	PI	LS		
TP1	0-280	66	11	10	13	32	8	4.5	0.70	A-4
	280-800	43	11	16	30	21	7	3.5	1.27	A-2-4
	800-1000	50	10	14	26	31	11	5.5	1.06	A-6
TP2	0-800	35	12	17	36	CBD	SP	1.2	0.83	A-2-4
	800-1000	37	16	20	27	28	7	3.5	1.06	A-2-4
TP3	0-200	28	19	23	30	CBD	SP	1.2	0.89	A-2-4
	200-1000	38	15	20	26	28	5	2.5	1.04	A-2-4
TP4	0-600	26	12	17	46	CBD	SP	0.9	1.58	A-2-4
	600-1000	29	9	12	50	CBD	SP	0.6	0.97	A-2-4
TP5	0-400	23	19	13	35	CBD	SP	1.2	1.15	A-2-4
	400-900	31	18	17	39	CBD	SP	1.4	2.23	A-1-a
	900-1000	37	16	17	30	27	7	3.5	1.85	A-2-4
TP6	0-500	18	21	24	38	CBD	NP	0.0	1.41	A-2-4
	500-1000	18	22	25	35	CBD	NP	0.0	1.18	A-2-4
TP7	0-400	13	18	24	45	CBD	NP	0.0	1.57	A-2-4
	400-1000	20	22	23	35	CBD	NP	0.0	1.25	A-2-4
TP8	0-400	22	17	21	40	CBD	SP	0.5	1.03	A-2-4
	400-1000	25	19	20	35	CBD	NP	0.0	1.31	A-2-4
TP1 RES	0.0-400	21	14	20	44	CBD	SP	0.6	0.96	A-2-4
	400-1600	24	15	21	40	CBD	SP	0.5	1.03	A-2-4
TP2 RES	0-300	22	13	23	42	CBD	NP	0.0	0.95	A-2-4
	300-1600	24	14	23	39	CBD	SP	0.5	0.94	A-2-4
TP3 RES	0-300	19	13	20	47	CBD	NP	0.0	1.02	A-2-4
	300-1600	20	15	21	43	CBD	NP	0.0	1.02	A-2-4
TP4 RES	0-400	23	17	22	39	CBD	NP	0.0	0.95	A-2-4
	400-1600	23	16	21	40	CBD	NP	0.0	0.93	A-2-4

LL – Liquid Limit
PI – Plasticity Index
LS – Linear Shrinkage

The results above indicate that the material occurring on site comprises a mixture of Clayey and silty sands sandstone/shale gravel and Sandstone pebbles. According to the AASHTO material classification these soils are GOOD to POOR subgrade material with medium potential for expansion in terms of the van der Merwe (1973) method. The plasticity index ranges between 5 and 11%.

Compaction test results

The compaction properties of the materials occurring on site were determined through laboratory testing and the results are summarised below.

Table 4: Summary of compaction test results

Pit No.	Depth (m)	Modified AASHTO	OMC %	CBR Values (%) Compaction MDD (%)				Swell (%)	TRH 14 Classification
		MDD (kgm3)		90	93	95	100		
TP1	280-800	2102	6.2	13	19	23	40	0.32	G7
TP2	0-800	1966	8.3	7	10	13	23	1.17	G8
	800-1000	1971	8.3	6	9	12	25	0.66	G9
TP3	200-1000	2062	8.9	11	20	30	80	0.06	G7
TP4	0-600	1985	6.6	17	26	35	69	0.05	G6
	600-1000	2012	9.4	7	12	16	37	0.24	G8
TP5	400-900	2058	8.9	7	10	12	22	0.23	G8
TP6	500-1000	1935	7.6	9	14	20	42	0.24	G8
TP8	400-1000	2045	5.5	8	11	13	22	0.35	G8
TP1 RES	0-400	2098	7.0	13	19	24	44	0.45	G7
	400-1000	2193	6.6	17	26	35	76	0.35	G7
TP2 RES	300-1600	2184	7.1	12	20	28	66	0.35	G7
TP3 RES	0-300	2051	6.7	9	14	19	42	0.26	G8

MDD – Maximum Dry Density

OMC – Optimum Moisture Content

CBR – California Bearing Ratio

The table above indicates that the in-situ soils have fair compaction properties. The Maximum Dry Density (MDD) ranges between 1935kg/m³ to 2193kg/m³ and an Optimum moisture Content (OMC) range of 6% to 10%. Low swell percentages at 95% modified AASHTO compaction occur. According to TRH 14 Classification, these are lower-quality materials, typically naturally occurring gravels and soils, used in the lower layers of the subgrade. Material ranges between G7 and G9.

7 SOIL / ROCK PROFILE

The ground profile across the site comprises of Silty sands and Silty Clayey Sands. Silty sands together dominate the subsoil profile across the site. From the surface occurs Slightly moist, light to dark brown, loose to very soft, residual/intact Silty Sands with fine roots, weathered sandstones and shale are visible on the profiles.

8 GEOTECHNICAL CONSIDERATIONS

8.1 Excavatability

Excavation conditions across the site should classify as “Intermediate excavation” according to SABS 1200 DA-1998, as the material was easily excavated by mechanical means.

8.2 Stability of excavations

Sidewall collapses occurred during the test pit excavations as such excavations are anticipated to be unstable. However, this appraisal is based on shallow test pits that were open for very short periods of time. Stability of excavations will have to be assessed during construction.

8.3 Compressible / collapsible soils

Soil with a collapsing fabric may be defined as soil that can withstand relatively large, imposed stresses with small settlements at a low in-situ moisture content but will exhibit a decrease in volume and increase in associated settlement with no increase in the applied stress if wetting up occurs, as is aptly described by (Schwartz;1985). Several geotechnical tests are available to determine the collapse potential of a soil material either as a parametric or numerical value.

The tests all depend on the availability of an undisturbed sample cut from the soil profile and are relatively expensive. With the transported soils on site being of loose and very loose consistency, it was not possible to extract an undisturbed sample. However, Errerra (1977) researched the properties of the residual and transported soils resulting from siltstone and sandstone tend to be

predominantly sandy and defined a grading envelope for collapsing sands. According to his research, it has been found that should the grading curve of a soil material fit into this envelope, the soil can be regarded as being of collapsing nature.

The transported materials on site with a consistency that is loose to medium dense which is prone to collapse according to research from Errerra. It is expected that the transported soil material will be collapsible when the moisture conditions change from dry to moist due to rainwater infiltration.

8.4 Expansive soils

A PI > 20 indicates high expansiveness. The materials tested on site shows that the Plasticity index is less than 20 which indicates that the potential for expansion is moderate or lower.

8.5 Groundwater conditions

Groundwater Seepages and Side wall Collapses were encountered on TP3 and TP4 together with all four reservoir test pits during this investigation.

8.6 Construction material

8.6.1 Selected granular material.

Selected Granular Material is used as bedding material to support the pipe, while the “Selected Back Fill Material” is used as blanket material over the crown of the pipe, especially if laying pipes. Back fill

material is generally placed above the blanket materials, up to ground level. Some of the in-situ silty sandy materials (transported layer) along the site are considered suitable to be used as "Selected Granular Material" or "Selected Back Fill Material". Should there be inadequate volumes of the transported layer, the materials meeting the SANS1200LB requirements would thus need to be imported to the site.

8.6.2 Selected fill material

Selected fill material shall be material that has a PI not exceeding 6 and that is free from vegetation and from lumps and stones of diameter exceeding 30 mm.

It is therefore recommended that consideration be given to the use of a soil raft as founding solution for structures constructed with at least G7 material.

8.6.3 Founding conditions for structures and recommendations

Reservoir: The site is dominated by Moist, Dark Brown, Soft, Residual/Intact, Silty Sands with Fine Roots 0.00m to 0.4m. The soils range from soft to very soft. At 0.3m up to 1.6m occurs Moist, Light Brown, Very Soft, Residual/Intact, Silty Clayey Sands.

Lower CBR soils may necessitate thicker or stabilized layers to distribute loads effectively. Conversely, higher CBR soils can support thinner structures, optimizing material use and cost.

It is therefore recommended that consideration be given to the use of a soil raft as founding solution for structures constructed with at least G7 material.

9 CONCLUSIONS

This report presents the results of the investigation conducted for the CONSTRUCTION OF CAROLINA BULK WATER SUPPLY TO SILOBELA, EXTENSION 5, Chief Albert Luthuli Local Municipality, Gert Sibande District Municipality, Mpumalanga. The site investigation was conducted on the 27th of March 2025.

The site is suitable for the proposed development; however, all the geotechnical considerations must be adhered to.

It should however be noted that the information presented on this report is based on point information obtained from the test pits and that variable conditions may occur at intermediate positions.

10 REFERENCES

1. Geotechdata. URL: <http://www.geotechdata.info/parameter/bearing-capacity.html/>.
2. K. J. Wilkinson, F. Coetsee (1988). Department of Mineral and Energy Affairs, Geological Survey. – Pretoria (1:250 000 geological series; 2630 Mbabane).
3. SABS 1200 DA-1988: Standardized Specification for Civil Engineering Construction. DA: Earthworks (Small works).
4. http://www.saexplorer.co.za/south-africa/climate/Carolina_Silobela_climate.asp
5. South African National Standard. Profiling, Percussion Borehole and Core Logging in Southern Africa. SANS 633:2012.

11 ANNEXURE A: SITE PLAN



12 ANNEXURE B: SOIL PROFILE LOGS

BAV CONSULTING GEOTECH & GEOHYDROLOGY CONSULTING SERVICES		
TESTPIT LOG 01		
PROJECT NUMBER CAROLINA BULK WATER S DRILLING DATE 27/03/2025 CLIENT KUFANIKWA CONSULTING TOTAL DEPTH 1.0m COORDINATES -26.093592S 30.089516E		
COMMENTS LOGGED BY M Hadebe CHECKED BY T Ndaba		
Depth (m)	Graphic Log	Material Description
0.05		Moist, Dark Reddish, Soft, Residual/Intact, Silty Sands.
0.1		SAMPLE: 1IND
0.15		NB: Material not enough for large bags.
0.2		
0.25		
0.3		Moist, Light Brown, Soft, Residual/Intact, Silty Sands with Shale and Boulders -300mm
0.35		SAMPLE: 2L
0.4		
0.45		
0.5		
0.55		
0.6		
0.65		
0.7		
0.75		
0.8		Moist, Light Brown Yellow, Soft, Residual/Intact, Silty Clayey Sands.
0.85		SAMPLE: 1IND
0.9		Material not enough for Large Bags
0.95		
1.0	Termination Depth at: 1.0 m	

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TESTPIT LOG 02

PROJECT NUMBER CAROLINA BULK WATER 5 DRILLING DATE 27/03/2025
CLIENT KUFANIKIWA CONSULTING TOTAL DEPTH 1.0m

COORDINATES -26.090532S 30.092785E

COMMENTS

LOGGED BY M Hadebe
CHECKED BY T Ndaba

Depth (m)	Graphic Log	Material Description
		Moist, Dark Reddish, Soft, Residual/Intact, Silty Sands with fine roots.
0.05		SAMPLE: 2L
0.1		
0.15		
0.2		
0.25		
0.3		
0.35		
0.4		
0.45		
0.5		
0.55		
0.6		
0.65		
0.7		
0.75		
0.8		Moist, Light Reddish, Soft, Residual/Intact, Silty Clayey Sands
0.85		SAMPLE: 1IND
0.9		
0.95		
1		Termination Depth at 1.0 m

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Termination Depth at: 1.0 m

TESTPIT LOG 04

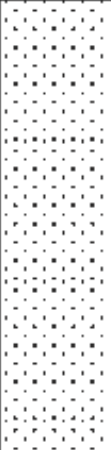
PROJECT NUMBER CAROLINA BULK WATER S DRILLING DATE 27/03/2025
CLIENT KUFANIKWA CONSULTING TOTAL DEPTH 1.0m

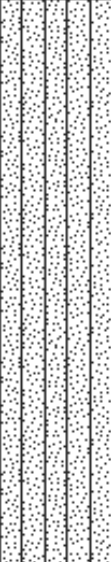
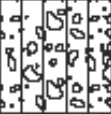
COORDINATES -26.090387S 30.101358E

COMMENTS

LOGGED BY M Hadebe

CHECKED BY T Ndaba

Depth (m)	Graphic Log	Material Description
0.05		Slightly Moist, Light Brown, Loose, Residual/Intact Silty Sands with Weathered Sandstone.
0.1		SAMPLE: 2L
0.15		
0.2		
0.25		
0.3		
0.35		
0.4		
0.45		
0.5		
0.55		
0.6		Slightly Moist, Whitish Reddish, Loose, Residual/Intact, Weathered Sandstone.
0.65		SAMPLE: 2L
0.7		
0.75		
0.8		
0.85		
0.9		
0.95		
1		Termination Depth at: 1.0 m

 TESTPIT LOG 05		
PROJECT NUMBER: CAROLINA BULK WATER S DRILLING DATE: 27/03/2025 COORDINATES: -26.090387S 30.101358E CLIENT: KUFANIKIWA CONSULTING TOTAL DEPTH: 1.0m		
COMMENTS: _____ LOGGED BY: M Hadebe CHECKED BY: T Ndaba		
Depth (m)	Graphic Log	Material Description
0.05		Moist, Dark Brown, Loose, Import, Silty Sands with Pieces of Plastic and Paper near Dump Site.
0.1		SAMPLE: 1IND
0.15		
0.2		
0.25		
0.3		Moist, Light Brown, Soft, Residual/Intact, Silty Sands
0.35		SAMPLE: 2L
0.4		
0.45		
0.5		
0.55		Moist, Light Brown Orange, Loose, Residual/Intact, Silty Sands with Sandstone Pebbles.
0.6		SAMPLE: 1IND
0.65		
0.7		
0.75		
0.8		
0.85		
0.9		
0.95		
1.0		Ground Water Seepage at 800mm
		Termination Depth at: 1.0 m

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TESTPIT LOG 06		
PROJECT NUMBER CAROLINA BULK WATER S DRILLING DATE 27/03/2025 COORDINATES -26.094253S 30.110584E CLIENT KUFANIKWA CONSULTING TOTAL DEPTH 1.0m		
COMMENTS LOGGED BY M Hadebe CHECKED BY T Ndaba 		
Depth (m)	Graphic Log	Material Description
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5		Moist, Light Brown, Loose, Import, Silty Sands. SAMPLE: 1IND
0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95 1		Moist, Dark Brown, Loose, Residual/Intact, Silty Sands SAMPLE: 2L
Termination Depth at: 1.0 m		

TESTPIT LOG 07

PROJECT NUMBER CAROLINA BULK WATER S	DRILLING DATE 27/03/2025	COORDINATES -26.096256S 30.115081E
CLIENT KUFANIKWA CONSULTING	TOTAL DEPTH 1.0m	
COMMENTS		LOGGED BY M Hadebe CHECKED BY T Ndaba

Depth (m)	Graphic Log	Material Description
0.05		Moist, Light Brown, Loose, Residual/Intact, Silty Sands.
0.1		SAMPLE: 1IND
0.15		
0.2		
0.25		
0.3		
0.35		
0.4		
0.45		Moist, Dark Brown, Loose, Residual/Intact, Silty Sands
0.5		SAMPLE: 1IND
0.55		Same material as TP6
0.6		
0.65		
0.7		
0.75		
0.8		
0.85		
0.9		
0.95		
1		Termination Depth at: 1.0 m

TESTPIT LOG 08		
PROJECT NUMBER CAROLINA BULK WATER 5 DRILLING DATE 27/03/2025 COORDINATES -26.098202S 30.119647E CLIENT KUFANIKWA CONSULTING TOTAL DEPTH 1.0m		
COMMENTS		LOGGED BY M Hadebe CHECKED BY T Ndaba
Depth (m)	Graphic Log	Material Description
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95 1		Moist, Dark Brown, Soft, Residual/Intact, Silty Sands with Fine Roots. SAMPLE: 1IND
		Moist, Light Brown, Very Soft, Residual/Intact, Silty Sands SAMPLE: 2L
Termination Depth at: 1.0 m		

TESTPIT LOG RESERVOIR 01

PROJECT NUMBER CAROLINA BULK WATER S DRILLING DATE 27/03/2025 COORDINATES -26.099096S 30.112077E
CLIENT KUFANIWA CONSULTING TOTAL DEPTH 1.6m

COMMENTS Sidewall Collapse and groundwater Seepage 110mm LOGGED BY M Hadebe
CHECKED BY T Ndaba

Depth (m)	Graphic Log	Material Description
0.1		Moist, Dark Brown, Soft, Residual/Intact, Silty Sands with Fine Roots
0.2		SAMPLE: 2L
0.3		
0.4		Moist, Light Brown, Very Soft, Residual/Intact, Silty Clayey Sands.
0.5		SAMPLE: 2L
0.6		At 110mm there is groundwater seepage and side wall collapses.
0.7		
0.8		
0.9		
1		
1.1		
1.2		
1.3		
1.4		
1.5		
1.6		
1.7		
1.8		
1.9		
2		Termination Depth at 1.6 m

BAV CONSULTING GEOTECH & GEOHYDROLOGY CONSULTING SERVICES		
TESTPIT LOG RESERVOIR 02		
PROJECT NUMBER: CAROLINA BULK WATER S DRILLING DATE: 27/03/2025 COORDINATES: -26.099169S 30.120728E CLIENT: KUFANIKWA CONSULTING TOTAL DEPTH: 1.6m		
COMMENTS: Sidewall Collapse and groundwater Seepage 900mm LOGGED BY: M Hadebe CHECKED BY: T Ndaba		
Depth (m)	Graphic Log	Material Description
0.1		Moist, Dark Brown, Soft, Residual/Intact, Silty Sands with Fine Roots
0.2		SAMPLE: 1IND NB: Same as Reservoir TP1
0.3		Moist, Light Brown, Very Soft, Residual/Intact, Silty Clayey Sands.
0.4		SAMPLE: 2L
0.5		At 900mm there is groundwater seepage and side wall collapses.
0.6		
0.7		
0.8		
0.9		
1		
1.1		
1.2		
1.3		
1.4		
1.5		
1.6		
1.7		
1.8		
1.9		
2		Termination Depth at: 1.6 m

TESTPIT LOG RESERVOIR 03

PROJECT NUMBER CAROLINA BULK WATER S DRILLING DATE 27/03/2025 COORDINATES -26.099107S 30.120941E
CLIENT KUFANIKWA CONSULTING TOTAL DEPTH 1.6m

COMMENTS Sidewall Collapse and groundwater Seepage 700mm LOGGED BY M Hadebe
CHECKED BY T Ndaba

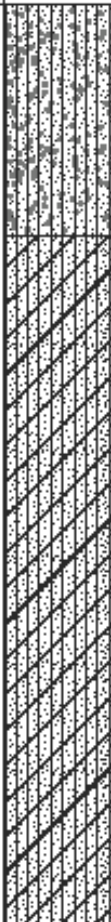
Depth (m)	Graphic Log	Material Description
0.1		Moist, Dark Brown, Soft, Residual/Intact, Silty Sands with Fine Roots
0.2		SAMPLE: 2L
0.3		
0.4		Moist, Light Brown, Soft, Residual/Intact, Silty Clayey Sands.
0.5		SAMPLE: 1IND
0.6		At 700mm there is groundwater seepage and side wall collapses.
0.7		
0.8		
0.9		
1		
1.1		
1.2		
1.3		
1.4		
1.5		
1.6		
1.7		
1.8		
1.9		
2		Termination Depth at 1.6 m

TESTPIT LOG RESERVOIR 04

PROJECT NUMBER CAROLINA BULK WATER S DRILLING DATE 27/03/2025 COORDINATES -26.099177S 30.120899E
CLIENT KUFANIKIWA CONSULTING TOTAL DEPTH 1.6m

COMMENTS Sidewall Collapse and groundwater Seepage 800mm

LOGGED BY M Hadebe
CHECKED BY T Ndaba

Depth (m)	Graphic Log	Material Description
0.1		Moist, Dark Brown, Soft, Residual/Intact, Silty Sands with Fine Roots
0.2		SAMPLE: 1IND
0.3		Same material as TP1, TP2 and TP3
0.4		
0.5		Moist, Light Brown, Very Soft, Residual/Intact, Silty Clayey Sands.
0.6		SAMPLE: 1IND
0.7		At 800mm there is groundwater seepage and side wall collapses.
0.8		
0.9		
1		
1.1		
1.2		
1.3		
1.4		
1.5		
1.6		
1.7		
1.8		
1.9		
2		Termination Depth at 1.6 m

