KING CETSHWAYO DISTRICT MUNICIPALITY
TENDER DOCUMENT

TENDER REFERENCE: KCDM/MIG/02/2022
TENDER FOR THE GREATER MTHONJANENI SSA4: BULK WATER SUPPLY IMPROVEMENTS - UPGRADE OF ZIMELA PUMPSTATION 1, 2 & 3

SITE/BRIEFING MEETING:	**21 September 2022 @ 12h00**
TENDER CLOSING:	**17 October 2022 @ 12h00**

The Tender Document (which includes the Form of Offer and Acceptance) completed in all respects, plus any additional supporting documentation required, must be addressed to the Municipal Manager and submitted in a sealed envelope with the legal name and address of the Tenderer, the Tender No. and tender title as well as the closing date indicated on the envelope. The sealed envelope must be inserted into the Tender Box situated in the foyer of King Cetshwayo House, Corner of Kruger Rand & Barbados Bay Road, CBD, Richards Bay before closing time. If the tender offer is too large to fit into the abovementioned Tender Box or the Box is full, please enquire at the reception counter as to where the SCM (Tender Office) is for alternative instructions. The onus remains with the Tenderer to ensure that the tender is placed in either the Tender Box or as alternatively instructed.

SERVICE PROVIDER'S DETAILS

Name of Service Provider:	
CSD Supplier Number	
Contact Person:	
E-mail Address:	
Telephone Number:	( )Code
Fax Number:	( )Code
Physical Address:	
Postal Address:	

NOTE:

The Service Provider shall be deemed to have satisfied himself/herself/themselves as to all the conditions and circumstances affecting this tender, including the physical aspects of working areas, and by the submission of a tender, will confirm acceptance of the conditions and circumstances applicable to any subsequent contract.

Enquiries relating to this tender must be directed as indicated below:

Tender Queries:	Technical Queries:
Contact Name: Mr. Z Mkhwanazi	**Contact Name:** Mr. Z Ndlovu
Telephone: 035-799 2715	**Telephone:** 035 – 799 2500

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T1.1 Tender Notice and Invitation to Tender

KING CETSHWAYO DISTRICT MUNICIPALITY
TENDER REFERENCE: KCDM/MIG/02/2022

TENDER FOR GREATER MTHONJANENI SSA4: BULK WATER SUPPLY IMPROVEMENTS - UPGRADE OF ZIMELA PUMPSTATION 1, 2 & 3

Interested parties must collect tender documents from the SCM Unit at King Cetshwayo House, Suite No. 8, Corner of Krugerrand & Barbados Bay Road, CBD, Richards Bay (035 799 2500), after a payment of R 3964.80 (Incl. VAT) non-refundable, cash or EFT (First National Bank, King Cetshwayo District Municipality, Acc. 62943444109, Bank code 210554, Ref. Your company name and Tender ref. no.), tender deposit should be paid at the rates hall at of the King Cetshwayo District Municipality or alternatively download & print the bid document from www.etenders.gov.za. The King Cetshwayo District Municipality will strive to achieve targeted procurement in accordance with Preferential Procurement Policy Framework Act Regulation 2017 in the manner that only tenderers with Level 1 BBBEE are targeted for this tender. The tenderer must also have a CIDB grading of 5ME or Higher. The tender that fails to meet the stipulated criteria will be regarded as non-responsive.

Any tender submitted by a person(s) who is in the service of the state or if that person(s) is not a natural person, of which any director, manager, principal shareholder, or stakeholder is a person in the service of the state or who is an advisor or consultant contracted with the Municipality shall not be considered in terms of regulation 44 of the Municipal Supply Chain Regulations. National Treasury has introduced the Central Supplier Data Base (CSD), where all suppliers are required to register. For more information, please contact Mr. Z Mkhwanazi on (035) 799 2529 or visit the CSD website at www.csd.gov.za. Only tenderers who are registered with CSD and King Cetshwayo District Municipality Supplier Data base will be considered for this tender.

A compulsory tender briefing meeting will be held on Wednesday, 21 September 2022 at 12h00 at the ePhobane, Zimele Pump station 1. The GPS coordinates are 28°46'16.70"S 31°28'29.92"E. A LDV type transport is recommended to access the site.

Completed tenders in sealed envelopes bearing the tender number must be deposited in the Municipality's tender box in the foyer of King Cetshwayo House, Corner of Krugerrand & Barbados Bay Road, CBD, Richards Bay on or before 12h00 on Monday, 17 October 2022. It must be noted that due to COVID 19 regulations, tender documents will not be opened in public, however the opening register will be published on KCDM's website. Tenders received after the due date and time will not be considered. Only locally produced goods or locally manufactured goods, meeting the stipulated minimum threshold for local production and content will be considered. The exchange rate to be used for the calculation of local content (local content and local production are used interchangeably) must be the exchange rate published by the SARB at 12h00 on the date, one week (7 calendar days) prior to the closing date of the bid

Tenders are required to employ Targeted Enterprises on this contract, failure to do so may lead to the tenderer being completely disqualified. The Targeted Enterprises to be utilized should meet the requirements of Preferential Procurement Regulations, 2017 and registered with CIDB with grading of 1 ME to 3 ME, EME or QSE which are at least 51% black owned. At least 30% of contract value (with stipulated exceptions) must be subcontracted to the Targeted Enterprises. The objective is to bring about meaningful transformation in the Construction Industry through meaningful economic participation, transfer of technical, management and entrepreneurial skills and creation of sustainable Black Enterprises.

Please note that this tender will be evaluated on compliance (returnable and completeness) and functionality. The following criteria in "Functional Evaluation Criteria", will be applicable for the functionality and compliance and maximum weight of each criterion is indicated in the table below and any tenderer who scores less than 70 percent, in respect of "functionality" will be regarded as submitting a non-responsive tender and will be disqualified. Note that only tenderers who administratively comply (returnable and completeness of document) shall move to functionality stage.

Prospective service providers are required to ensure full completion and correctness of information when responding to MBD 4 and all other required declarations in the document. The municipality reserves the right to validate the correctness of the declarations through various databases inclusive of the Central Supplier Database (CSD). Failure to fully complete and/or provision of incorrect information in the declaration will be regarded by the employer as a non-responsive tender.

Functional Evaluation Criteria:

#	Criteria Description		Weight
1	Service providers must comply with the following pre-requisites:		
	a.	Tenderer's experience in similar nature and value (No project will lead to disqualification)	25
	b.	Key Personnel: Site Agent / Contracts Manager (No experience or less than 1 year will lead to disqualification)	20
	c.	Key Personnel: Foreman (No experience or less than 1 year will lead to disqualification)	20
	d.	Construction Programme	15
	e.	Quality Assurance / Quality Management System (No quality assurance will lead to disqualification)	15
	f.	Geographic location of Tenderer	5
		TOTAL	100

It will be the tenderer's responsibility to check the document on receipt for completeness and to notify the employer of any discrepancies or omissions. It is the tenderer's responsibility to provide all the data and information requested in the form required, failure to do so may be regarded by the employer as a non-responsive tender. Submissions may only be done on documentation supplied by the Municipality.

All communication between the employer and the tenderer shall be in a form that can be read, copied, and recorded. All writing shall be in the English Language. The employer shall not take any responsibility for non-receipt of communications from a tenderer.

All tender enquiries which are non-technical must be directed to Mr. Z Mkhwanazi at Tel. 035-799 2715, Technical queries must be directed to Mr. Zenzele Ndlovu at Tel. 035-799 2513.

Tenderers who do not hear from the King Cetshwayo Municipality within 90 days of the closing date of the tender should consider their tender unsuccessful. Please note that no tender will be accepted by fax or e-mail.

Mr P. Sibiya
Municipal Manager
King Cetshwayo District Municipality
Private Bag X1025
RICHARDS BAY
3900

T1.2 Tender Data

The Conditions of Tender are the Standard Conditions of Tender as contained in Annexure C of the CIDB Standard for Uniformity in Construction Procurement (2019) (See www.cidb.org.za) which are reproduced without amendment or alteration and are, for the convenience of Tenderers attached as an Annex to this Tender Data.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this Tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard Conditions of Tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

Variations and additions to the Standard Conditions of Tender are indicted at the end of the Tender Data.