13 ANNEXURE C: DCP TESTING RESULTS

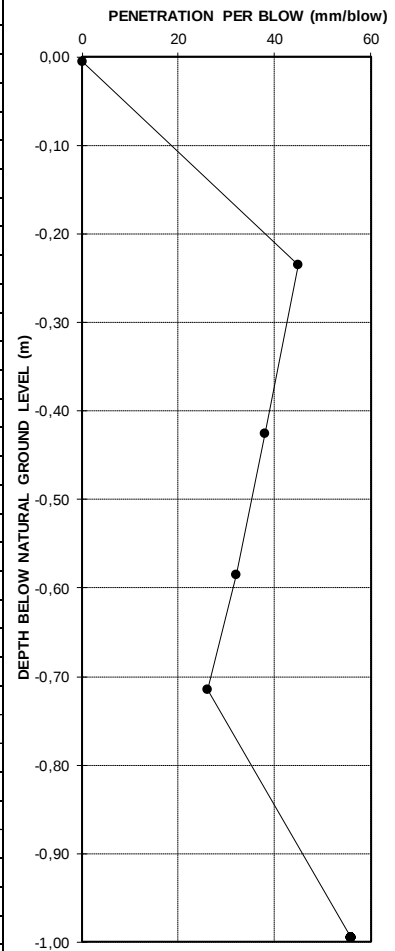
DYNAMIC CONE PENETROMETER (DCP)



Client: Kufanikiwa
Project Name: Silobela Pipeline
Project Number: 0
Job no: Ground Assessment
Blow Interval: 5

Testpit No: DCP1
Section no: 0
Chainage: Carolina Bulk Water
Offset: 0,0
Start depth: 5

Lane: 0
GPS (X): 30,089516
GPS (Y): 26,093592
Date: 27-03-2025

[illegible]

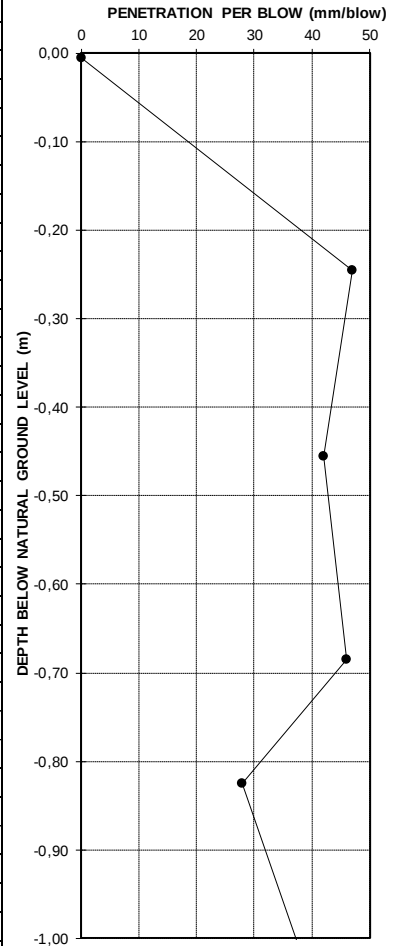
BAV CONSULTING

Lane: 0
GPS (X): 30,092785
GPS (Y): 26,090532
Date: 27-03-2025

The graph displays the relationship between penetration per blow and depth below the natural ground level. The data points are as follows:

Depth Below Natural Ground Level (m)	Penetration per Blow (mm/blow)
0.00	0
-0.25	45
-0.45	42
-0.68	45
-0.82	28

A linear trendline is shown, indicating a general increase in penetration with depth, with a slight deviation at the deepest point.



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Lane: 0
GPS (X): 30,096778
GPS (Y): 26,088541
Date: 27-03-2025

Depth below Natural Ground Level (m)	Penetration per Blow (mm/blow)
0.00	0
-0.10	20
-0.20	40
-0.26	45
-0.51	45
-0.78	45
-0.90	20
-1.00	0

Client: Kufanikiwa	Testpit No: DCP4	Lane: 0
Project Name: Silobela Pipeline	Section no: 0	GPS (X): 30,101358
Project Number: 0	Chainage: Carolina Bulk Water	GPS (Y): 26,090387
Job no: Ground Assessment	Offset: 0,0	Date: 27-03-2025
Blow Interval: 5	Start depth: 10	

[illegible]