Clause Number **Tender Data**

C.1 The Employer is the King Cetshwayo District Municipality.

C.1.2 The tender documents issued by the employer comprise:

a) Book 1 (This document)

b) Book 2 (The drawings)

C.1.4 The employer's agent, for the purposes of any communication between the employer and tenderer, is:

Queries Type	Tender Matters	Technical Matters
Name:	Mr. Z Mkhwanazi	Mr. Zenzele Ndlovu
Postal Address:	Private Bag X1025 Richards Bay 3900	Private Bag X1025 Richards Bay 3900
Physical Address	King Cetshwayo House, Corner Kruger Rand & Barbados Bay Road, Richards Bay CBD	King Cetshwayo House, Corner Kruger Rand & Barbados Bay Road, Richards Bay CBD
Tel /Fax No.:	035 799 2529	035 799 2313
E-mail:	xulus@kingcetshwayo.gov.za	ndlovuze@kingcetshwayo.gov.za

C1.6.2 A competitive negotiation process will not be used.

C1.6.3 A two-envelope procedure will not be used.

C.2.1.1 Eligibility to Tender

Only those tenderers meeting the following criteria are eligible to tender.

a) Tenderers who have a BBBEE rating of Level 1;

b) Tenderers who are registered with the CIDB, in an equal or higher than 6 Mechanical Engineering works (5ME or higher) class of construction work and are registered with the CIDB as having a track record;

c) Tenderers who meet the minimum score for functionality;

d) Tenderers who are registered on the National Treasury Central Supplier Database and the KCDM supplier database;

e) Tenderers who's name and signature appear on the attendance register of the tender briefing meeting;

f) Tenderers who have not failed to perform on any previous contract and were issued a written notice to this effect;

g) Tenderers who when completing the Compulsory Enterprise Questionnaire can show that there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the Tender process.

h) Only those tenderers who have in their employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff are eligible to submit tenders.

C2.2.1 The employer will provide R0.00 compensation.

C.2.7 The arrangements for a clarification meeting are as stated in the Tender Notice and Invitation to Tender.

C.2.11 No correction fluid/ tape should be used on this tender document.

C.2.12.2 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 so as 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 to 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 of confirming the acceptability of the detailed design before it is constructed.

C.2.13.3 Each Tender offer communicated on paper shall be submitted as an original only with zero copies.

C.2.13.4 All forms where a requirement for a signature is indicated are to be signed.

C.2.13.5 & 2.13.7 The employer's address and identification details to be shown on each Tender offer package are:

Identification details:	Reference No. KCDM/MIG/02/2022
Title of Tender	Tender for GREATER MTHONJANENI SSA4: BULK WATER SUPPLY IMPROVEMENTS - UPGRADE OF ZIMELA PUMPSTATION 1, 2 & 3
Closing Date	As per Tender Notice
Time	As per Tender Notice
Employers Address:	Private Bag X1025, Richards Bay, 3900

C.2.13.9 Telephonic, telegraphic, telex, facsimile or e-mailed Tender offers will not be accepted.

C2.15.1 The closing time is as stated in the Tender Notice and Invitation to Tender.

C2.15.1 The address for receipt of the tender document is:

The tender box in the foyer of the offices of the King Cetshwayo District Municipality, Corner of Krugerrand & Barbados Bay Road, CBD, Richards Bay

C.2.16 The Tender offer validity period is 90 days.

C.2.18 The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.

C.2.19 Should it be necessary in the course of an inspection, test or analysis for whatever reason that an official of the Employer or the Employers Agent should need to proceed to other centres for inspection, test or analysis purposes, such costs shall be for the account of the Tenderer.

C.2.23 The tenderer must submit to the Employer the details as requested in the various returnable schedules.

C.3.4 Tenders will be opened immediately after the closing time for Tenders at a venue to be announced at the tender box immediately after the closing time for Tenders.

C.3.11.1 The procedure for the evaluation of responsive Tenders is as per the Preferential Procurement Regulations, 2017.

With reference to the clauses in the regulation:

5.(1) the tender will be evaluated on functionality.