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```
Lane: 0
GPS (X): 30,105923
GPS (Y): 26,092355
Date: 27-03-2025
```

Depth below natural ground level (m)	Penetration per blow (mm/blow)
0.00	0
-0.28	55
-0.41	25
-0.60	35
-0.78	38
-0.90	22

Lane: 0
GPS (X): 30,110584
GPS (Y): 26,094253
Date: 27-03-2025

Figure 1 is a line graph showing the relationship between Penetration per Blow (mm/blow) on the X-axis and Depth below Natural Ground Level (m) on the Y-axis. The X-axis ranges from 0 to 40, and the Y-axis ranges from 0.00 to -1.00. The graph shows a series of data points connected by lines, illustrating the penetration of a 100 mm diameter cone into the soil at various depths. The penetration generally increases with depth, with a notable increase between 0.60 m and 0.70 m depth.

Depth below Natural Ground Level (m)	Penetration per Blow (mm/blow)
0.00	0
0.17	34
0.28	21
0.39	21
0.50	21
0.61	21
0.70	18
0.82	21
0.90	18
1.00	21

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Lane: 0
GPS (X): 30,115081
GPS (Y): 26,096256
Date: 27-03-2025

Figure 1 is a line graph showing the relationship between Penetration per Blow (mm/blow) and Depth below Natural Ground Level (m). The x-axis represents Penetration per Blow (mm/blow) and ranges from 0 to 50. The y-axis represents Depth below Natural Ground Level (m) and ranges from 0.00 to -1.00. The graph shows a single data series with points connected by lines, illustrating how penetration varies with depth.

Depth below Natural Ground Level (m)	Penetration per Blow (mm/blow)
0.00	0
-0.20	40
-0.32	25
-0.45	25
-0.58	25
-0.67	20
-0.79	25
-0.90	20

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Client: Kufanikiwa	Testpit No: DCP8	Lane: 0
Project Name: Silobela Pipeline	Section no: 0	GPS (X): 30,119647
Project Number: 0	Chainage: Carolina Bulk Water	GPS (Y): 26,098202
Job no: Ground Assessment	Offset: 0,0	Date: 27-03-2025
Blow Interval: 5	Start depth: 0	

[illegible]

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Client: Kufanikiwa	Testpit No: DCP9 Res01	Lane: 0
Project Name: Reservoir 01	Section no: 0	GPS (X): 30,120779
Project Number: 0	Chainage: Carolina Bulk Water	GPS (Y): 26,099095
Job no: Ground Assessment	Offset: 0,0	Date: 27-03-2025
Blow Interval: 5	Start depth: 5	

[illegible]

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Lane: 0
GPS (X): 30,120728
GPS (Y): 26,099169
Date: 27-03-2025

Depth Below Natural Ground Level (m)	Penetration per Blow (mm/blow)
0.00	0
0.20	35
0.33	25
0.70	75
1.00	60

Lane: 0
GPS (X): 30,120941
GPS (Y): 26,099107
Date: 27-03-2025

Depth below Natural Ground Level (m)	Penetration per Blow (mm/blow)
0.00	0
-0.18	35
-0.40	40
-0.78	10
-1.00	30

Lane: 0
GPS (X): 30,120899
GPS (Y): 26,099177
Date: 27-03-2025

Graph showing Penetration per Blow (mm/blow) versus Depth Below Natural Ground Level (m). The data points are plotted as follows:

Depth Below Natural Ground Level (m)	Penetration per Blow (mm/blow)
0.00	0
-0.15	25
-0.29	25
-0.42	25
-0.80	75

14 ANNEXURE D: LABORATORY TESTING RESULTS

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD CIVIL ENGINEERING MATERIALS TESTING LABORATORY Reg. No. : 1965 / 009585 / 07 11 HALSTED ROAD - 24 DAVLEN PARK - MKONDENI - P.O.BOX 846 PIETERMARITZBURG - 3200 TELEPHONE : 033 - 386 9095 TELEFAX : 033 - 386 1878 email : shikar@soilco.co.za			
			 T 0823
Date	: 2025-05-16		
For the Attention of	: Thanda Ndaba		
Customer Name	: BAV Consulting		
Address	: 103 Woodford Essex Gardens 1 Nelson Drive 3630		
Project Information	: Carolina Bulk Water Supply - Reservoir & Pipeline		
Job Card Number	: 258167		
Sample Number / s	: P3225 - P3249		
Dear Sir / Madam,			
Herewith, please find the report(s), pertaining to the above project. All tests conducted are in accordance with prescribed test method(s). Information herein consists of the following : -			
Materials Report and Reference No.	Test Conducted	Prescribed Method	No. of Pages
Materials Report (Soilco SF 33)	Sieve Analysis	SANS 3001 GR 1	12
	Atterberg Limits	SANS 3001 GR 10 - GR 12	
	The Determination of Maximum Dry Density & Optimum Moisture Content	SANS 3001 GR 30	
	California Bearing Ratio	SANS 3001 GR 40	
Moisture / Density Relationship (Soilco SF 38)	The Determination of Maximum Dry Density & Optimum Moisture Content	SANS 3001 GR 30	13
We thank you for your valued support and look forward to assisting you in the near future. Yours faithfully,  _____ For Soilco (Technical Signatory) S. Jayraj Page 1 of 28			
Any test results contained in this report and marked with * in the table above are " Not SANAS Accredited ", and are Not included in the Schedule of Accreditation for this Laboratory. Any information contained in this test report pertain only to the areas of samples as received and tested at the Laboratory . Documents may only be reproduced or published in their full context. Any information in relation to the client and associated test results, gained by the laboratory prior, during or after the test process will be treated as confidential and will not be reproduced or disclosed to any person or organization, without the prior written consent from the client, unless required by law or covered by legally enforceable, signed confidentiality undertakings (i.e. SANAS Assessors or Internal Auditors). If the arrangement is not suitable to you, our client, please contact the Management of Soilco Materials Investigations (Pty) Ltd. While every care is taken to ensure that all tests are carried out in accordance with recognised standards, neither Soilco Materials Investigations (Pty) Ltd nor its employees shall be liable in any way whatsoever for any error made in the execution or reporting of tests or any erroneous conclusions drawn therefrom or for any consequences thereof. All interpretations, Interpolations, Opinions and / or Classifications contained in this report falls outside our scope of accreditation. Unless otherwise requested or stated, all samples will be discarded after a period of 3 months. Deviation from Test Method : - Moisture Contents Dried Overnight at 105°C to 110°C. 2022-03-17 Revision 2 Soilco SF 125			

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



Reg. No. : 1965 / 009585 / 07

11 HALSTED ROAD - 24 DAVLEN PARK - MKONDENI - P.O.BOX 846 - PIETERMARITZBURG
TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikar@soilco.co.za



T 0823

Customer : BAV Consulting Job Card No. : 259167
Project : Carolina Bulk Water Supply - Reservoir Date Received : 2025-04-16
Condition of Sample : Moist Date Tested : 2025-04-16 to 2025-05-15
Environmental Conditions : Date Reported : 2025-05-16
Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3225	P3226			
Field Number	-	-			
Position in field / Location	TP 01 - Reservoir				
Depth (m)	0.0 - 0.4	0.4 - 1.6			
Sample Description	Dk. Br. Silty Sands	Lt. Br. Silty Clayey Sands			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm		100			
14.0 mm		99			
5.0 mm		100	97		
2.0 mm		99	94		
0.425 mm		84	80		
0.075 mm		20.7	23.1		
Grading Modulus SANS 3001 PR 5		0.96	1.03		

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	15	15			
Coarse - Fine Sand (%)	29	25			
Medium - Fine Sand (%)	20	21			
Fine - Fine Sand (%)	14	15			
Silt and Clay (%)	21	24			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	SP	SP			
Linear Shrinkage (%)	0.6	0.5			

Materials Classification

Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #	G7	G7			
COLTO Classification #	G7	G7			
TRH 14 Classification (1985) #	G7	G7			

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m³)	2098	2193			
Optimum Moisture Content (%)	7.0	6.6			

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction	44	76			
CBR @ 98 % Compaction	34	56			
CBR @ 95 % Compaction	24	35			
CBR @ 93 % Compaction	19	26			
CBR @ 90 % Compaction	13	17			
Swell @ 100 % Compaction	0.45	0.35			

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. [Signature] (Technical Signatory)

2015-05-12

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Soilco SF 33

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



Reg. No. : 1965 / 009585 / 07

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TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikar@soilco.co.za



T 0823

Customer : BAV Consulting
Project : Carolina Bulk Water Supply - Reservoir
Condition of Sample : Moist
Environmental Conditions :
Sampling Process : Samples Delivered by Customer

Job Card No. : 259167
Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Date Reported : 2025-05-16
Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3227	P3228			
Field Number	-	-			
Position in field / Location	TP 02 - Reservoir				
Depth (m)	0.0 - 0.3	0.3 - 1.6			
Sample Description	Dk.Br Silty Sands	Lt.Br Silty Clayey Sands.			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm					
14.0 mm					
5.0 mm					
2.0 mm					
0.425 mm					
0.075 mm					
Grading Modulus	SANS 3001 PR 5	0.95	0.94		

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	16	13			
Coarse - Fine Sand (%)	26	26			
Medium - Fine Sand (%)	23	23			
Fine - Fine Sand (%)	13	14			
Silt and Clay (%)	22	24			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	NP	SP			
Linear Shrinkage (%)	0.0	0.5			

Materials Classification

Classification Group Index	#	A-2-4	A-2-4		
COTO (Draft)	#		G7		
COLTO Classification	#		G7		
TRH 14 Classification (1985)	#		G7		

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m ³)		2184			
Optimum Moisture Content (%)		7.1			

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction		66			
CBR @ 98 % Compaction		47			
CBR @ 95 % Compaction		28			
CBR @ 93 % Compaction		20			
CBR @ 90 % Compaction		12			
Swell @ 100 % Compaction		0.35			

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. Jayraj (Technical Signatory)

2015-05-12

Revision 1

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Soilco SF 33

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				T 0823	
Customer : BAV Consulting		Job Card No. : 259167			
Project : Carolina Bulk Water Supply - Reservoir		Date Received : 2025-04-16			
Condition of Sample : Moist		Date Tested : 2025-04-16 to 2025-05-15			
Environmental Conditions :		Date Reported : 2025-05-16			
Sampling Process : Samples Delivered by Customer		Date Sampled : 2025-04-16			
MATERIALS TEST REPORT					
Laboratory Number	P3229	P3230			
Field Number	-	-			
Position in field / Location	TP 03 - Reservoir				
Depth (m)	0.0 - 0.3	0.3 - 1.6			
Sample Description	DK.Br Silty Sands	Lt.Br. Silty Clayey Sands			
Stabilising Agent	Natural	Natural			
Sieve Analysis (Wet Preparation) SANS 3001 - GR 1					
100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm					
14.0 mm					
5.0 mm		100			
2.0 mm	100	99			
0.425 mm	79	80			
0.075 mm	19.4	20			
Grading Modulus SANS 3001 PR 5	1.02	1.02			
Mechanical Analysis - SANS 3001 - GR 1					
Coarse Sand (%)	20	19			
Coarse - Fine Sand (%)	27	24			
Medium - Fine Sand (%)	20	21			
Fine - Fine Sand (%)	13	15			
Silt and Clay (%)	19	20			
Atterberg Limits - SANS 3001 - GR 10 and GR 12					
Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	NP	NP			
Linear Shrinkage (%)	0.0	0.0			
Materials Classification					
Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #	G8				
COLTO Classification #	G8				
TRH 14 Classification (1985) #	G8				
Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30					
Maximum Dry Density (kg/m ³)	2051				
Optimum Moisture Content (%)	6.7				
California Bearing Ratio - SANS 3001 - GR 40					
CBR @ 100 % Compaction	42				
CBR @ 98 % Compaction	31				
CBR @ 95 % Compaction	19				
CBR @ 93 % Compaction	14				
CBR @ 90 % Compaction	9				
Swell @ 100 % Compaction	0.26				
Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.					
For Soilco : S. Jayraj (Technical Signatory) 2016-05-02		Revision 1		Page 4 of 26 Soilco SF 33	

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



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T 0823

Customer : BAV Consulting
Project : Carolina Bulk Water Supply - Reservoir
Condition of Sample : Moist
Environmental Conditions :
Sampling Process : Samples Delivered by Customer

Job Card No. : 259167
Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Date Reported : 2025-05-16
Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3231	P3232			
Field Number	-	-			
Position in field / Location	TP 04 - Reservoir				
Depth (m)	0.0 - 0.4	0.4 - 1.6			
Sample Description	Dk.Br. Silty Sands	Lt.Br Silty Clayey Sands			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm	Percentage Passing				
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm					
14.0 mm					
5.0 mm					
2.0 mm		100	100		
0.425 mm		82	84		
0.075 mm		23.1	23.2		
Grading Modulus SANS 3001 PR 5		0.95	0.93		

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	18	16			
Coarse - Fine Sand (%)	21	24			
Medium - Fine Sand (%)	22	21			
Fine - Fine Sand (%)	17	16			
Silt and Clay (%)	23	23			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	NP	NP			
Linear Shrinkage (%)	0.0	0.0			

Materials Classification

Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #					
COLTO Classification #					
TRH 14 Classification (1985) #					

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m ³)					
Optimum Moisture Content (%)					

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction					
CBR @ 98 % Compaction					
CBR @ 95 % Compaction					
CBR @ 93 % Compaction					
CBR @ 90 % Compaction					
Swell @ 100 % Compaction					

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. J. (Technical Signatory)
2015-04-12

Revision 1

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SOILCO MATERIALS INVESTIGATIONS (PTY) LTD CIVIL ENGINEERING MATERIALS TESTING LABORATORY Reg. No. : 1965 / 009585 / 07 11 HALSTED ROAD - 24 DAVLEN PARK - MKONDENI - P.O.BOX 846 - PIETERMARITZBURG TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikan@soilco.co.za					
				T 0823	
Customer : BAV Consulting Project : Carolina Bulk Water Supply - Pipeline		Job Card No. : 259167 Date Received : 2025-04-16 Date Tested : 2025-04-16 to 2025-05-15 Date Reported : 2025-05-16 Date Sampled : 2025-04-16			
Condition of Sample : Moist Environmental Conditions : Sampling Process : Samples Delivered by Customer					
MATERIALS TEST REPORT					
Laboratory Number		P3233	P3234	P3235	
Field Number		-	-	-	
Position in field / Location		TP 01 - Pipeline			
Depth (m)		0 - 0.28	0.28 - 0.8	0.8 - 1.0	
Sample Description		Dk.R. Silty Sands	Lt.Br. Silty Sands with Shale	Lt.Br.Y. Silty Clayey Sands	
Stabilising Agent		Natural	Natural	Natural	
Sieve Analysis (Wet Preparation) - SANS 3001 - GR 1					
100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm		100	100	100	
14.0 mm		98	99	98	
5.0 mm		92	87	89	
2.0 mm		88	76	82	
0.425 mm		84	64	71	
0.075 mm		58.1	32.7	41.1	
Grading Modulus SANS 3001 PR 5		0.70	1.27	1.06	
Mechanical Analysis - SANS 3001 - GR 1					
Coarse Sand (%)		5	16	14	
Coarse - Fine Sand (%)		8	14	12	
Medium - Fine Sand (%)		10	16	14	
Fine - Fine Sand (%)		11	11	10	
Silt and Clay (%)		66	43	50	
Atterberg Limits - SANS 3001 - GR 10 and GR 12					
Liquid Limit (%)		32	21	31	
Plasticity Index (%)		8	7	11	
Linear Shrinkage (%)		4.5	3.5	5.5	
Materials Classification					
Classification Group Index #		A-4	A-2-4	A-6	
COTO (Draft) #			G7		
COLTO Classification #			G7		
TRH 14 Classification (1985) #			G7		
Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30					
Maximum Dry Density (kg/m³)			2102		
Optimum Moisture Content (%)			6.2		
California Bearing Ratio - SANS 3001 - GR 40					
CBR @ 100 % Compaction			40		
CBR @ 98 % Compaction			32		
CBR @ 95 % Compaction			23		
CBR @ 93 % Compaction			19		
CBR @ 90 % Compaction			13		
Swell @ 100 % Compaction			0.32		
Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.					
For Soilco / [Signature] (Technical Signatory) 2016-04-22		Revision 1		Page 6 of 26 Soilco SF 33	

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD CIVIL ENGINEERING MATERIALS TESTING LABORATORY Reg. No. : 1965 / 009585 / 07 11 HALSTED ROAD - 24 DAVLEN PARK - MKONDENI - P.O.BOX 846 - PIETERMARITZBURG TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikan@soilco.co.za					
				T 0823	
Customer : BAV Consulting Project : Carolina Bulk Water Supply - Pipeline Condition of Sample : Moist Environmental Conditions : Sampling Process : Samples Delivered by Customer		Job Card No. : 259157 Date Received : 2025-04-16 Date Tested : 2025-04-16 to 2025-05-15 Date Reported : 2025-05-16 Date Sampled : 2025-04-16			
MATERIALS TEST REPORT					
Laboratory Number		P3236	P3236 A		
Field Number		-	-		
Position in field / Location		TP 02 - Pipeline			
Depth (m)		0 - 0.8	0.8 - 1.0		
Sample Description		DK.R. Silty Sands	L.R. Silty Clayey Sands		
Stabilising Agent		Natural	Natural		
Sieve Analysis (Wet Preparation) SANS 3001 - GR 1					
100.0 mm	Percentage Passing				
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm					
14.0 mm			100		
5.0 mm		100	97		
2.0 mm		98	87		
0.425 mm		84	75		
0.075 mm		34.6	32.4		
Grading Modulus SANS 3001 PR 5		0.83	1.06		
Mechanical Analysis - SANS 3001 - GR 1					
Coarse Sand (%)		14	14		
Coarse - Fine Sand (%)		22	13		
Medium - Fine Sand (%)		17	20		
Fine - Fine Sand (%)		12	16		
Silt and Clay (%)		35	37		
Atterberg Limits - SANS 3001 - GR 10 and GR 12					
Liquid Limit (%)		CBD	28		
Plasticity Index (%)		SP	7		
Linear Shrinkage (%)		1.25	3.5		
Materials Classification					
Classification Group Index #		A-2-4	A-2-4		
COTO (Draft) #		G8	G9		
COLTO Classification #		G8	G9		
TRH 14 Classification (1985) #		G8	G9		
Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30					
Maximum Dry Density (kg/m³)		1966	1971		
Optimum Moisture Content (%)		8.3	8.3		
California Bearing Ratio - SANS 3001 - GR 40					
CBR @ 100 % Compaction		23	25		
CBR @ 98 % Compaction		18	19		
CBR @ 95 % Compaction		13	12		
CBR @ 93 % Compaction		10	9		
CBR @ 90 % Compaction		7	6		
Swell @ 100 % Compaction		1.17	0.66		
Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.					
For Soilco - (Technical Signatory) 2015-05-12		Revision 1		Page 7 of 26 Soilco SF 33	

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



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T 0823

Customer : BAV Consulting
Project : Carolina Bulk Water Supply - Pipeline
Condition of Sample : Moist
Environmental Conditions :
Sampling Process : Samples Delivered by Customer

Job Card No. : 259167
Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Date Reported : 2025-05-16
Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3237	P3238			
Field Number	-	-			
Position in field / Location	TP 03 - Pipeline				
Depth (m)	0 - 0.2	0.2 - 1.0			
Sample Description	Dk.Br. Silty Sands	Lt.R Silty Clayey Sands			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm	Percentage Passing				
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm					
14.0 mm			100		
5.0 mm		100	97		
2.0 mm		98	87		
0.425 mm		86	75		
0.075 mm		27.1	33.3		
Grading Modulus SANS 3001 PR 5		0.89	1.04		

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	12	13			
Coarse - Fine Sand (%)	18	13			
Medium - Fine Sand (%)	23	20			
Fine - Fine Sand (%)	19	15			
Silt and Clay (%)	28	38			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	28			
Plasticity Index (%)	SP	5			
Linear Shrinkage (%)	1.15	2.5			

Materials Classification

Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #		G7			
COLTO Classification #		G7			
TRH 14 Classification (1985) #		G7			

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m³)		2062			
Optimum Moisture Content (%)		8.9			

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction		80			
CBR @ 98 % Compaction		54			
CBR @ 95 % Compaction		30			
CBR @ 93 % Compaction		20			
CBR @ 90 % Compaction		11			
Swell @ 100 % Compaction		0.06			

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. [Signature] (Technical Signatory)
2015-05-12

Revision 1

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Soilco SF 33

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



Reg. No.: 1965 / 009585 / 07

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TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikar@soilco.co.za



T 0823

Customer : BAV Consulting
Project : Carolina Bulk Water Supply - Pipeline
Condition of Sample : Moist
Environmental Conditions :
Sampling Process : Samples Delivered by Customer

Job Card No. : 259167
Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Date Reported : 2025-05-16
Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3239	P3240			
Field Number	-	-			
Position in field / Location	TP 04 - Pipeline				
Depth (m)	0 - 0.6	0.6 - 1.0			
Sample Description	Lt.Br Silty Sands + Weathered Sandstone	White Reddish Weathered Sandstone			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm	100				
14.0 mm	88				
5.0 mm	78	100			
2.0 mm	72	99			
0.425 mm	52	75			
0.075 mm	18.5	28.9			
Grading Modulus SANS 3001 PR 5	1.58	0.97			

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	28	25			
Coarse - Fine Sand (%)	18	25			
Medium - Fine Sand (%)	17	12			
Fine - Fine Sand (%)	12	9			
Silt and Clay (%)	26	29			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	SP	SP			
Linear Shrinkage (%)	0.95	0.6			

Materials Classification

Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #	G6	G8			
COLTO Classification #	G6	G8			
TRH 14 Classification (1985) #	G6	G8			

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m³)	1965	2012			
Optimum Moisture Content (%)	6.6	9.4			

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction	69	37			
CBR @ 98 % Compaction	52	27			
CBR @ 95 % Compaction	35	16			
CBR @ 93 % Compaction	26	12			
CBR @ 90 % Compaction	17	7			
Swell @ 100 % Compaction	0.05	0.24			

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. Pyraj (Technical Signatory)
2016-05-02

Revision 1

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Soilco SF 33

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



Reg. No. : 1965 / 009585 / 07

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TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikar@soilco.co.za



T 0823

Customer : BAV Consulting Job Card No. : 259167
Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
Condition of Sample : Moist Date Tested : 2025-04-16 to 2025-05-15
Environmental Conditions : Date Reported : 2025-05-16
Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3241	P3242	P3243		
Field Number	-	-	-		
Position in field / Location	TP 05 - Pipeline				
Depth (m)	0 - 0.4	0.4 - 0.9	0.9 - 1.0		
Sample Description	DK.Br Silty Sands	LT.Br. Silty Sands	LT.Br.Or. Silty Sands + Sandstone Pebbles		
Stabilising Agent	Natural	Natural	Natural		

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm			100		
14.0 mm	100	100	88		
5.0 mm	95	44	59		
2.0 mm	89	37	52		
0.425 mm	75	29	44		
0.075 mm	20.6	11.4	19		
Grading Modulus SANS 3001 PR 5	1.15	2.23	1.85		

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	16	23	15		
Coarse - Fine Sand (%)	19	12	15		
Medium - Fine Sand (%)	23	17	17		
Fine - Fine Sand (%)	19	18	16		
Silt and Clay (%)	23	31	37		

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD	27		
Plasticity Index (%)	SP	SP	7		
Linear Shrinkage (%)	1.2	1.4	3.5		

Materials Classification

Classification Group Index #	A-2-4	A-1-a	A-2-4		
COTO (Draft) #		G8			
COLTO Classification #		G8			
TRH 14 Classification (1985) #		G8			

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m ³)		2058			
Optimum Moisture Content (%)		8.9			

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction		22			
CBR @ 98 % Compaction		17			
CBR @ 95 % Compaction		12			
CBR @ 93 % Compaction		10			
CBR @ 90 % Compaction		7			
Swell @ 100 % Compaction		0.23			

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. J. J. (Technical Signatory)

2015/05/07

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SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



Reg. No.: 1965 / 009585 / 07

11 HALSTED ROAD - 24 DAVLEN PARK - MKONDENI - P.O.BOX 846 - PIETERMARITZBURG

TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikar@soilco.co.za



T 0823

Customer : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Condition of Sample : Moist Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3244	P3245			
Field Number	-	-			
Position in field / Location	TP 06 - Pipeline				
Depth (m)	0 - 0.5	0.5 - 1.0			
Sample Description	Lt.Br. Silty Sands	DK.Br. Silty Sands			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm		100			
14.0 mm		97	100		
5.0 mm		86	95		
2.0 mm		80	89		
0.425 mm		65	77		
0.075 mm		14.1	16		
Grading Modulus SANS 3001 PR 5		1.41	1.18		

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	19	14			
Coarse - Fine Sand (%)	19	21			
Medium - Fine Sand (%)	24	25			
Fine - Fine Sand (%)	21	22			
Silt and Clay (%)	18	18			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	NP	NP			
Linear Shrinkage (%)	0.0	0.0			

Materials Classification

Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #		G8			
COLTO Classification #		G8			
TRH 14 Classification (1985) #		G8			

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kgm ³)		1935			
Optimum Moisture Content (%)		7.5			

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction		42			
CBR @ 98 % Compaction		31			
CBR @ 95 % Compaction		20			
CBR @ 93 % Compaction		14			
CBR @ 90 % Compaction		9			
Swell @ 100 % Compaction		0.24			

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. J. J. (Technical Signatory)
 2015-05-12

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T 0823

Customer : BAV Consulting
Project : Carolina Bulk Water Supply - Pipeline

Job Card No. : 259167
Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Date Reported : 2025-05-16
Date Sampled : 2025-04-16

Condition of Sample : Moist
Environmental Conditions :
Sampling Process : Samples Delivered by Customer

MATERIALS TEST REPORT

Laboratory Number	P3246	P3247			
Field Number	-	-			
Position in field / Location	TP 07 - Pipeline				
Depth (m)	0 - 0.4	0.4 - 1.0			
Sample Description	Li.Br Silty Sands	Di.Br. Silty Sands			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm	Percentage Passing				
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm		100	100		
14.0 mm		99	99		
5.0 mm		89	92		
2.0 mm		75	86		
0.425 mm		57	72		
0.075 mm		10	16.8		
Grading Modulus SANS 3001 PR 5		1.57	1.25		

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	23	16			
Coarse - Fine Sand (%)	22	19			
Medium - Fine Sand (%)	24	23			
Fine - Fine Sand (%)	18	22			
Silt and Clay (%)	13	20			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	NP	NP			
Linear Shrinkage (%)	0.0	0.0			

Materials Classification

Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #					
COLTO Classification #					
TRH 14 Classification (1985) #					

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m³)					
Optimum Moisture Content (%)					

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction					
CBR @ 98 % Compaction					
CBR @ 95 % Compaction					
CBR @ 93 % Compaction					
CBR @ 90 % Compaction					
Swell @ 100 % Compaction					

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco (Technical Signatory)

2015-0002

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T 0823

Customer : BAV Consulting
Project : Carolina Bulk Water Supply - Pipeline
Condition of Sample : Moist
Environmental Conditions :
Sampling Process : Samples Delivered by Customer

Job Card No. : 259167
Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Date Reported : 2025-05-16
Date Sampled : 2025-04-16

MATERIALS TEST REPORT

Laboratory Number	P3248	P3249			
Field Number	-	-			
Position in field / Location	TP 08 - Pipeline				
Depth (m)	0 - 0.4	0.4 - 1.0			
Sample Description	Dk.Br. Silty Sands	Lt.Br. Silty Sands			
Stabilising Agent	Natural	Natural			

Sieve Analysis (Wet Preparation) SANS 3001 - GR 1

100.0 mm					
75.0 mm					
63.0 mm					
50.0 mm					
37.5 mm					
28.0 mm					
20.0 mm		100			
14.0 mm		99			
5.0 mm	100	92			
2.0 mm	97	82			
0.425 mm	79	67			
0.075 mm	21	20.1			
Grading Modulus SANS 3001 PR 5	1.03	1.31			

Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	18	17			
Coarse - Fine Sand (%)	22	18			
Medium - Fine Sand (%)	21	20			
Fine - Fine Sand (%)	17	19			
Silt and Clay (%)	22	25			

Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	CBD			
Plasticity Index (%)	SP	NP			
Linear Shrinkage (%)	0.5	0.0			

Materials Classification

Classification Group Index #	A-2-4	A-2-4			
COTO (Draft) #		G8			
COLTO Classification #		G8			
TRH 14 Classification (1985) #		G8			

Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m ³)		2045			
Optimum Moisture Content (%)		5.5			

California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction		22			
CBR @ 98 % Compaction		18			
CBR @ 95 % Compaction		13			
CBR @ 93 % Compaction		11			
CBR @ 90 % Compaction		8			
Swell @ 100 % Compaction		0.35			

Remarks : The COLTO / TRH 14 / COTO Classifications are only based on the above results. Further testing may be required.

For Soilco - S. [Signature] (Technical Signatory)
2015-05-16

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1 UR523

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Reservoir Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3225

Field Reference No. : -

Position in field / Location : TP 01

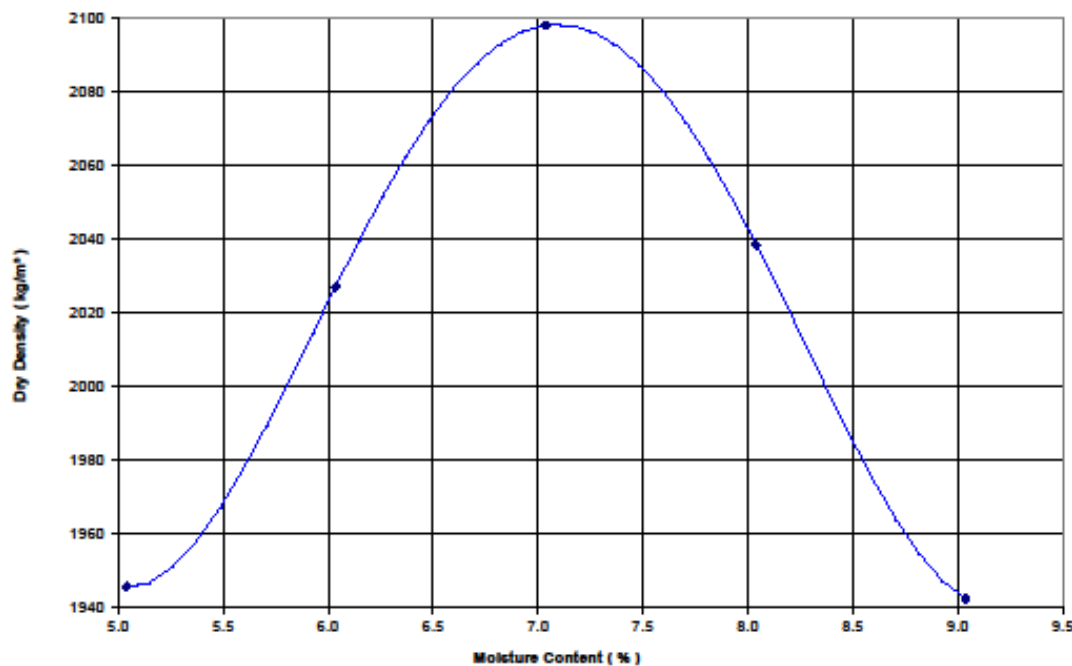
Depth (m) : 0 - 0.4

Material Description : Dk. Br. Silty Sands

Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	5.0	6.0	7.0	8.0	9.0	Maximum Dry Density	2098 kg/m ³
Dry Density (kg/m ³)	1946	2027	2098	2039	1942	Optimum Moisture Content	7.0 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

S. Jayraj (Technical Signatory)

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2015-04-08

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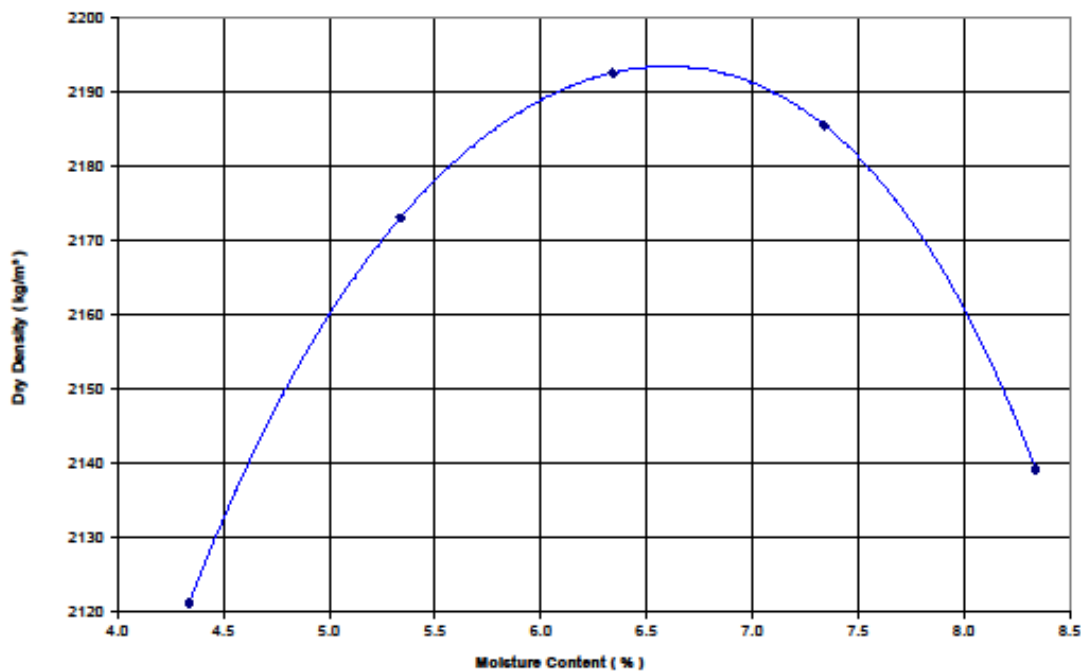
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Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Reservoir Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3226 Field Reference No. : -
 Position in field / Location : TP 01 Depth (m) : 0.4 - 1.6
 Material Description : Lt. Br. Silty Clayey Sands Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	5.3	6.3	7.3	8.3	4.3	Maximum Dry Density	2193 kg/m ³
Dry Density (kg/m ³)	2173	2193	2186	2139	2121	Optimum Moisture Content	6.6 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco : (Technical Signatory)

2015-04-08

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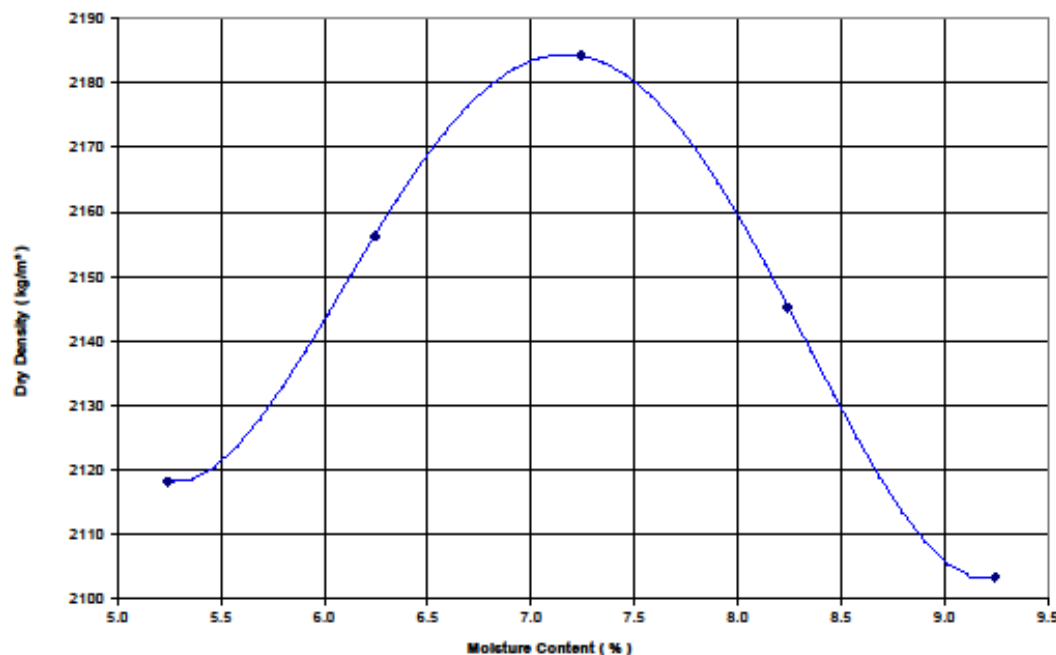
I USZ3

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Reservoir Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3228 Field Reference No. : -
 Position in field / Location : Depth (m) : 0.3 - 1.6
 Material Description : Lt.Br. Silty Clayey Sands Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	5.2	6.2	7.2	8.2	9.2	Maximum Dry Density	2184 kg/m ³
Dry Density (kg/m ³)	2118	2156	2184	2145	2103	Optimum Moisture Content	7.1 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :  S. Jayraj (Technical Signatory)

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2015-04-08

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Soilco SP 38

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URS23

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Reservoir Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3229

Field Reference No. : -

Position in field / Location : TP 03

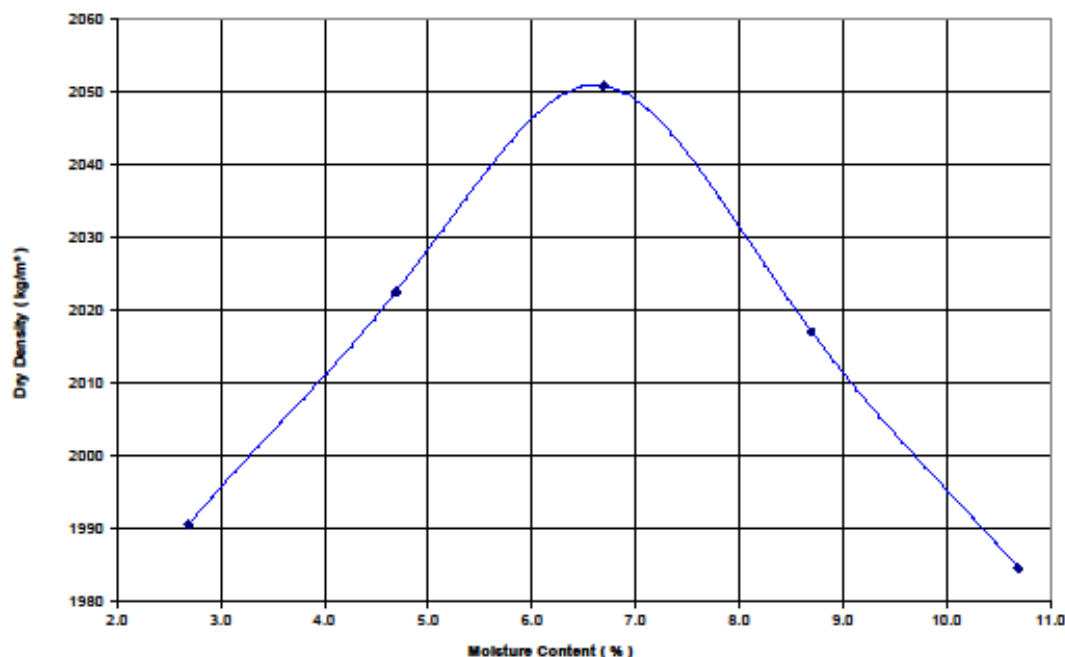
Depth (m) : 0 - 0.3

Material Description : Dk.Br Silty Sands

Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	4.7	6.7	8.7	10.7	2.7	Maximum Dry Density	2051 kg/m ³
Dry Density (kg/m ³)	2023	2051	2017	1985	1991	Optimum Moisture Content	6.7 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

S. Jeyaraj (Technical Signatory)

2015-04-08

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Soilco SF 38

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

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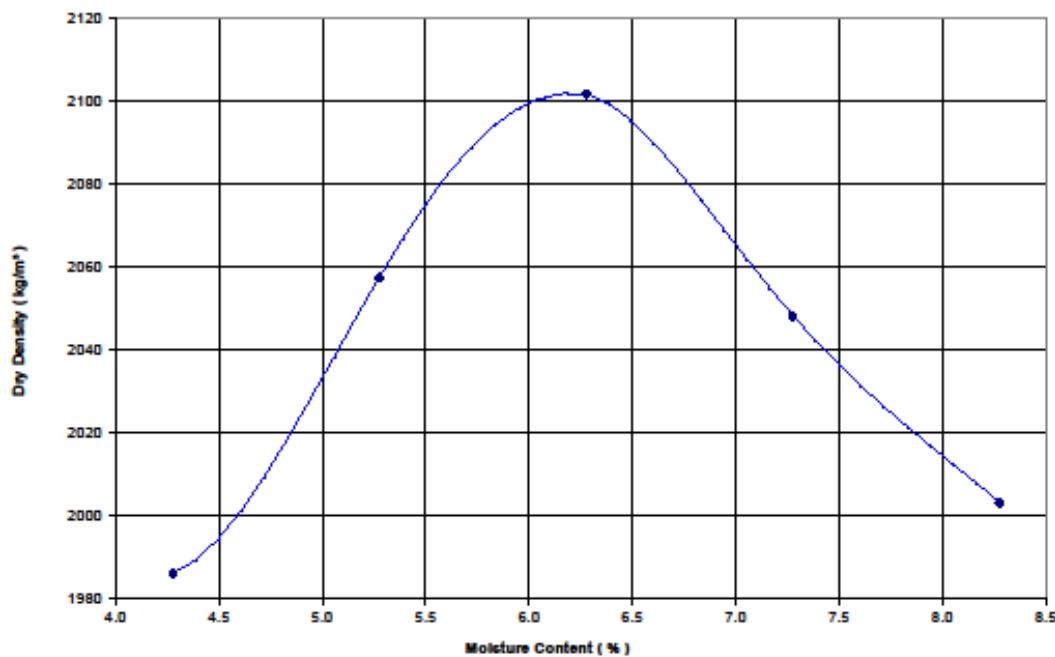
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Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3234 Field Reference No. : -
 Position in field / Location : TP 01 Depth (mm) : 0.28 - 0.8
 Material Description : Lt.Br. Silty Sands with Shale Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	4.3	5.3	6.3	7.3	8.3	Maximum Dry Density	2102 kg/m ³
Dry Density (kg/m ³)	1986	2057	2102	2048	2003	Optimum Moisture Content	6.2 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco : 
 S. Jayaram (Technical Signatory)

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2015-04-08

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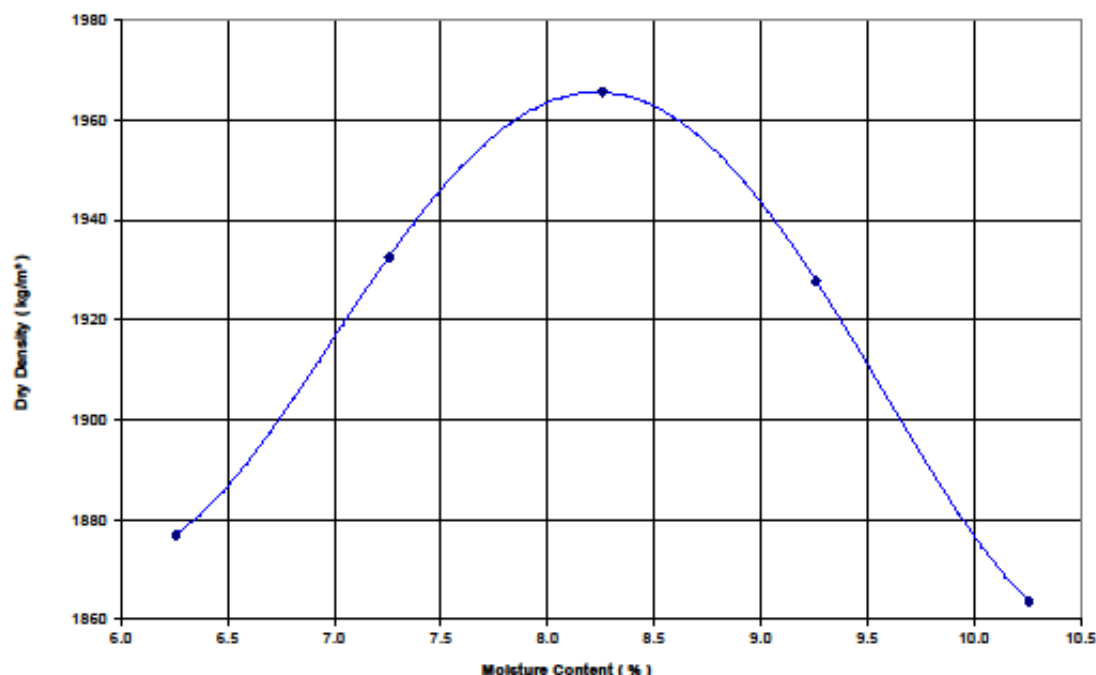
I 08523

Client : BAV Consulting Job Card No. : 259167
Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Environmental Conditions : Date Reported : 2025-05-16
Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3236 Field Reference No. : -
Position in field / Location : TP 02 Depth (m) : 0 - 0.8
Material Description : Dk.R. Silty Sands Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	6.3	7.3	8.3	9.3	10.3	Maximum Dry Density	1966 kg/m ³
Dry Density (kg/m ³)	1877	1933	1966	1928	1863	Optimum Moisture Content	8.3 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

S. Jeyaraj (Technical Signatory)

2015-04-08

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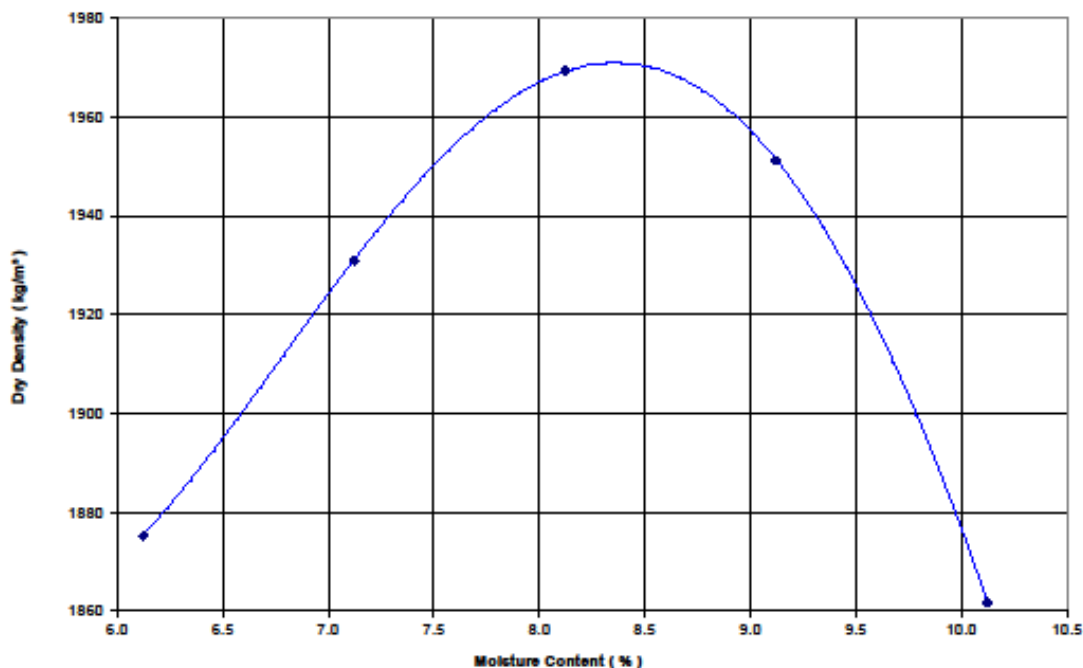
1 US23

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3236 A Field Reference No. : -
 Position in field / Location : TP 02 Depth (m) : 0.8 - 1.0
 Material Description : Lt.R. Silty Clayey Sands Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	6.1	7.1	8.1	9.1	10.1	Maximum Dry Density	1971 kg/m ³
Dry Density (kg/m ³)	1875	1931	1969	1951	1862	Optimum Moisture Content	8.3 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

S. Jayraj (Technical Signatory)

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2015-04-06

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SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



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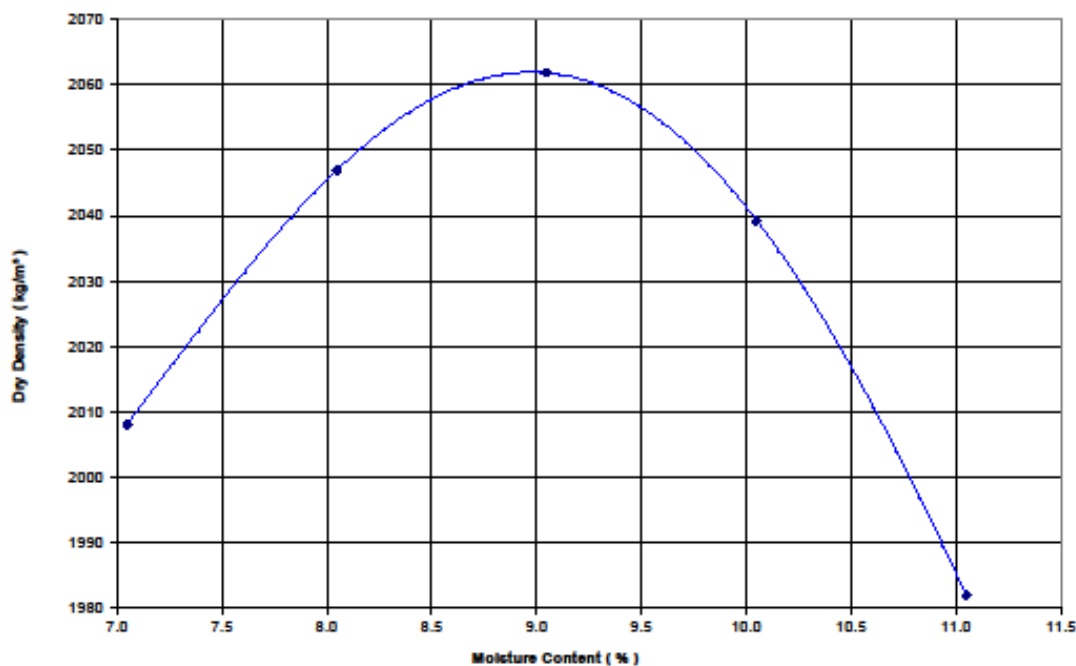
1 US25

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3238 Field Reference No. : -
 Position in field / Location : TP 03 Depth (mm) : 0.2 - 1.0
 Material Description : Lt. R. Silty Clayey Sands Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	7.0	8.0	9.0	10.0	11.0	Maximum Dry Density	2062 kg/m ³
Dry Density (kg/m ³)	2008	2047	2062	2039	1982	Optimum Moisture Content	8.9 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :  (Technical Signatory)

2015-04-08

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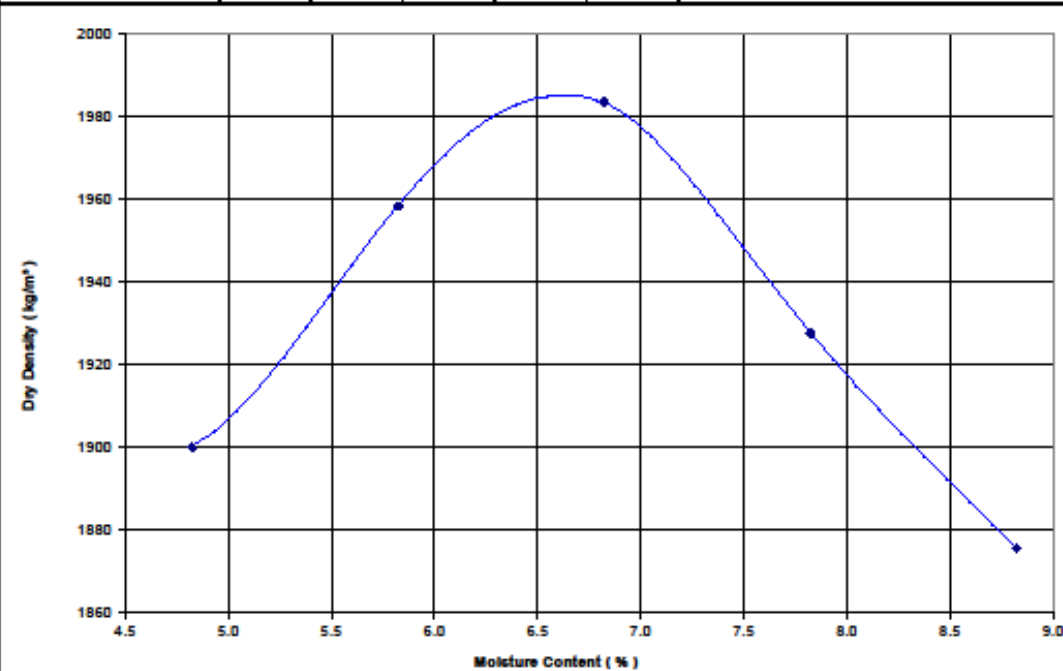
I US23

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3239 Field Reference No. : -
 Position in field / Location : TP 04 Depth (m) : 0 - 0.6
 Material Description : Lt.Br. Silty Sands + Weathered Sandstone Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	4.8	5.8	6.8	7.8	8.8	Maximum Dry Density	1985 kg/m ³
Dry Density (kg/m ³)	1900	1958	1983	1928	1876	Optimum Moisture Content	6.6 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

S. Jayasingh (Technical Signatory)

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2015-04-08

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CIVIL ENGINEERING MATERIALS TESTING LABORATORY



Reg. No. : 1965 / 009585 / 07

11 HALSTED ROAD - 24 DAVLEN PARK - MKONDENI - P.O.BOX 846 - PIETERMARITZBURG

TELEPHONE : 033 386 9095 TELEFAX : 033 386 1878 email : shikar@soilco.co.za



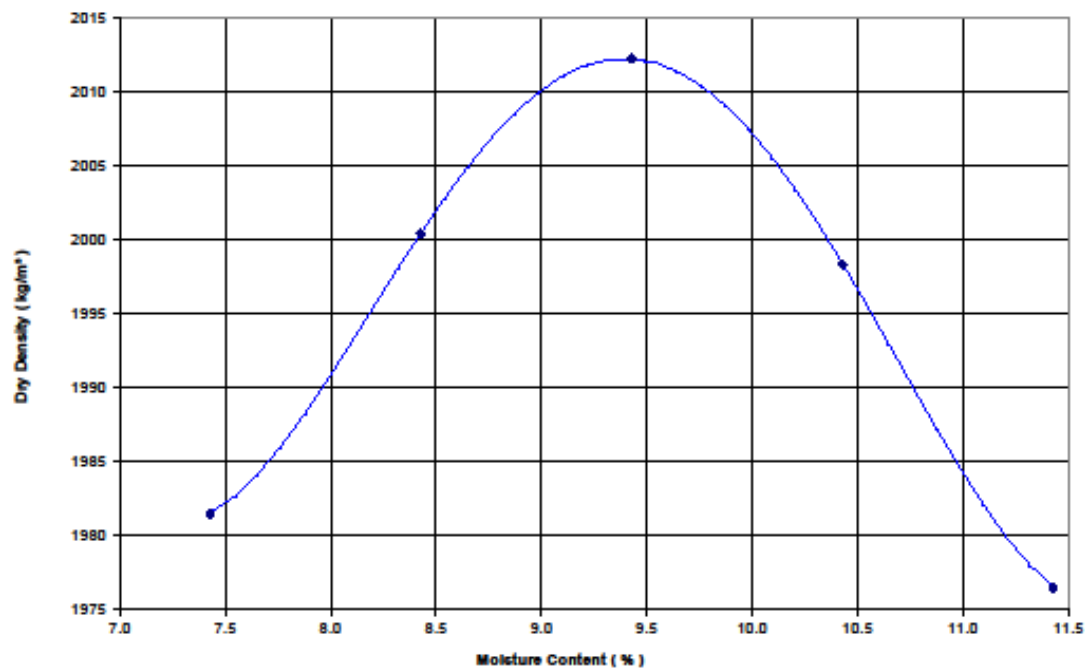
1 US23

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3240 Field Reference No. : -
 Position in field / Location : TP 04 Depth (m) : 0.6 - 1.0
 Material Description : White Reddish Weathered Sandstone Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	7.4	8.4	9.4	10.4	11.4	Maximum Dry Density	2012 kg/m ³
Dry Density (kg/m ³)	1982	2000	2012	1998	1977	Optimum Moisture Content	9.4 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

[Signature]

S. Jeyaraj (Technical Signatory)

2015-04-08

Revision 2

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Soilco SF 38

SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

CIVIL ENGINEERING MATERIALS TESTING LABORATORY



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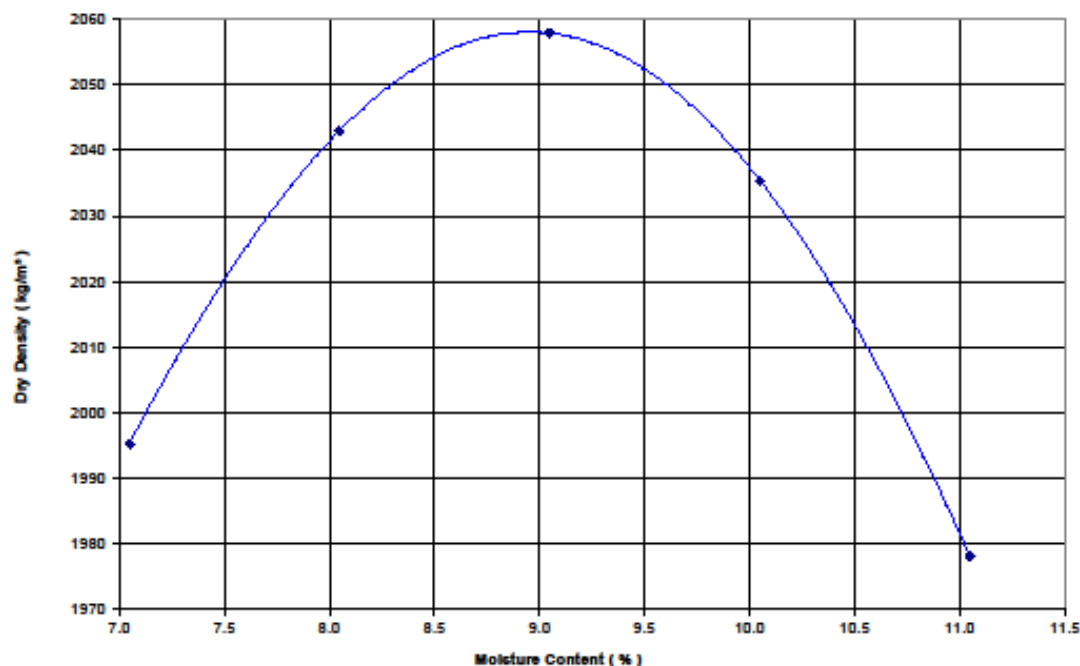
1 US23

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Environmental Conditions : Date Tested : 2025-04-16 to 2025-05-15
 Sampling Process : Samples Delivered by Customer Date Reported : 2025-05-16
 Date Sampled : 2025-04-16

Laboratory Number : P3242 Field Reference No. : -
 Position in field / Location : TP 05 Depth (m) : 0.4 - 0.9
 Material Description : Lt.Br. Silty Sands Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	7.0	8.0	9.0	10.0	11.0	Maximum Dry Density	2058 kg/m ³
Dry Density (kg/m ³)	1995	2043	2058	2035	1978	Optimum Moisture Content	8.9 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :  S. Jayaram (Technical Signatory)

2015-04-06

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I 08523

Client : BAV Consulting Job Card No. : 259167
 Project : Carolina Bulk Water Supply - Pipeline Date Received : 2025-04-16
 Date Tested : 2025-04-16 to 2025-05-15
 Environmental Conditions : Date Reported : 2025-05-16
 Sampling Process : Samples Delivered by Customer Date Sampled : 2025-04-16

Laboratory Number : P3245

Field Reference No. : -

Position in field / Location : TP 06

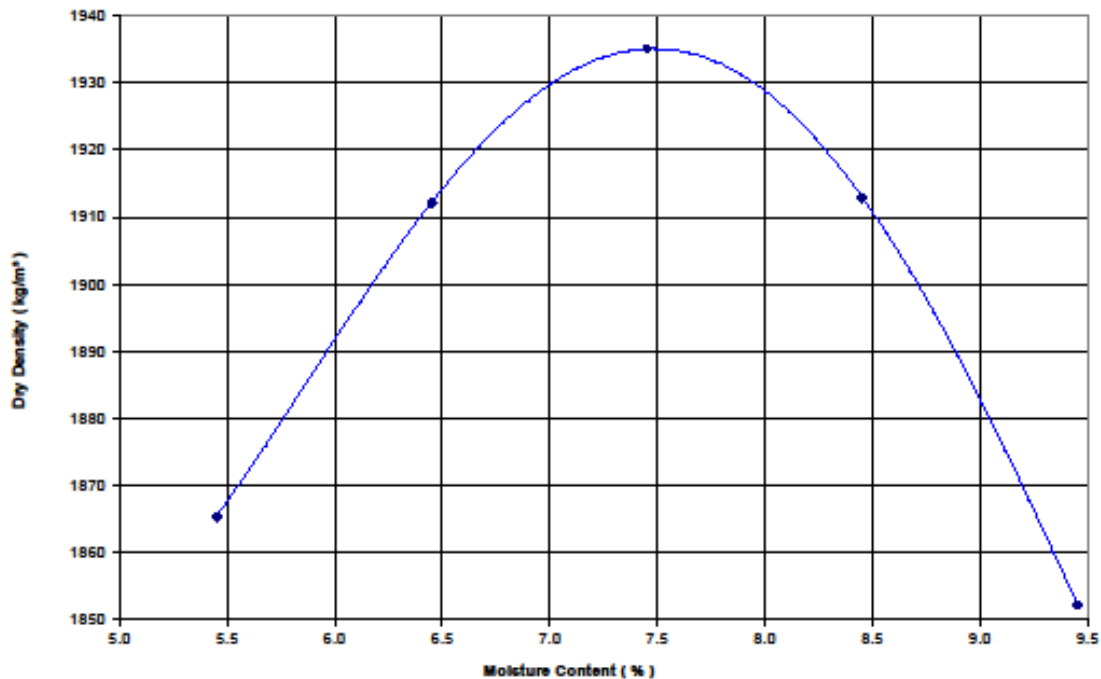
Depth (m) : 0.5 - 1.0

Material Description : Dk.Br. Silty Sands

Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	5.5	6.5	7.5	8.5	9.5	Maximum Dry Density	1935 kg/m ³
Dry Density (kg/m ³)	1886	1912	1935	1913	1852	Optimum Moisture Content	7.6 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

S. Jayraj (Technical Signatory)

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2015-04-08

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SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

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1 UR23

Client : BAV Consulting
Project : Carolina Bulk Water Supply - Pipeline

Job Card No. : 259167
Date Received : 2025-04-16
Date Tested : 2025-04-16 to 2025-05-15
Date Reported : 2025-05-16
Date Sampled : 2025-04-16

Environmental Conditions :
Sampling Process : Samples Delivered by Customer

Laboratory Number : P3249

Field Reference No. : -

Position in field / Location : TP 08

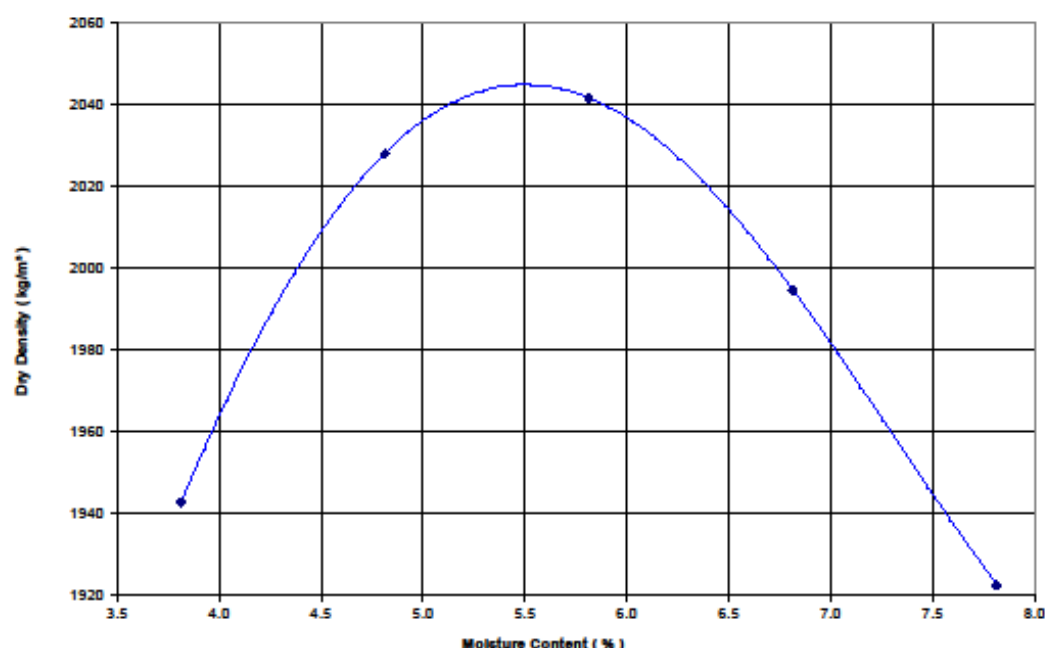
Depth (m) : 0.4 - 1.0

Material Description : Lt.Br. Silty Sands

Condition of Sample : Moist

MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	3.8	4.8	5.8	6.8	7.8	Maximum Dry Density	2045 kg/m ³
Dry Density (kg/m ³)	1943	2028	2042	1995	1923	Optimum Moisture Content	5.5 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

S. Jayaraj (Technical Signatory)

2015-04-06

Revision 2

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Soilco SF 30

Annexure C: CALLM Supply Chain Management Policy

Chief Albert Luthuli Municipality

The transparent, innovative and developmental municipality that improves the quality of life of its people



SUPPLY CHAIN MANAGEMENT POLICY

2024/25

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“*treasury guidelines*” means any guidelines on supply chain management issued by the minister in terms of section 168 of the Act as adopted by council in terms of MFMA s168(3);

“*the Act*” means the Local Government: Municipal Finance Management Act, 2003 (Act No 56 of 2003);

“*the Regulations*” means the Local Government: Municipal Finance Management Act, 2003, Municipal Supply Chain Management Regulations published by Government Notice 868 of 2005;

“*written quotations*” means quotations referred to in section 12(1)(b) of this policy.

CHAPTER 1

IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT POLICY

2. Supply Chain Management Policy

- (1) All officials and other role players in the supply chain management system of the municipality shall implement this policy in a way that
 - (a) Gives effect to
 - (i) Section 217 of the Constitution; and
 - (ii) Part 1 of Chapter 11 and other applicable provisions of the Act;
 - (b) is fair, equitable, transparent, competitive and cost effective;
 - (c) complies with –
 - (i) the Regulations; and
 - (ii) any minimum norms and standards that may be prescribed in terms of section 168 of the Act;
 - (d) is consistent with other applicable legislation;
 - (e) does not undermine the objective for uniformity in supply chain management systems between organs of state in all spheres; and
 - (f) is consistent with national economic policy concerning the promotion of investments and doing business with the public sector.
- (2) This policy applies when the municipality -
 - a. procures goods or services;
 - b. disposes goods no longer needed;
 - c. selects contractors to provide assistance in the provision of municipal services otherwise than in circumstances where Chapter 8 of the Municipal Systems Act applies; or
 - d. selects external mechanisms referred to in section 80(1)(b) of the Municipal Systems Act for the provision of municipal services in

circumstances contemplated in section 83 of that Act.

- (3) This policy, except where provided otherwise, does not apply in respect of the procurement of goods and services contemplated in section 110(2) of the Act, including –
- (a) water from the Department of Water Affairs or a public entity, another municipality or a municipal entity;
 - (b) electricity from Eskom or another public entity, another municipality or a municipal entity;
 - (c) goods and services in respect of servicing of fleet at the dealership. eg Toyota, Nissan, Audi, BMW etc.;
 - (d) accommodation in hotel/lodge where one has to attend a course/workshop/event, or from nearest available (not more than 3 star) hotel/lodge if fully booked.

3. Amendment of the supply chain management policy

- (1) The accounting officer shall –
- (a) at least annually review the implementation of this policy; and
 - (b) when the accounting officer considers it necessary, submit proposals for the amendment of this policy to the council;
- (2) if the accounting officer submits proposals/amendments to the council that differs from the model policy issued by the national treasury, the accounting officer shall
- (a) ensure that such proposed amendments comply with the regulations; and
 - (b) report any deviation from the model policy to the national treasury and the relevant provincial treasury;
- (3) when amending this policy the need for uniformity in supply chain practices, procedures and forms between organs of state in all spheres, particularly to promote accessibility of supply chain management systems for small businesses shall be taken into account.

4. Delegation of supply chain management powers and duties

- (1) The council hereby delegates all powers and duties to the accounting officer which are necessary to enable the accounting officer –
 - (a) to discharge the supply chain management responsibilities conferred on accounting officers in terms of –
 - (i) Chapter 8 or 10 of the Act; and
 - (ii) this policy;
 - (b) to maximise administrative and operational efficiency in the implementation of this policy;
 - (c) to enforce reasonable cost-effective measures for the prevention of fraud, corruption, favouritism and unfair and irregular practices in the implementation of this policy; and
 - (d) to comply with his or her responsibilities in terms of section 115 and other applicable provisions of the Act.
- (2) Sections 79 and 106 of the Act apply to the sub-delegation of powers and duties delegated to an accounting officer in terms of subsection (1).
- (3) The accounting officer may not sub-delegate any supply chain management powers or duties to a person who is not an official of the municipality or to a committee that is not exclusively composed of officials of the municipality;
- (4) This section may not be read as permitting an official to whom the power to make final awards has been delegated, to make a final award in a competitive bidding process otherwise than through the committee system provided for in section 26 of this policy.

5. Sub-delegations

- (1) The accounting officer may in terms of section 79 or 106 of the Act sub delegate any supply chain management powers and duties, including those delegated to the accounting officer in terms of this policy, but any such sub delegation must be consistent with subparagraph (2) of this paragraph and paragraph 4 of this policy.
- (2) The power to make a final award –
 - (a) Above R10 million (VAT included) may not be sub-delegated by the accounting officer;
 - (b) Above R2 million (VAT included), but not exceeding R10 million (VAT included), may be sub- delegated but only to –
 - (i) The chief financial officer;
 - (ii) A senior manager; or
 - (iii) A bid adjudication committee of which the chief financial officer or a senior manager is a member; or