5.(3)(a) & (b) The evaluation criteria for measuring functionality and the points for each criteria is given the Functionality Criteria Table.

5.(3)(c) the minimum qualifying score for functionality for a tender to be considered further is 70%

The information provided by the tenderer in the returnable documents will be used in the evaluation process.

Table 1 Functionality Criteria Table

NO.	CRITERIA	POINTS	RETURN-ABLE SCHEDULE	WEIGHT
1.	Tenderer's Experience: Successful completion of similar projects (in nature and value) in the last ten (10) years	• No Project (Disqualification) • 1 project (5) • 2 projects (10) • 3 projects (15) • 4 projects (20) • 5 projects and above (25)	RS011	25
2.	Key Personnel: Site Agent/ Contracts Manager qualifications and experience.	Qualification required is 3yr Degree / N. Diploma in Civil Engineering and LIC NQF 5 • No qualification or less than 1-year experience (Disqualification) • Qualified with less 1- 2 years' relevant experience in the position (7) • Qualified with more than 2-5 years' relevant experience in the position (14) • Qualified with more than 5 years' relevant experience in the position (20)	RS012	20
3.	Key Personnel: Foreman qualification and experience	Qualification required is LIC NQF 4 and Matric/N3 • No experience or less than 1-year experience (Disqualification) • 1-2 years' relevant experience in the position (4) • More than 2 - 4 years of relevant experience in the position (8) • More than 4 years - 6 years' relevant experience in the position (12) • More than 6 years - 8 years' relevant experience in the position (16) • More than 8 years' relevant experience in the position (20)	RS012	20
4.	Preliminary Construction Programme: Detail to which works items are planned.	• No programme (Disqualification) • Poor (only major work items shown) (5) • Adequate (all necessary work items shown) (10) • Excellent (all necessary work items shown including links between tasks) (15)	RS017	15

5.	Quality Management System	• Nothing submitted (Disqualification) • Poor Quality Management system (4) • Detailed company quality management program attached (8) • ISO 9001: 2015 certified (15)	RS019	15
6.	Geographic Location: Locality of the Tenderer	• Outside KZN (1) • Inside KZN (3) • Inside the King Cetshwayo District Municipality (5)	RS007	5

C.3.17 The number of paper copies of the signed contract to be provided by the employer is: One.

Variations and Additions to the Standard Conditions of Tender

1 Variation of Clause C.2.14

Replace Clause C2.14 with the following

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

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, shall be regarded by the employer as non-responsive. This would include, but not be limited to, aspects such as letters not signed or certification not provided where certification is requested."

2 Add New Clause C.2.24

"C.2.24 Verification of Information

Accept and agree that the Employer may verify the validity and correctness of any data provided by the tenderer through direct contact with the source of such data. Which would include, but not be limited to banking institutions, SARS, the Central Supplier Database, CIPRO, references, key personnel, etc."

T1.3 Standard Conditions of Tender

The CIDB Standard for Uniformity 2019: Annex C Standard Conditions of Tender is reproduced here for convenience. The original can be accessed as published in Board Notice 423 of 2019 in Government Gazette 42622 of 8 August 2019.

Annex C Standard Conditions of Tender

C.1 General

C.1.1 Actions

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

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

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

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

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

C.1.2 Tender Documents

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

C.1.3 Interpretation

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

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

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

a) **conflict of interest** means any situation in which:
   i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
   ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
   iii) incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.

b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;

c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;

d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

C.1.4 Communication and employer's agent

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

C.1.5 Cancellation and Re-Invitation of Tenders

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

a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
b) funds are no longer available to cover the total envisaged expenditure; or
c) no acceptable tenders are received.
d) there is a material irregularity in the tender process.