- (3) An official or bid adjudication committee to which the power to make final awards has been sub- delegated in accordance with subparagraph (2) must within five days of the end of each month submit to the official referred to in subparagraph (4) a written report containing particulars of each final award made by such official or committee during that month, including–
 - (a) the amount of the award;
 - (b) the name of the person to whom the award was made; and
 - (c) the reason why the award was made to that person.

(4) A written report referred to in subparagraph (3) must be submitted –

(a) to the accounting officer, in the case of an award by –

- (i) the chief financial officer;
- (ii) a senior manager; or
- (iii) a bid adjudication committee of which the chief financial officer or a senior manager is a member; or

(b) to the chief financial officer or the senior manager responsible for the relevant bid, in the case of an award by –

- (i) a manager referred to in subparagraph (2) (c) (iii); or
- (ii) a bid adjudication committee of which the chief financial officer or a senior manager is not a member.

Subsections (3) and (4) of this policy do not apply to procurements out of petty cash.

This paragraph may not be interpreted as permitting an official to whom the power to make final awards has been sub-delegated, to make a final award in a competitive bidding process otherwise than through the committee system provided for in paragraph 26 of this policy.

No supply chain management decision-making powers may be delegated to an advisor or consultant.

6. Oversight role of council

(1) The council reserves its right to maintain oversight over the implementation of this policy.

(2) For the purposes of such oversight the accounting officer shall -

(a) within 30 days of the end of each financial year, submit a report on the

implementation of this policy and the supply chain management policy of any

municipal entity under the sole or shared control of the municipality, to the council of the municipality; and

- (b) whenever there are serious and material problems in the implementation of this policy, immediately submit a report to the council.
- (3) The accounting officer shall, within 10 days of the end of each quarter, submit a report on the implementation of the supply chain management policy to the executive mayor.
- (4) The reports must be made public in accordance with section 21A of the Municipal Systems Act.

7. Supply chain management unit

- (1) A supply chain management unit is hereby established to implement this policy.
- (2) The supply chain management unit shall operate under the direct supervision of the chief financial officer through the supply chain manager to whom this duty has been delegated in terms of section 82 of the Act.

8. Training of supply chain management officials

The training of officials involved in implementing this policy shall be in accordance with any treasury guidelines on supply chain management training.

CHAPTER 2

SUPPLY CHAIN MANAGEMENT SYSTEM

9. Format of supply chain management system

This policy provides systems for –

- (i) demand management;
- (ii) acquisition management;
- (iii) logistics management;
- (iv) disposal management;
- (v) risk management; and
- (vi) performance management.

Part 1: Demand management

10. System of demand management

- (1) The accounting officer shall establish and implement an appropriate demand management system in order to ensure that the resources required by the municipality support its operational commitments and its strategic goals outlined in its Integrated Development Plan.
- (2) The demand management system shall –
 - (a) include timely planning and management processes to ensure that all goods and services required by the municipality are quantified, budgeted for and timely and effectively delivered at the right locations and at the critical delivery dates, and are of the appropriate quality and quantity at a fair cost;
 - (b) take into account any benefits of economies of scale that may be

derived in the case of acquisitions of a repetitive nature; and

- (c) provide for the compilation of the required specifications to ensure that its needs are met.
- (3) To undertake appropriate industry analysis and research to ensure that innovations and technological benefits are maximized.

Part 2: Acquisition management

11. System of acquisition management

- (1) The accounting officer shall implement the system of acquisition management set out in this part in order to ensure –
- (a) that goods and services are procured by the municipality in accordance with authorised processes only;
 - (b) that expenditure on goods and services is incurred in terms of an approved budget in terms of section 15 of the Act;
 - (c) that the threshold values for the different procurement processes are complied with;
 - (d) that bid documentation, evaluation and adjudication criteria, and general conditions of a contract, are in accordance with any applicable legislation.
 - (e) that any treasury guidelines on acquisition management are properly taken into account.
- (2) When procuring goods or services contemplated in section 110(2) of the Act, the accounting officer shall make public the fact that such goods or services are procured otherwise than through the municipality's supply chain management system, including –
- (a) the kind of goods or services; and
 - (b) the name of the supplier.

12. Range of procurement processes

- (1) The procurement of goods and services through this policy is provided by way of –
 - (a) Petty cash purchases shall be incurred up to a value of R2000(VAT included);
 - (c) formal written price quotations for procurement of a transaction value over—
 - (i) R2000 up to R300 000 (VAT included), in the case of a local municipality;
 - (d) And a competitive bidding process for—
 - (i) procurement above a transaction value of R300 000 (VAT included), in the case of a local municipality
 - (ii) the procurement of long-term contracts.
- (2) The accounting officer may, in writing-
 - (a) lower, but not increase, the different threshold values specified in subsection (1); or
 - (b) direct that –
 - (i) three formal written price quotations be obtained for any specific procurement of a transaction value lower than R30 000; or
 - (ii) a competitive bidding process be followed for any specific procurement of a transaction value lower than the competitive bidding thresholds specified in sub regulation (1)(c)(i)
- (3) Goods or services may not deliberately be split into parts or items of a lesser value merely to avoid complying with the requirements of the policy. When determining transaction values, a requirement for goods or services consisting of different parts or items shall as far as possible be treated and dealt with as a single transaction.

13. General preconditions for consideration of written quotations or bids

A written quotation or bid may not be considered unless the provider who submitted the quotation or bid –

(a) has furnished that provider's –

- (i) Full name;
- (ii) Identification number or company or other registration number; and
- (iii) Tax reference number and VAT registration number, if any
- (iv) Municipal rates account that is not older than 3 months;
- (v) Municipal rates account must not be in arrears for more than 90 days;
- (vi) Proof of CSD Registration

(b) has authorised the municipality to obtain a tax clearance from the South African Revenue Services that the provider's tax matters are in order; and

(c) has indicated –

- (i) whether he or she is in the service of the state, or has been in the service of the state in the previous twelve months;
- (ii) if the provider is not a natural person, whether any of its directors, managers, principal shareholders or stakeholder is in the service of the state, or has been in the service of the state in the previous twelve months; or
- (iii) whether a spouse, child or parent of the provider or of a director, manager, shareholder or stakeholder referred to in subsection (ii) is in the service of the state, or has been in the service of the state in the previous twelve months.

(d) The submitted quotation or bid shall be properly signed and shall at least be valid for the period of 0 to 120 days; otherwise such bid shall amount to disqualification.

14. Lists of accredited prospective providers

- (1) The accounting officer shall –
 - (a) keep a list of accredited prospective providers of goods and services that must be used for the procurement requirements of the municipality or municipal entity through formal written price quotations
 - (b) All prospective providers of goods or services to apply for evaluation and listing as accredited prospective providers will be obtained through the use of the National Treasury Centralised Supplier Database (CSD)
 - (c) specify the listing criteria for accredited prospective providers;
 - (d) disallow the listing of any prospective provider whose name appears on the National Treasury's database as a person prohibited from doing business with the public sector.
 - (e) disallow the listing of any prospective provider who previously defaulted with contract with the provision of goods or services in the municipality for the past 5 years; irrespective of the value of the contract or service.
 - (f) The list shall be updated at least quarterly to include any additional prospective providers and any new commodities or types of services. Prospective providers shall be allowed to submit applications for listing at any time.
 - (g) The list shall be compiled per commodity and per type of service.

15. (a) Petty cash purchases (R0 to R1000)

(Note: this portion is not applicable to salary and wage payouts made from petty cash through the Salaries Office)

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1. The conditions for the procurement of goods by means of petty cash purchases referred to in section 12(1)(a) of this policy are as follows -

- a) The chief financial officer shall authorize all petty cash purchases up to a maximum of R1000 per month, per Directorate/Department.
- b) The following expenditure may only be incurred from petty cash in cases of urgency -

2. Any item that is a stores stock item.

- (1) A monthly reconciliation report from each directorate shall be provide to the chief financial officer, including-
 - i. the total amount of petty cash purchases for that month; and
 - ii. receipts and appropriate documents for each purpose.

3. Written quotations (up to R2 000)

The conditions for the procurement of goods or services through written quotations are as follows:

- (1) A written quotation shall be obtained from at least one service provider for the procurement of goods and services of a transaction value lower than R2 000 (VAT included);
- (2) upon receipt of the written quotation an order must be issued to the selected provider.

16. Written quotations (up to R30 000)

The conditions for the procurement of goods or services through written quotations are as follows:

- (1) Written quotations up to R30 000 (VAT included) shall be obtained from at least three different providers preferably from, but not limited to, providers whose names appear on the Central Supplier Database (CSD).
- (2) To the extent feasible, providers shall be requested to submit such

quotations in writing.

- (3) If it is not possible to obtain at least three quotations, the reasons shall be recorded and reported quarterly to the accounting officer or another official designated by the accounting officer.
- (4) The accounting officer shall record the names of the potential providers requested to provide such quotations with their quoted prices.
- (5) If a quotation was submitted written, the order may be placed only against written confirmation by the selected provider.

17. Formal written price quotations

- (1) The conditions for the procurement of goods or services through formal written price quotations are as follows:
 - (a) By advertising goods/services required for at least 7 (seven) days on the website and an official notice board of the municipality
 - (a) Quotations may be obtained from providers who are not listed, provided that such providers meet the listing criteria set out in section (14)(1) of this policy.
 - (b) If it is not possible to obtain at least three quotations, the reasons shall be recorded and approved by the chief financial officer or an official designated by the chief financial officer.
 - (c) The accounting officer shall record the names of the potential providers and their written quotations.
 - (d) a designated official referred to in sub section (1)(c) shall within three days of each month, report to the chief financial officer of any approvals given during that month by that official in terms of that sub section.

18. Procedures for procuring goods or services through formal written price quotations

- (2) The procedure for the procurement of goods or services through written quotations or formal written price quotations is as follows:
 - (a) When using the list of accredited prospective providers, the accounting officer shall promote ongoing competition amongst providers by inviting providers to submit quotations on a rotation basis.
 - (b) All requirements in excess of R30 000 (VAT included) that are to be procured

by means of formal written price quotations shall, except in a case where section 18(a) is utilised, in addition to the requirements of section 17, be advertised for at least 7 (seven) days on the website and an official notice board of the municipality.

- (c) Offers received shall be evaluated on a comparative basis taking into account unconditional discounts.
- (d) The accounting officer must take all reasonable steps to ensure that the procurement of goods and services through formal written price quotations is not abused;” and
- (e) The accounting officer or chief financial officer shall on a monthly basis be notified in writing of all written quotations and formal written price quotations accepted by an official acting in terms of a sub-delegation.
- (f) Offers below R30 000 (VAT included) shall be awarded based on compliance to specifications and conditions of contract, ability and capability to deliver the goods and services, and lowest price.
- (g) Acceptable offers, which are subject to the preference points system (PPPFA and associated regulations), shall be awarded to the bidder who scores the highest points, goals as contemplated in the Preferential Procurement Regulations and evaluation and adjudication criteria, including any criteria required by other applicable legislation
- (h) Minutes of evaluation of quotations and the criteria used to evaluate the quotations shall be properly recorded and signed by the evaluator of such quotations duly appointed by the accounting officer, the supply chain manager and the chief financial officer.

- (i) Any bid or quotation between R0 to R200 000 may be evaluated only by the supply chain management section, wherein recommendations shall be made by the end-user department, the chief financial officer and shall be approved by the accounting officer.

18. Competitive bids

- (1) Goods or services above a transaction value of R300 000 (VAT included) and long-term contracts may only be procured through a competitive bidding process, subject to section 11(2) of this policy.
- (2) No procurement of goods or services above an estimated transaction value of R300 000 (VAT included) may deliberately be split into parts or items of lesser value merely for the sake of procuring the goods or services otherwise than through a competitive bidding process.

19. Process for competitive bidding

- (1) The procedures for the following stages of a competitive bidding process are as follows:
 - (a) Compilation of bidding documentation as detailed in section 22;
 - (b) Public invitation for bids as detailed in section 23;
 - (c) Site meetings or briefing sessions as detailed in section 23;
 - (d) Handling of bids submitted in response to public invitation as detailed in section 24;
 - (e) Evaluation of bids as detailed in section 28;
 - (f) Award of contracts as detailed in section 29;
 - (g) Administration of contracts -
 - (h) After approval of a bid, the accounting officer and the bidder shall enter into a written agreement.
 - (i) Proper record keeping -
 - (i) Original / legal copies of written contract agreements shall be kept in a secure place for reference purposes.

20. Bid documentation for competitive bids

- (1) The criteria to which bid documentation for a competitive bidding process shall comply shall –
 - a) take into account -
 - (i) the general conditions of contract and any special conditions of contract, if specified;
 - (ii) any treasury guidelines on bid documentation; and
 - (iii) the requirements of the Construction Industry Development Board, in the case of a bid relating to construction, upgrading or refurbishment of buildings or infrastructure;
 - (b) include the preference points system to be used, goals as contemplated in the Preferential Procurement Regulations and evaluation and adjudication criteria, including any criteria required by other applicable legislation;
 - (c) compel bidders to declare any conflict of interest they may have in the transaction for which the bid is submitted;
 - (d) if the value of the transaction is expected to exceed R10 million (VAT included, require bidders to furnish -
 - (i) if the bidder is required by laws to prepare annual financial statements for auditing, their audited annual financial statements:
 - for the past three years; or
 - since their establishment if established during the past three years;
 - (ii) a certificate signed by the bidder certifying that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 90 days.
 - (iii) particulars of any contracts awarded to the bidder 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;
 - (iv) a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic; and
 - (e) stipulate that disputes shall be settled by means of mutual consultation,

mediation (with or without legal representation or, when unsuccessful, in a South African court of law.

21. Public invitation for competitive bids

(1) The procedure for the invitation competitive bids is as follows:

(a) Any invitation to prospective bidders to submit bids shall be by means of a public advertisement in newspapers commonly circulating locally or on the government tender website (eTender), municipal official notice boards, the website of the municipality or any other appropriate ways (which may include an advertisement in the Government Tender Bulletin); and

(b) The information contained in a public advertisement shall include –

- (i) the closure date for the submission of bids, which may not be less than
- (ii) 30 days in R10 million (VAT included), or which are for a long term nature, from the date on which the advertisement is placed in a newspaper or eTender subject to subsection (2) of this policy;
- (iii) a statement that bids may only be submitted on the bid documentation provided by the municipality; and
- (iv) the date, time and venue/virtual app with the meeting ID of any proposed site meetings or briefing sessions.
- (v) The attendance register should be kept for all members that attended the compulsory briefing on site or through Virtual meetings.

(2) The accounting officer may determine a closure date for the submission of bids which is less than the 30 or 14 days requirement, but only if such shorter period can be justified on the grounds of urgency or emergency or any exceptional case where it is impractical or impossible to follow the official procurement process.

(3) Bids submitted shall be sealed.

(4) Where bids are requested in electronic format, such bids shall be supplemented by sealed hard copies.

22. Procedure for handling, opening and recording of bids

(1) The procedures for the handling, opening and recording of bids are as follows:

- (a) Bids -
 - (i) shall be opened only in public or through virtual means;
 - (ii) shall be opened at the same time and as soon as possible after the period for the submission of bids has expired; and
 - (iii) received after the closing time shall not be considered and returned unopened immediately.
- (b) Any bidder or member of the public has the right to request that the names of the bidders who submitted bids in time shall be read out and, if practical, also each bidder's total bidding price; the designated SCM official should read out the names of all tenders received and amount to all members attending the opening through Virtual Opening of bids.
- (c) No rates and other confidential information will be disclosed, except the provisions in subsection (b), relating to the bid shall be disclosed to bidders or other persons until the successful bidder is notified of the award.
- (d) The accounting officer shall -
 - (i) record in a register all bids received in time;
 - (ii) make the register available for public inspection; and
 - (iii) publish the entries in the register and the bid results on the website.

23. Negotiations with preferred bidders

- (1) The accounting officer may negotiate the final terms of a contract with bidders identified through a competitive bidding process as preferred bidders, provided that such negotiation
 - (a) does not allow any preferred bidder a second or unfair opportunity;
 - (b) is not to the detriment of any other bidder; and
 - (c) does not lead to a higher price than the bid as submitted.
- (2) Minutes of such negotiations shall be kept for record purposes

24. Two-stage bidding process

- (1) A two-stage bidding process is allowed for -
 - (a) large complex projects;
 - (b) projects where it may be undesirable to prepare complete detailed technical specifications; or
 - (c) long term projects with a duration period exceeding three years.
- (2) In the first stage technical proposals on conceptual design or performance specifications shall be invited, subject to technical as well as commercial clarifications and adjustments.
- (3) In the record stage final technical proposals and priced bids shall be invited.

25. Committee system for competitive bids

- (1) A committee system for competitive bids is hereby established, consisting of the following committees for each procurement or cluster of procurements as the accounting officer may determine:
 - (a) a bid specification committee;
 - (b) a bid evaluation committee; and
 - (c) a bid adjudication committee.
- (2) The accounting officer appoints the members of each committee, taking into account section 117 of the Act.
- (3) A neutral or independent observer, appointed by the accounting officer, shall attend or oversee a committee when this is appropriate.
- (4) Neither a member of a bid evaluation committee, nor an advisor or person assisting the evaluation committee, may be a member of a bid adjudication committee.
- (5) (a) If the bid adjudication committee decided to award a bid other than the one recommended by the bid evaluation committee, the bid adjudication committee shall prior to awarding the bid -

- (i) check in respect of the preferred bidder whether that bidder's municipal rates and taxes and municipal service charges are not in arrears, and
 - (ii) notify the accounting officer.
- (b) The accounting officer may -
 - (i) after due consideration of the reasons for the deviation, ratify or reject the decision of the bid adjudication committee referred to in section (a); and
 - (ii) if the decision of the bid adjudication committee is rejected, refer the decision of the adjudication committee back to that committee for reconsideration.
- (6) The accounting officer may at any stage of the bidding process, refer any recommendation made by the evaluation committee or the adjudication committee back to that committee for reconsideration of the recommendation.
- (7) The accounting officer shall comply with section 114 of the Act within 10 working days.
- (8) The bid evaluation or adjudication committee may - after consulting with the accounting officer, appoint an interim or a liquid chairperson in an event whereby the chairperson appointed by the accounting officer is absent.
- (9) Bid committees shall sit and appoint service providers within 21 days after the tender has closed.

26. Bid Specification Committee

- (1) A bid specification committee must compile the specifications for procurement of goods or services by the Chief Albert Luthuli Municipality.
- (2) Specifications –
 - (a) Must be drafted in an unbiased manner to allow all potential suppliers to offer their goods or services;

- (b) must take account of any accepted standards such as those issued by Standards South Africa, the International Standards Organisation, or an authority accredited or recognised by the South African National Accreditation System with which the equipment or material or workmanship should comply;
 - (c) Must, where possible, be described in terms of performance required rather than in terms of descriptive characteristics for design;
 - (d) may not create trade barriers in contract requirements in the forms of specifications, plans, drawings, designs, testing and test methods, packaging, marking or labeling of conformity certification;
 - (e) may not make reference to any particular trade mark, name, patent, design, type, specific origin or producer unless there is no other sufficiently precise or intelligible way of describing the characteristics of the work, in which case such reference must be accompanied by the word "equivalent";
 - (f) must indicate each specific goal for which points may be awarded in terms of the points system set out in the Preferential Procurement Regulations 2022;
 - (g) Must be approved by the Accounting Officer prior to publication of the invitation for bids in terms of paragraph 22 of this Policy.
- (3) **A bid specification committee must be composed of one SCM officials** and more officials from departments as required of the Chief Albert Luthuli Municipality preferably the manager responsible for the function involved, and may, when appropriate, include external specialist advisors
- (4) No person, advisor or corporate entity involved with the bid specification committee, or director of such a corporate entity, may bid for any resulting contracts.

27. Bid evaluation committees

- (1) A bid evaluation committee must –
 - (a) Evaluate bids in accordance with –
 - (i) the specifications for a specific procurement; and
 - (ii) The points system set out in terms of paragraph 27(2)(f).
 - (b) Evaluate each bidder's ability to execute the contract;
 - (c) Check in respect of the recommended bidder whether municipal rates and taxes and municipal service charges are not in arrears, and meet the requirements of the tender; and
 - (d) Submit to the adjudication committee a report and recommendations regarding the award of the bid or any other related matter.
- (2) A bid evaluation committee must as far as possible be composed of-
 - (a) Officials from departments requiring the goods or services; and
 - (b) At least one supply chain management practitioner of the Chief Albert Luthuli Municipality.
- (3) Committee shall sit and submit a report to the Bid Adjudication Committee.
- (4) Elimination of bids, with reasons provided, should be recorded on the Bid Register. A record of all disqualified bids should be kept for audit purposes.

28. Bid adjudication committees

- (1) A bid adjudication committee must –
 - (a) Consider the report and recommendations of the bid evaluation committee within 7 days of its receipt; and
 - (b) Either –
 - (i) Depending on its delegations, make a final award or a recommendation to the Accounting Officer to make the final award; or

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- (ii) Make another recommendation to the Accounting Officer how to proceed with the relevant procurement.
- (2) A bid adjudication committee must consist of at least four senior Managers of the **Chief Albert Luthuli Municipality** which must include –
 - (a) The Chief Financial Officer or, if the Chief Financial Officer is not available, another manager in the Finance Department reporting directly to the Chief Financial Officer and designated by the Chief Financial Officer; and
 - (b) At least one senior Supply Chain Management practitioner who is an official of the **Chief Albert Luthuli Municipality**; and
 - (c) A technical expert in the relevant field who is an official, if such an expert exists.
 - (d) A Quorum of the BAC committee will be constituted by the presence of 3(three) voting members.
 - (e) The members of the BAC committee will be required to sign the code of conduct.
- (3) The Accounting Officer must appoint the chairperson of the committee. If the chairperson is absent from a meeting, the members of the committee who are present must elect one of them to preside at the meeting.
- (4) Neither a member of a bid evaluation committee, nor an advisor or person assisting the evaluation committee, may be a member of a bid adjudication committee.
 - (a) if the bid adjudication committee decides to award a bid other than the one recommended by the bid evaluation committee, the bid adjudication committee must prior to awarding the bid –
 - (i) check in respect of the preferred bidder whether that bidder's municipal rates and taxes and municipal service charges are not in arrears, and;
 - (ii) Notify the Accounting Officer.
 - (b) The Accounting Officer may –
 - (i) After due consideration of the reasons for the deviation, ratify or reject the decision of the bid adjudication committee referred to in paragraph (a); and
 - (ii) If the decision of the bid adjudication committee is rejected, refer the decision of the adjudication committee back to that committee for

reconsideration.

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- (6) The Accounting Officer may at any stage of a bidding process, refer any recommendation made by the evaluation committee or the adjudication committee back to that committee for reconsideration of the recommendation.
- (7) The Accounting Officer must comply with section 114 of the Act within 10 working days
- (8) The bid evaluation or adjudication committee may –
After consulting with the Accounting Officer, appoint an interim or a liquid chairperson in an event whereby the chairperson appointed by the Accounting Officer is absent.

29. Procurement of banking services

- (1) A contract for banking services -
 - (a) shall be procured through competitive bids;
 - (b) shall be consistent with section 7 of 85 of the Act; and
 - (c) shall not be for a period of more than five years at a time.
- (2) The process for procuring a contract for banking services shall commence at least nine months before the end of an existing contract.
- (3) The closure date for the submission of bids may not be less than 60 days from the date on which the advertisement is placed in a newspaper or eTender in terms of section 22(1). Bids shall be restricted to banks registered in terms of the Banks Act, 1990 (Act No 94 of 1990).

30. Procurement of IT related goods or services

- (1) The accounting officer may request the State Information Technology Agency (SITA) to assist with the acquisition of IT related goods or services through a competitive bidding process.
- (2) Both parties shall enter into a written agreement to regulate the services rendered by, and the payments to be made to SITA.

- (3) The accounting officer shall notify SITA together with a motivation of the IT needs if -
 - (a) the transaction value of IT related goods or services required in any financial year shall exceed R50 million (VAT included); or
 - (b) the transaction value of a contract to be procured whether for one or more years exceeds R50 million (VAT included).
- (4) If SITA comments on the submission and the municipality disagrees with such comments, the comments and the reasons for rejecting or not following such comments shall be submitted to the council, the national treasury, the relevant provincial treasury and the Auditor-general.

31. Procurement of goods and services under contracts secured by other organs of state

- (1) The accounting officer may procure goods or services under a contract secured by another organ of state, but only if -
 - (a) the contract has been secured by that other organ of state by means of a competitive bidding process applicable to that organ of state;
 - (b) there is no reason to believe that such contract was not validly procured;
 - (c) there are demonstrable discounts or benefits to do so; and
 - (d) that other organ of state and the provider have consented to such procurement in writing.

32. Procurement of goods necessitating special safety arrangements

- (1) The acquisition and storage of goods in bulk (other than water) which necessitates special safety arrangements, including gasses and fuel, shall be avoided wherever possible.
- (2) Where the storage of goods in bulk is justified, such justification shall be based on sound reasons, including the total cost of ownership, cost advantages and environmental impact and shall be approved by the accounting officer

33. Proudly SA Campaign and EPWP Initiative

The municipality supports the Proudly SA Campaign to the extent that, all things

being equal, preference is given to procuring local goods and services.

At least 40% of work should be subcontracted to Cooperatives where possible

34. Contract management

- (1) A contract or agreement procured through the supply chain management system shall be in writing, and shall stipulate the terms and conditions of the contract or agreement, which shall include provisions which allow for:
 - (a) the termination of the contract or agreement in the case of non- or under-performance;
 - (b) dispute resolution mechanisms to settle disputes between the parties; and
 - (c) a periodic review of the contract or agreement once every 3 years in the case of a contract or agreement for longer than 3 years.
- (2) The accounting officer shall:
 - (a) take all reasonable steps to ensure that a contract or agreement procured through the supply chain management supply is properly enforced;
 - (b) monitor on a quarterly basis the performance of the contractor under the contract or agreement;
 - (c) establish capacity in the administration to assist the accounting officer in carrying out the foregoing responsibilities, and in overseeing the day-to-day management of contractors and agreements; and
 - (d) regularly report to the council as the use may be on the management of the contract or agreement and the performance of the contractor.

- (3) A contract or agreement procured through the supply chain management policy may be amended by the parties, but only after the reasons for the proposed amendment have been tabled in the council of the municipality, or, in the case of a municipal entity, in the council of its parent municipality.
- (4) In case where it is not possible to appoint another service provider or conclude the procurement process the Accounting officer may table to council with reasons a proposal to extend the current contract on a month to month basis but not exceeding the initial period and rates of the contract.

35. Appointment of consultants

- (1) The accounting officer may procure consulting services provided that the regulation 5 of the MCCR where adhered to.
- (2) The accounting officer must assess the need thereof against the available internal capacity for the specific services required. Failure to undertake the latter assessment may result in the expenditure incurred being classified as irregular expenditure.
- (3) Monitoring of performance against contracts must also ensure skills are transferred to municipal officials, which forms an integral part of the contract or arrangements arising from such contracts. Skills may be transferred through the provision of workshops or on the job training.
- (4) , ECSA and DWAF guidelines in respect of consulting services are taken into account when such procurements are made
- (5) In instances whereby a panel of consultants were appointed using the technical criteria, the municipality must advertise within the appointed panel for at least 7 days to get price proposals from the appointed panel.
- (6) When consultants are appointed, an accounting officer must -
 - (a) appoint consultants on a time and cost basis with specific start and end dates;
 - (b) where practical, appoint consultants on an output- specified basis, subject to specific measurable objectives and associated remuneration;
 - (c) ensure that contracts with consultants include overall cost ceilings by specifying whether the contract price is inclusive or exclusive of travel and subsistence disbursements;
 - (d) ensure the transfer of skills by consultants to the relevant officials of a municipality or municipal entity;

(e) undertake all engagements of consultants in accordance with the Municipal Supply Chain Management Regulations, 2005 and the municipality or municipal entity's supply chain management policy; and

(f) develop consultancy reduction plans to reduce the reliance on consultants.

(6) All contracts with consultants must include a fee retention or penalty clause for poor performance.

(7) A municipality or municipal entity must ensure that the specifications and performance are

(8) used as a monitoring tool for the work to be undertaken and are appropriately recorded and monitored.

(9) Consultancy services shall be procured through competitive bids if -

a. the value of the contract exceeds R300 000 (VAT included); or

b. the duration period of the contract exceeds one year.

(10) In addition to any requirements prescribed by this policy for competitive bids, bidders shall furnish particulars of -

a. all consultancy services provided to an organ of state in the last five years; and

b. any similar consultancy service provided to an organ of state in the last five years.

(11) The accounting officer shall ensure that copyright in any document produced, and the patent rights or ownership in any plant, machinery, thing, system or process designed or devised by a consultant in the course of the consultancy service is vested in the municipality.

36. Deviation from, and ratification of minor breaches of, procurement processes

(1) The accounting officer may -

(a) dispense with the official procurement processes established by this policy and to procure any required goods or services through any convenient process, which may include direct negotiations, but only -

(i) in an emergency;

(ii) if such goods or services are produced or available from a single

provider only;

- (iii) for the acquisition of special works of art or historical objects where specifications are difficult to compile;
 - (iv) in any other exceptional case where it is impractical or impossible to follow the official procurement processes; and
- (2) ratify any minor breaches of the procurement processes by an official or committee acting in terms of delegated powers or duties which are purely of a technical nature.
- (3) Deviations on contracts may be by not more than 20% for construction related goods, services and/or infrastructure projects and 15% for all other goods and/or services of the original value of the contract; and if it is more than that it shall be approved by council.
- (4) all deviations must be reported to council.

37. Unsolicited bids

- (1) In accordance with section 113 of the Act there is no obligation to consider unsolicited bids received outside a normal bidding process.
- (2) The accounting officer may decide in terms of section 113(2) of the Act to consider an unsolicited bid, only if -
 - (a) the product or service offered in terms of the bid is a demonstrably or proven unique innovative concept;
 - (b) the product or service offered in terms of the bid is a demonstrably or proven unique innovative concept;
 - (c) the person who made the bid is the sole provider of the product or serve; and
 - (d) the reasons for not going through the normal bidding processes are found to be sound by the accounting officer.
- (3) If the accounting officer decides to consider an unsolicited bid that complies with subsection (2) of this policy, the decision shall be made public in accordance with

- (4) section 21A of the Municipal Systems Act together with -
- (a) reasons why the bid shall not be open to other competitors;
 - (b) and explanation of the potential benefits if the unsolicited bid were accepted;
 - (c) an invitation to the public or other potential suppliers to submit their comments within 30 days of the notice.
- (5) The accounting officer shall submit all written comments received pursuant to subsection (3), including any responses from the unsolicited bidder, to the National Treasury and the relevant provincial treasury for comment.
- (6) The adjudication committee shall consider the unsolicited bid and may award the bid or make a recommendation to the accounting officer, depending on its delegations.
- (7) A meeting of the adjudication committee to consider an unsolicited bid shall be open to the public.
- (8) When considering the matter, the adjudication committee shall take into account -
- (a) any comments submitted by the public; and
 - (b) any written comments and recommendations of the National Treasury or the relevant provincial treasury.
- (9) If any recommendations of the National Treasury or provincial treasury are rejected or not followed, the accounting officer shall submit to the Auditor-General, the relevant provincial treasury and National Treasury the reasons for rejecting or not following those recommendations

- (10) Such submission shall be made within seven days after the decision on the award of the unsolicited bid is taken, but no contract committing the municipality to the bid may be entered into or signed within 30 days of the submission.

38. Combating of abuse of supply chain management system

- (1) The accounting officer shall -

- (a) take all reasonable steps to prevent abuse of the supply chain management system;
- (b) investigate any allegations against an official or other role player of fraud, corruption, favouritism, unfair or irregular practices or failure to comply with this policy, and when justified -
 - (i) take appropriate steps against such official or other role player; or
 - (ii) report any alleged criminal conduct to the South African Police Service;
- (c) check the National Treasury's database prior to awarding any contract to ensure that no recommended bidder, or any of its directors, is listed as a person prohibited from doing business with the public sector;
- (d) reject any bid from a bidder -
 - (i) if any municipal rates and taxes or municipal service charges owed by that bidder or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three months; or
 - (ii) 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 bidder that performance was unsatisfactory;
- (e) reject a recommendation for the award of a contract if the recommended bidder, or any of its directors, has committed a corrupt or fraudulent act in competing for the particular contract;
- (f) cancel a contract awarded to a person if -
 - (i) the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract; or
 - (ii) an official or other role player committed any corrupt or fraudulent act

during the bidding process or the execution of the contract that benefited that person; and

- (g) reject the bid or any bidder if that bidder or any of its directors -
 - (i) has abused the supply chain management system of the municipality or has committed any improper conduct in relation to such system;
 - (ii) has been convicted for fraud or corruption during the past five years;
 - (iii) has wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - (iv) has been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No 12 of 2004).
- (2) The accounting officer shall inform the National Treasury and relevant provincial treasury in writing of any actions taken in terms of subsections (1)(b)(ii), (e) or (f) of this policy.

Part 3: Logistics, Disposal, Risk and Performance Management

39. Logistics management

- 1. The accounting officer shall establish and implement an effective system of logistics management, which shall include -
 - (a) the monitoring of spending patterns on types or classes of goods and services incorporating, where practical, the coding of items to ensure that each item has a unique number;
 - (b) the setting of inventory levels that includes minimum and maximum levels and lead times wherever goods are placed in stock;
 - (c) the placing of manual or electronic orders for all acquisitions other than those from petty cash;
 - (d) before payment is approved, certification by the responsible officer that the goods and services are received or rendered on time and is in accordance with the order, the general conditions of contract and specifications where applicable and that the price charged is as quoted in terms of a contract;
 - (e) appropriate standards of internal control and warehouse management to ensure that goods placed in stores are secure and only used for the purpose for which they were purchased;

- (a) regular checking to ensure that all assets including official vehicles are properly managed, appropriately maintained and only used for official purposes; and
- (b) monitoring and review of the supply vendor performance to ensure compliance with specifications and contract conditions for particular goods or services.

40. Disposal management

- (1) The criteria for the disposal or letting of assets, including unserviceable, redundant or obsolete assets, subject to sections 14 and 90 of the Act are as follows:

- (a) Assets may be disposed of by -

- (i) transferring the asset to another organ of state in terms of a provision of the Act enabling the transfer of assets;
- (ii) transferring the asset to another organ of state at market related value or, when appropriate, free of charge;
- (iii) selling the asset and through auctioning; or
- (iv) destroying the asset.

- (2) The accounting officer shall ensure that -

- (a) immovable property is sold only at market related prices except when the public interest or the plight of the poor demands otherwise;
- (b) movable assets are sold either by way of written price quotations, a competitive bidding process, auction or at market related prices, whichever is the most advantageous;
- (c) firearms are not sold or donated to any person or institution within or outside

the Republic unless approved by the National Conventional Arms Control Committee;

- (d) immovable property is let at market related rates except when the public interest or the plight of the poor demands otherwise;
- (e) all fees, charges, rates, tariffs, scales of fees or other charges relating to the letting of immovable property are annually reviewed
- (f) where assets are traded in for other assets, the highest possible trade-in price is negotiated;
- (g) in the case of the free disposal of computer equipment, the provincial department of education is first approached to indicate within 30 days where any of the local schools are interested in the equipment.

41. Disposal of capital assets

- (1) A municipality may not transfer ownership as a result of a sale or other transaction or otherwise permanently dispose of a capital asset needed to provide the minimum level of basic municipal services.
- (2) A municipality may transfer ownership or otherwise dispose of a capital asset other than one contemplated in subsection (1), but only after the municipal council, in a meeting open to the public
 - (a) has decided on reasonable grounds that the asset is not needed to provide the minimum level of basic municipal services; and
 - (b) has considered the fair market value of the asset and the economic and community value to be received in exchange for the asset.
- (3) A decision by a municipal council that a specific capital asset is not needed to provide the minimum level of basic municipal services, may not be reversed by the municipality after that asset has been sold, transferred or otherwise disposed of.
- (4) A municipal council may delegate to the accounting officer of the municipality its power to make the determinations referred to in subsection (2)(a) and (b) in respect of moveable capital assets below a value determined by the council.

- (5) Any transfer of ownership of a capital asset in terms of subsection (2) or (4) shall be fair, equitable, transparent, competitive and consistent with the supply chain management policy which the municipality shall have and maintain in terms of section 111.

42. Risk management

- (1) The criteria for the identification, consideration and avoidance of potential risks in the supply chain management system are as follows:
 - (a) By appointing a qualified risk assessor on contract basis or as a consultant or permanently if possible.
- (2) Risk management shall include -
 - (a) the identification of risks on a case-by-case basis;
 - (b) the allocation of risks to the party best suited to manage such risks;
 - (c) acceptance of the cost of the risk where the cost of transferring the risk is greater than that of retaining it;
 - (d) the management of risks in a pro-active manner and the provision of adequate cover for residual risks; and
 - (e) the assignment of relative risks to the contracting parties through clear and unambiguous contract documentation.

43. Performance management

The accounting officer shall establish and implement an internal monitoring system in order to determine, on the basis of a retrospective analysis, whether the authorised supply chain management processes were followed and whether the objectives of this policy were achieved

Part 4: Other matters

44. Prohibition on awards to persons whose tax matters are not in order

- (1) No award above R15 000 may be made in terms of this policy to a person whose tax matters have not been declared by the South African Revenue Service to be in order.
- (2) Before making an award to a person the accounting officer shall first check with SARS whether that person's tax matters are in order.
- (3) If SARS does not respond within 7 days such person's tax matters may for purposes of subsection (1) be presumed to be out of order. It is therefore a responsibility of the prospective bidder to ensure that such tax matters are in order and shall remain his or her responsibility to provide supporting documentation required by the municipality.

45. Prohibition on awards to person in the service of the state

- (1) Irrespective of the procurement process followed, no award may be made to a person in terms of this policy -
 - (a) who is in the service of the state;
 - (b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or
 - (c) a person who is an advisor or consultant contracted with the municipality.

46. Awards to close family members of persons in the service of the state

- (1) The accounting officer shall ensure that the notes to the annual financial statements disclose particulars of any award of more than R2 000 to a person who is a spouse,

child or parent of a person in the service of the state, or has been in the service of the state in the previous 12 months, including -

- (a) the name of that person;
- (b) the capacity in which that person is in the service of the state; and
- (c) the amount of the award.

47. Ethical standards

- (1) A code of ethical standards as set out in the *“National Treasury’s code of conduct for supply chain management practitioners and other role players involved in supply chain management”* is hereby established for officials and other role players in the supply chain management system of the municipality in order to promote -

- (a) mutual trust and respect; and
- (b) an environment where business can be conducted with integrity and in a fair and reasonable manner.

- (2) A breach of the code of ethics shall be dealt with as follows -

- (a) in the case of an employee, in terms of the disciplinary procedures of the municipality envisaged in section 67(1)(h) of the Municipal Systems Act;
- (b) in the case of a role player who is not an employee, through other appropriate means in recognition of the severity of the breach.
- (c) In all cases, financial misconduct shall be dealt with in terms of chapter 15 of the Act.

48. Inducements, rewards, gifts and favours to municipalities, officials and other role players

- (1) No person who is a provider or prospective provider of goods or services, or a recipient or prospective recipient of goods disposed of or to be disposed of may either directly or through representative or intermediary promise offer or grant -
 - (a) by inducement or reward to the municipality for or in connection with the award of a contract; or
 - (b) any reward, gift, favour or hospitality to -
 - (i) any official; or
 - (ii) any other role player involved in the implementation of this policy.
- (2) The accounting officer shall promptly report any alleged contravention of subsection (1) to the national treasury for considering whether the offending person, and any representative or intermediary through which such person is alleged to have acted, would be listed in the national treasury's database of persons prohibited from doing business with the public sector.
- (3) Subsection (1) does not apply to gifts less than R350 in value.

49. Sponsorship

- (1) The accounting officer shall promptly disclose to the national treasury and the relevant provincial treasury and sponsorship promised, offered or granted, whether directly or through a representative or intermediary, by any person who is -
 - (a) a provider or prospective provider of goods or services; or
 - (b) a recipient or prospective recipient of goods disposed of or to be disposed

50. Objections and complaints

Persons aggrieved by decisions or actions taken in the implementation of this supply chain management system, may lodge within 14 days of the decision or action, a written objection or complaint against the decision or action.

51. Resolution of disputes, objections, complaints and queries

(1) The accounting officer shall appoint an independent and impartial person, not directly involved in the supply chain management processes -

(a) to assist in the resolution of disputes between the municipality and other persons regarding -

(i) any decisions or actions taken in the implementation of the supply chain management system; or

(ii) any matter arising from a contract awarded in the course of the supply chain management system; or

(b) to deal with objections, complaints or queries regarding any such decisions or actions or any matters arising from such contract.

(2) The accounting officer, or another official designated by the accounting officer, is responsible for assisting the appointed person to perform his or her functions efficiently.

(3) The person appointed shall -

(a) strive to resolve promptly all disputes, objections, complaints or queries received; and

(b) submit monthly reports to the accounting officer on all disputes, objections, complaints or queries received, attended to or resolved.

(4) A dispute, objection, complaint or query may be referred to the relevant provincial treasury if -

(a) the dispute, objection, complaint or query is not resolved within 60 days; or

(b) no response is forthcoming within 60 days.

(5) If the provincial treasury does not or cannot resolve the matter, the dispute, objection, complaint or query may referred to the National Treasury for resolution.

(6) This section shall not be read as affecting a person's rights to approach a court at any time.

52. Contracts providing for compensation base on turnover

(1) If a service provider acts on behalf of a municipality to provide any service or act as a collector of fees, service charges or taxes and the compensation payable to the service provider is fixed as an agreed percentage of turnover for the service or the amount collected, the contract between the service provider and the municipality shall stipulate -

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- (a) a cap on the compensation payable to the service provider; and
- (b) that such compensation shall be performance based.

53. Bidders commitments

- (1) All prospective bidders of the municipality shall -
 - (a) declare abide to the mission and vision of the municipality and shall assist the municipality to realise and meet its objectives;
 - (b) after an award of any contract for more than R200 000, commit to a 1% social responsibility programme.
 - (c) ensure and promote good relations with all structures established in terms of the municipal processes, the Municipal Systems Act, and the Municipal Structures Act;
 - (d) promote the employment of local people, reimburse their services taking into consideration the minimum standards set by the Department of Labour through the Sectoral Determination Act.

54. Checking the list of restricted suppliers

- (1) The accounting officer shall verify the status of the recommended bidder with the National Treasury prior to awarding a contract.
- (2) A response shall be provided within one working day confirming whether the name provided has been listed as a person of company prohibited from doing business with the public sector.
 - (a) Such request shall be forwarded by e-mail to restrictions@treasury.gov.za
 - (b) Under no circumstances shall a contract be awarded to a provider whose name appears on the Treasury defaulters register.

55. Register for tender defaulters

- (1) The accounting officer shall keep a register of providers that have defaulted with the municipality in the past, stating reasons for defaulting in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No 12 of 2004).
 - (a) The accounting officer shall reject any bid if that bidder or any of its directors has been listed in the Register for Tender Defaulters of treasury.
 - (b) The register determines the period, which may not be less than five years or more than 10 years, for which the convicted provider shall be prohibited from doing business with the public sector;
 - (i) if the period determined by the register has expired, the convicted provider would be prohibited from doing business with the public sector.

ANNEXURE 1

1. Code of Conduct for Supply Chain Management Practitioners and other Role Players

The purpose of this code of conduct is to promote mutual trust and respect and an environment where business can be conducted with integrity and in fair and reasonable manner.

- (1) The municipality commits itself to a policy of fair dealing and integrity in the conducting of its business. Officials and other role players involved in supply chain management (supply chain management) are in a position of trust, implying a duty to act in the public interest. Officials and other role players shall not perform their duties to unlawfully gain any form of compensation, payment or gratuities from any person, or provider/contractor for themselves, their family or their friends.
- (2) Officials and other role players involved in supply chain management shall ensure that they perform their duties efficiently, effectively and with integrity, in accordance with the relevant legislation, policies, and guidelines. They shall ensure that public resources are administered responsibly.
- (3) Officials and other role players involved in supply chain management shall be fair and impartial in the performance of their functions. They shall at no time afford any undue preferential treatment to any group or individual or unfairly discriminate

against any group or individual. They shall not abuse the power and authority vested in them.

2. Conflict of interest

- (1) An official or other role player involved with supply chain management –
 - (a) shall treat all providers and potential providers equitably;
 - (b) may not use his/her position for private gain or to improperly benefit another person;
 - (c) may not accept any reward, gift, favour, hospitality or other benefit directly or indirectly, including to any close family member, partner or associate of that person, of a value more than R350;
 - (d) shall declare to the accounting officer details of any reward, gift, favour, hospitality or other benefit promised, offered or granted to that person or to any close family member, partner or associate of that person;
 - (e) shall declare to the accounting officer details of any private business interest which that person, or any close family member, partner or associate, may have in any proposed procurement or disposal process, or in any reward of a contract by the municipality;
 - (f) shall immediately withdraw from participating in any manner whatsoever in a procurement or disposal process or in the award of a contract in which that person, or any close family member, partner or associate, has any private or business interest;
 - (g) shall declare any business, commercial and financial interest or activities undertaken for financial gain that may raise a possible conflict of interest;
 - (h) shall not place him/herself under any financial or other obligation to outside individuals or organizations that might seek to influence them in the performance of their official duties; and
 - (i) shall not take improper advantage of their previous office after leaving their official position.

3. Accountability

- (1) Practitioners are accountable for their decisions and actions to the public.
- (2) Practitioners shall use public property scrupulously.
- (3) Only accounting officers or their delegates have the authority to commit the municipality to any transaction for the procurement of goods and/or services.
- (4) All transactions conducted by a practitioner shall be recorded and accounted for in an appropriate accounting system. Practitioners shall not make any false or misleading entries into such a system for any reason whatsoever.
- (5) Practitioners shall assist the accounting officer in combating fraud, corruption, favoritism and unfair and irregular practices in the supply chain management system.
- (6) Practitioners shall report to the officer any alleged irregular conduct in the supply chain management system which that person may become aware of, including –
 - (a) any alleged fraud, corruption, favoritism or unfair conduct;
 - (b) any alleged contravention of the policy on inducements, rewards, gifts and favors to municipalities, officials or other role players;
 - (c) any alleged breach of this code of conduct.

- (7) Any declarations made shall be recorded in a register which the accounting officer shall keep for this purpose. Any declarations made by the accounting officer shall be made to the mayor who shall ensure that such declaration is recorded in the register.

4. Openness

- (1) Practitioners shall be as open as possible about all the decisions and actions that they take. They shall give reasons for their decisions and restrict information only if it is in the public interest to do so.

5. Confidentiality

- (1) Any information that is the property of the municipality or its providers shall be protected at all times. No information regarding any bid/contract contractor may be revealed if such an action shall infringe on the relevant bidder's/contractor's personal rights.
- (2) Matters of confidential nature in the possession of officials and other role players involved in supply chain management shall be kept confidential unless legislation, the performance of duty or the provisions of law requires otherwise. Such restrictions also apply to officials and other role players involved in supply chain management after separation from service.

6. Bid Specification / Evaluation / Adjudication Committees

- (1) Bid specification, evaluation and adjudication committees shall implement supply chain management on behalf of the municipality in an honest, fair, impartial,

transparent, cost-effective and accountable manner.

- (2) Bid evaluation/adjudication committees shall be familiar with and adhere to the prescribed legislation, directives and procedures in respect of supply chain management in order to perform effectively and efficiently.
- (3) All members of bid adjudication committees shall be cleared by the accounting officer at the level of "CONFIDENTIAL" and shall be required to declare their financial interest annually.
- (4) No person shall –
 - (a) interfere with the supply chain management system of the municipality; or
 - (b) amend or tamper with any price quotation/bid after its submission.

7. Combative Practices

- (1) Combative practices are unethical and illegal and shall be avoided at all cost. They include but are not limited to:
 - (a) suggestions to fictitious quotations;
 - (b) reference to non-existent competition;
 - (c) exploiting errors in price quotations/bids;
 - (d) soliciting price quotations/bids from bidders/contractors whose names appear on the Register of Tender Default.

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ANNEXURE 2

SUPPLY CHAIN MANAGEMENT PROCEDURE MANUAL

PART 1 DOCUMENTS USED

Requisition form– this document is used to convey to the supply chain unit, that goods and services are required. It can be initiated in any department and sent to the Supply chain management unit,

Tender Register – this document is used to register all tenders received

Stores requisition – this document is used to request items from the stores in contact with the end user department.

Requisition book– this document is used to request items that are not in the Stores (warehouse) from the buying unit in contact with the end user department.

Order – which are completed by the buying department, record the detail and price of the goods to be purchased and is addressed to the supplier. It should be signed by the Buyer (if above R30 000, by the Manager)

Supplier Delivery Note – this document is made out by the supplier and details the goods which are being supplied. It will be cross referenced to the Order and on delivery of the goods and services will be signed by the stores to acknowledge the receipt of the goods and services.

Goods Receive Note (book) – this document is completed by the stores when goods are delivered by the supplier. It is cross referenced to the supplier's delivery note

Invoice – this document is sent by the supplier to the Supply Chain Management Unit to inform of the goods and services for which it is being charged, the price, any discounts and

VAT.

Procurement Checklist – this document is used to ensure that all the above relevant documents are attached accordingly as required.

Deviation form – this document is used to request for approval for deviating from the SCM Policy

Tender Documents – these documents are used during the bidding process

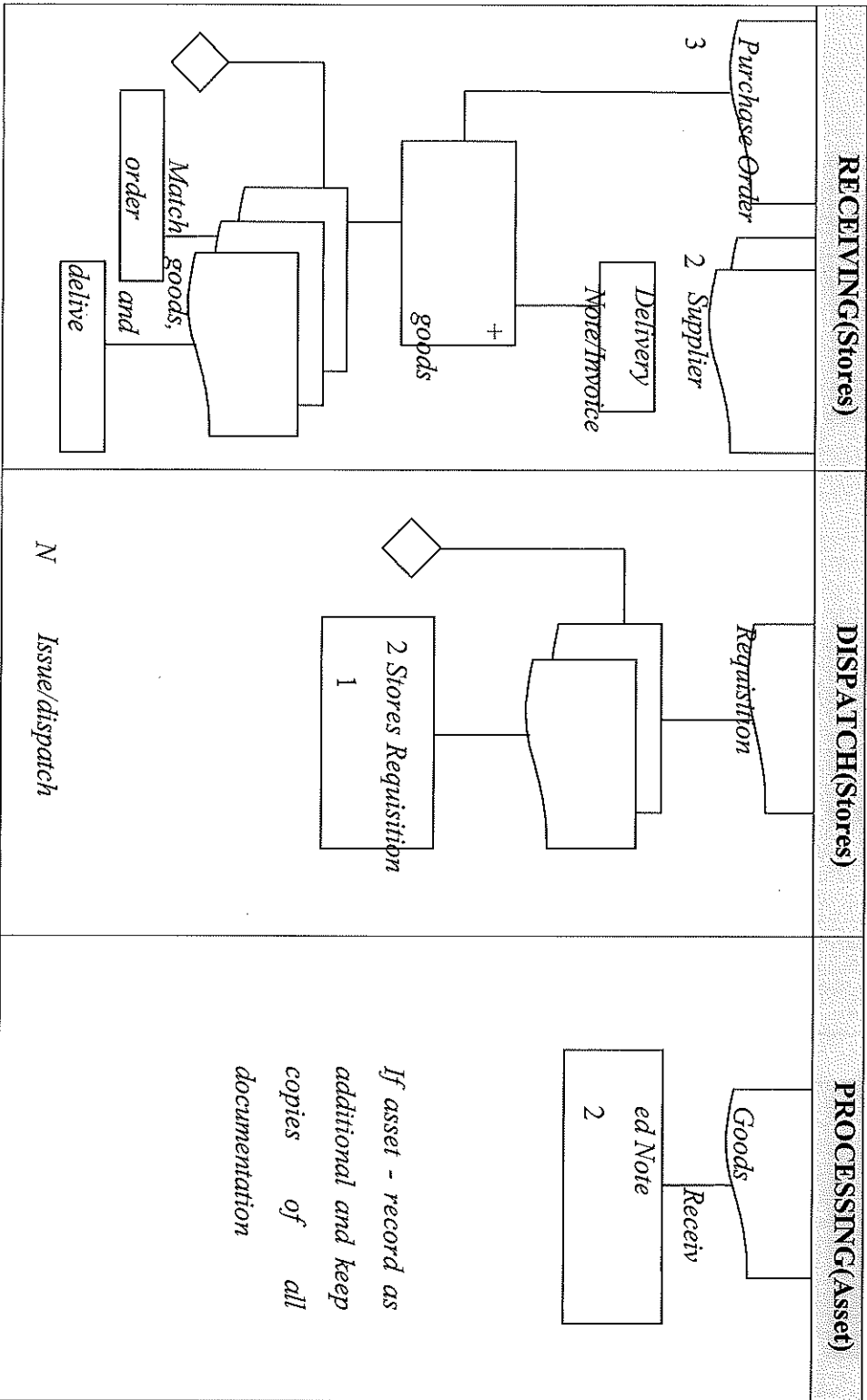
Supply Chain Management Policy

PROCUREMENT PROCESSES		
R0 –R30 000	R30 001 –R200 000	R200 001 and above
	Requisition Prepare advert for Request for Formal Quotations Obtain And approval 1 advertise on notice boards and website – > 7 days Record at	Preparation of Specifications by Bid Specification Committee Requisition Obtain approval from MM Prepare Advert Obtain approval and advertise on notice boards, website or national newspaper - > 14 days Record responses at closing date and time Evaluation by BEC Recommendation by BAC Approval for appointment by MM

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<i>N</i> 4 3 2 Purchase Order 1 <i>N</i> To Stores To Expenditure To Supplier	<i>respons</i> <i>es</i> <i>closing date and time</i> <i>Evaluation by SCM Unit</i> <i>Recommendatio By</i> <i>n</i> <i>Evaluation And</i> <i>Adjudication</i> <i>Committee</i> <i>Chairpersons</i> <i>Approval for appointment</i> <i>by MM</i>	
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ry note/Invoice 3 2 Goods Received Note 1 N To SCM To Expenditure	goods/items to end user department	
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Supply Chain Management Policy

PART 2 MANAGEMENT OF PROCUREMENT REQUIREMENTS

All requests for the procurement of goods and services shall be submitted by the heads of departments concerned to Supply Chain Management Section. All requests shall be in writing (signed memorandum and requisition form), shall clearly specify the nature and, where applicable, quantity or duration, as the case may be, of the goods and services required, and shall be signed by the head of department concerned or by a senior official in the department designated by the head of department for this purpose. Each department should have a procurement coordinator that will deal directly with SCM on procurement issues (i.e. Administrators, Secretary of the department)

2.1 Quotations (R0 – R300 000)

SCM will see if requested items can be found in the stores or not, if not then will outsource that service, taking into account the SCM procurement levels as stipulated in paragraph 12 of the SCM Policy.

The supply chain management section shall manage procurement requisitions for amounts estimated not to exceed R200 000 including VAT by calling for quotations taking into account procurement levels stipulated in paragraph 12 of the SCM Policy.

The request for such quotations shall be prepared by the supply chain section, and shall be prominently displayed on the municipality's website, notice boards in all municipal offices and on the notice board, provided for the purpose of displaying quotations and tenders in the supply chain section.

Notices calling for quotations shall indicate the closing date and time for the submission of quotations, and such closing date shall be at least 7 (seven) days after the date on which the request for quotations is first displayed.

For a quotation to be considered, it must be in writing, be signed by a person with the necessary authority to act on behalf of the prospective supplier, substantially comply with the specification set out in the notice calling for quotations, be received by the supply chain section on or before due date and time, and be accompanied by a recent municipal rates and service charges account, a valid tax clearance certificate issued by the South African Revenue Service, B-BBEE Certificate issued by an accredited institution and the completed municipal bid forms, as prescribed by the accounting office

2.2 Tenders (R200 000 and above)

The supply chain management section shall manage procurement requisitions for amounts estimated to be in excess of R200 000 including VAT by calling for tenders. The request for such tenders shall be prepared by the supply chain management section, shall be prominently displayed on the municipality's website, all the notice boards, referred to under part 2.1 above, newspaper or eTender website and shall additionally be advertised on CIDB website where the tender has CIDB requirements. Notices calling for tenders shall comply with all the requirements indicated for quotations under part 2.1 above, except that the closing date shall be at least 14 (fourteen) days or 30 days (for value above R10million) after the date on which the call for tenders is first displayed or advertised.

For a tender to be considered it must comply with all the requirements indicated for quotations under part 2.1 above, except that a tender must be placed in the tender box provided for this purpose, the location of which shall be clearly specified in the relevant notice calling for tenders.

The chief financial officer shall ensure that such tender boxes are sealed until the date and time of their official opening, and that they are properly secured at the time.

Where the relevant notice specifies that prospective tenderers must complete certain documentation which must be obtained from the municipality, failure to complete such documentation shall render the tender invalid.

The relevant notice may also specify that a non-refundable fee, as determined from time to time by the council, is payable in order to obtain such documentation

2.3 Quotations and Tenders Not to Specification

Notwithstanding the above-stipulated requirements for consideration, tenders which are not to specification may be considered, but only if no tenders are received which substantially comply with the specification upon recommendation by the bid committees and approval by the accounting officer. For quotations, consideration as per above can be given upon recommendation and approval by parties as per the SCM Policy.

Supply Chain Management Policy

PART 3 ADJUDICATION OF QUOTATIONS AND TENDERS

Notwithstanding any of the requirements set out below, the municipality shall not be obliged to accept any quotation or tender received.

3.1 Quotations

After all the requisitions have been processed and quotations have been received, will then evaluate the quotations as per paragraph 18(f) of the SCM Policy.

All quotations to the value of R30 000 shall be evaluated and adjudicated by the supply chain section. The lowest quotation substantially to specification shall be accepted, taking into account the municipality's preferential procurement requirements as set out, provided the municipality is satisfied that it offers acceptable value for money for the municipality.

Supply Chain Management Policy

If no quotation is substantially to specification, the lowest quotation which is closest to specification shall be accepted, provided the municipality is satisfied that it offers acceptable value for money for the municipality, and provided further – if the goods or services concerned are being procured for a specific department or departments – that the head(s) of such department(s) concur(s) with such acceptance.

The supply chain management shall fill the requisition for order form and forward it for approval by the head of department concerned, chief financial officer and accounting officer depending on the amount charged for the service.

Quotations of value above R30 000 to R200 000 shall be evaluated by the supply chain management, recommended by the end user department, adjudicated by the chief financial officer and approved by the accounting officer, as per paragraph 18 of the SCM Policy

3.2 Tenders

All tenders with an estimated value exceeding R200 000 excluding VAT, shall be adjudicated by the tender committee, as established in terms of part 4 below, and approved by the municipal manager, acting on the written reports and recommendations of the tender committee.

The lowest tender substantially to specification shall be accepted, taking into account the municipality's preferential procurement requirements as set out in part 5 below, provided the adjudicating authority is satisfied that it offers acceptable value for money for the municipality.

If no tender is substantially to specification, the adjudicating authority may recommend acceptance of the lowest tender which is closest to specification, provided the adjudicating authority is satisfied that it offers acceptable value for money for the municipality as stated in paragraph 2.4 above.

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PART 4 TENDER COMMITTEE

The municipal manager shall establish a tender committee in accordance to paragraph 26 – 29 of the SCM Policy, to undertake the adjudicating functions set out in part 3.2 above.

PART 5 PRINCIPLES OF ADJUDICATION

For all tenders with an estimated value above R50 million (fifty million rand) including VAT, preference points will be allocated as follows:

POINTS 90

Lowest price substantially to specification

Municipal Objectives	10
Total	100

For all tenders and quotations with an estimated value below R50 million (fifty million rand) excluding VAT, preference points will be allocated as

follows:

	POI
	NTS
Lowest price substantially to specification	80
Municipal objectives	20
Total	100

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Supply Chain Management Policy

Where purely local goods are tendered or quoted for, compliance with the requirements of the South African Bureau of Standards shall be a prerequisite for the consideration of the quotation or tender concerned.

“To specification “ in the case of services to be provided to or works to be undertaken for the municipality shall include the furnishing of satisfactory proof of the skills and resources required to execute the bid.

PART 6 PRE-QUALIFICATION PROCEDURES

From time to time, invitations for forthcoming tenders or quotations may specify initial attendance by prospective suppliers at briefing meetings or site inspections or may require only an initial expression of interest from prospective suppliers indicating their expertise and/or other credentials in respect of the provision of the required goods or services. In such instances, the municipality reserves the right to limit subsequent invitations for the actual tenders or quotations to suppliers who have attended such meetings or inspections or who have provided reasonable evidence of the expertise or credentials required.

PART 7 GUARANTEES AND RETENTIONS

In the case of tenders for the undertaking of works on behalf of the municipality and with a value equal to or exceeding R1 000 000 (one million rand), the successful tenderer may lodge with the chief financial officer a guarantee, issued by an acceptable registered institution, for a sum equal to 60% of the agreed or estimated tender price. Such guarantee shall be lodged within one calendar month from the date on which the tender is awarded, and shall thereafter be managed in terms of the contract entered into between the municipality and the successful tenderer.

In the case of tenders where a performance guarantee as envisaged above is not required, the chief financial officer shall withhold payment of an amount equal to 10% (ten per centum) of the value of the actual goods or service supplied by the appointed contractor until the chief financial officer is satisfied that the contract has been satisfactorily executed, but provided that such final payment shall not be withheld for a period exceeding 6 (six) calendar months from the date on which final payment was due to the contractor.

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PART 8 EMERGENCIES

An emergency shall be considered as an unforeseeable and sudden event, with materially harmful or potentially materially harmful consequences for the municipality, and which requires urgent action to address.

In cases where the municipal manager determines that an emergency has arisen, the municipal manager may direct that the periods for advertising quotations or tenders, as stipulated in parts 2.1 and 2.2 above, be curtailed to the extent that the municipal manager deems appropriate. Where the estimated value of the goods or services to be supplied to cater for such emergency exceeds R1 million (one million rand) excluding VAT, the municipal manager may approve such tender on behalf of the council, but provided the executive mayor or the chairperson of the executive committee, as the case may be, concurs with the view of the municipal manager that the tender must be approved to address an emergency.

PART 9 PROHIBITED ACTIONS

No head of department in placing a requisition for goods or services to be

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procured by quotation or tender shall knowingly understate the requirements or the estimated value of the requirements with the intention of avoiding the more stringent process prescribed for requirements of a higher value.

The municipal manager shall promptly institute disciplinary action against any head of department suspected of infringing this requirement.

No councillor or official shall engage in any contact with a prospective supplier in respect of any quotation or tender which such supplier intends to submit with the purpose of influencing any aspect of such quotation or tender.

PART 10 SALES OF GOODS

In seeking to dispose of any fixed assets, the chief financial officer shall adhere to the requirements of the municipality's policy of disposal on the management of and accounting for fixed assets, including the legal prescription annexed to that policy.

The chief financial officer shall determine in each instance having regard to the nature and estimated resale value of the assets whether it is more advantageous for the municipality to dispose of the assets in

Supply Chain Management Policy

question by means of the invitation of tenders or quotations or by public auction. Notification of such intended sales shall follow the communication process prescribed for tenders in part 2.2 above, with the various notices and advertisements stating the date and time on which tenders will close for acceptance or the date, time and venue of the auction, as the case may be, as well as the date(s) and venue(s) where prospective tenderers may view the assets.

All tenders for sales of fixed assets shall be adjudicated by the tender committee under chairpersonship of the municipal manager, and shall be approved by the council on the recommendation of such committee. The highest tender substantially to specification shall be accepted, except if the adjudicating authority believes that no tender is satisfactory in terms of value for money offered.

In seeking to dispose of any stores or other items other than fixed assets, the chief financial officer shall adhere to the communication requirements prescribed for quotations. The chief financial officer shall further determine whether it is more advantageous for the municipality to dispose of the items by means of tenders or quotations or public auction, and shall in either case publish the notification of such sales in terms of the communication process prescribed in part 2.1 above. If the chief financial

officer considers it necessary, such notification may also be made by means of advertisements in the local and national press.

Where stores or other items other than fixed assets are sold by means of tenders or quotations, the chief financial officer shall adjudicate and approve the quotations received. The highest quotation substantially to specification shall be approved, except if the chief financial officer believes that no quotation is satisfactory in terms of value for money offered.

PART 11 REPORTING

All approved quotations shall be listed on the municipality's website and on the notice boards referred to in parts 2.1 and 2.2 above. Quotations approved during any particular calendar week shall be listed from the beginning of the following calendar week, and shall be displayed for the duration of that week.

All approved tenders shall be listed as for quotations, but shall be listed for 2 (two) calendar weeks.

Supply Chain Management Policy

PART 12 APPEALS

Suppliers who are dissatisfied with the decision of the municipality in regard to any quotation or tender may appeal in writing to the municipal manager, provided such appeal is lodged with the municipal manager as follows:

- for quotations, within 7 (seven) calendar days of the date on which the approved quotation is first listed in terms of part 11 above
- for tenders, within 14 (fourteen) calendar days of the date on which the approved tender is first listed in terms of part 11 above.

The municipal manager shall provide written acknowledgement of the receipt of such appeals to the appellant concerned, and shall endeavour to finalise such appeals within 7 (seven) calendar days of their receipt. Where this is not possible, the municipal manager shall promptly advise the appellant in writing of the reasons for the delay.

If the appeal is based on a technically complex matter, the municipal manager may engage an impartial consultant to provide an opinion on the appeal, provided that sufficient budget provision exists for the expenditure

to be incurred, and provided further that the municipal manager shall not be bound by any such opinion provided.

The municipal manager shall immediately after a ruling on an appeal has been made, advise the appellant in writing of such ruling.

If the appellant is dissatisfied with the municipal manager's ruling on an appeal in regard to a tender the appellant may request the municipal manager to refer such appeal and ruling to the ensuing council meeting for a decision. Such request must be lodged in writing with the municipal manager within 14 (fourteen) calendar days of the date on which the ruling was made.

The municipal manager shall decide whether the lodging of an appeal constitutes sufficient grounds for the municipality to delay, where possible, the procurement of the relevant goods or services in terms of the approved quotation or tender against which the appeal is lodged. If such delay is decided upon, the municipal manager shall immediately advise the approved supplier, in writing, of such delay.

PART 13 PAYMENTS AND INVOICING

Supply Chain Management Policy

All invoices for goods and services should be received by the stores and shall be submitted for payment within 5 days of receipt to the expenditure section.

All invoices pertaining to contracts managed by departments other than the finance department, shall be certified as in order for payment by the head of department concerned before being submitted to the procurement section.

PART 14 STORES (MATERIALS) MANAGEMENT

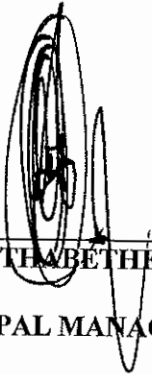
All goods procured by the municipality shall be delivered to and receipted by the stores, except if the chief financial officer, with the concurrence of the head of department concerned, directs that such goods shall be delivered to a specified site or to the sub-store maintained by the department concerned.

The procedures and charges for requisitioning goods from stores shall be determined from time to time by the chief financial officer, and shall be

notified to all departments by means of departmental circulars.

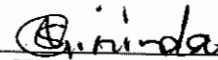
Stock levels shall be determined by the chief financial officer, in compliance with the municipality's banking and investment policy, and where applicable in consultation with the head of department concerned.

Council, subject to any special trusts in their deeds of title and upon conditions not at variance therewith.



MR. ME THABETHE (Pr.Tech.Eng)

MUNICIPAL MANAGER



Cllr. S.V GININDA

COUNCIL SPEAKER

Annexure D: MBD 6.2 – ANNEXURE C LOCAL CONTENT

(C1) Tender No.

(C2) Tender description:

(C3) Designated product(s)

(C4) Tender Authority:

(C5) Tendering Entity name:

(C6) Tender Exchange Rate:

(C7) Specified local content %

Annex C

Pula

EU

GBP

Note: VAT to be excluded from all calculations

Calculation of local content

Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)

Tender summary

Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C16)	(C17)	(C18)	(C19)

Signature of tenderer from Annex B

Date:

(C20) Total tender value

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

(C23) Total Imported content

(C24) Total local content

(C25) Average local content % of tender

288

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Annex D

Imported Content Declaration – Supporting Schedule to Annex C

(D1)Tender No.		Note: VAT to be excluded from all calculations					
(D2)Tender Description							
(D3)Designated Products							
(D4)Tender Authority							
		Pula		EU		GBP	

A. Exempted imported content				Calculation of imported content						Summary	
Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)
<i>This total must correspond with Annex C - C 21</i>									(D19) Total exempt imported value		

B. Imported directly by the Tenderer				Calculation of imported content						Summary	
Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

										(D32)Total imported value by tenderer	

C. Imported by a 3rd party and supplied to the Tenderer				Calculation of imported content						Summary	
Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Forign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)
										(D45) Total imported value by 3rd party	

B. Imported directly by the Tenderer			Calculation of foreign currency payments								Summary of payments
Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange							Local value of payments
(D46)	(D47)	(D48)	(D49)	(D50)							(D51)
											(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

					(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above					
										This total must correspond with Annex C - C 23
Signature of tenderer from Annex B										
Date:										

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Annex E

SATS 1286.2011

Local Content Declaration - Supporting Schedule to Annex C

Tender description: Designated products: Tender Authority: Tendering Entity name:		<u>Note:</u> VAT to be excluded from all calculations

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	(E7)	(E8)
		(E9) Total local products (Goods, Services and Works)	

Manpower costs	(E10)(Tenderer's manpower cost)	
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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Factory overheads	(E11)(Rental, depreciation & amortisation, utility costs, consumables etc.)	
Administration overheads and mark-up	(E12)(Marketing, insurance, financing, interest etc.)	
	(E13) Total local content	
<u>Signature of tenderer from Annex B</u>	This total must correspond with Annex C - C24	

Date: _____

The guidance document can be found at: www.dti.gov.za/industrial_development/docs/ip/guideline.p

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2