C.1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised

C.1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

C.1.6 Procurement procedures

C.1.6.1 General

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

C.1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

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

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

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

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

C.2.1 Eligibility

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

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

C.2.2 Cost of tendering

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

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

C.2.3 Check documents

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

C.2.4 Confidentiality and copyright of documents

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

C.2.5 Reference documents

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

C.2.6 Acknowledge addenda

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

C.2.7 Clarification meeting

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

C.2.8 Seek clarification

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

C.2.9 Insurance

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

C.2.10 Pricing the tender offer

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

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

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

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

C.2.11 Alterations to documents

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

C.2.12 Alternative tender offers

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

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

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

C.2.13 Submitting a tender offer

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

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

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

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

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

C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked “financial proposal” and place the remaining returnable documents in an envelope marked “technical proposal”. Each envelope shall state on the outside the employer’s address and identification details stated in the tender data, as well as the tenderer's name and contact address.

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

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

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

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

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

C.2.15 Closing time

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

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

C.2.16 Tender offer validity

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

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

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

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

C.2.17 Clarification of tender offer after submission

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

Note: Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

C.2.18 Provide other material

C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer’s commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

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

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

C.2.19 Inspections, tests and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

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

C.2.23 Certificates

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

C.3 The employer's undertakings

C.3.1 Respond to requests from the tenderer

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

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

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

C.3.2 Issue Addenda

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

C.3.3 Return late tender offers

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

C.3.4 Opening of tender submissions

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

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

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

C.3.5 Two-envelope system

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

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

C.3.6 Non-disclosure

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

C.3.7 Grounds for rejection and disqualification

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

C.3.8 Test for responsiveness

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

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

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

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

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

C.3.9 Arithmetical errors, omissions and discrepancies

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

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

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

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

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

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

C.3.10 Clarification of a tender offer

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

C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project. Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

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

Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

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

C.3.11.1 General

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

C.3.12 Insurance provided by the employer

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

C.3.13 Acceptance of tender offer

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

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
c) has the legal capacity to enter into the contract;
d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
e) complies with the legal requirements, if any, stated in the tender data; and
f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

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

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

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

C.3.15 Complete adjudicator's contract

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

C.3.16 Registration of the award

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

C.3.17 Provide copies of the contracts

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

C.3.18 Provide written reasons for actions taken

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

T2.1 List of Returnable Documents

The Tenderer must complete and /or sign the following Returnable Documents:

		Completed
1	**Returnable Schedules –Evaluation Documents**	
RS001	Record of Addenda to Tender Documents	
RS002	Compulsory Enterprise Questionnaire	
RS003	Site Inspection Certificate	
RS004	Contractor Registration with Construction Industry Development Board	
RS005	A copy of a valid Letter of Good Standing from Workmen's Compensation	
RS006	Performance Security	
RS007	Municipal Account Statement	
RS008	Preferential Procurement (MBD 6.1)	
RS009	Certificate of Authority for Signatory	
RS010	Schedule of Plant and Equipment	
RS011	Tenderer's Experience	
RS012	Key Personnel	
RS013	Proposed Amendments and Qualifications	
RS014	Declaration of Tenderers Past Supply Chain Management Practices (MBD8)	
RS015	Declaration of Interest (MBD4)	
RS016	Certificate of Independent Tender Determination (MBD9)	
RS017	Preliminary Programme	
RS018	Declaration of Competency on Health and Safety Requirements	
RS019	Quality Assurance & Environmental Management	
RS020	Declaration Certificate for Local Production and Content for Designated Sectors (MBD6.2)	
RS021	Annual Financial Statement	
RS022	Proposed Targeted Enterprise	
RS023	Tenderer's Participation in Job Creation Using Local Labour	
2	**The Offer of the C1.1 Offer and Acceptance**	
3	**C1.2 Contract Data (Part 2)**	
4	**C2.2 Bill of Quantities**	

....
Signature Date

T2.2 Returnable Schedules to be completed by Tenderer

Record of Addenda to Tender Documents RS001

We confirm that the following communications received from the Employer before the submission of this Tender offer, amending the Tender documents, have been taken into account in this Tender offer:

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

Attach additional pages if more space is required.

Compulsory Enterprise Questionnaire RS002

As Per Annex G of CIDB Standard for Uniformity 2019

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: CSD number:

Section 5: Particulars of sole proprietors and partners in partnerships:

Name*	Identity number*	Personal income tax number*

** Complete only if sole proprietor or partnership and attach separate page if more than 3 partners*

Section 6: Particulars of companies and close corporations

Company registration number:

Close corporation number:

Tax reference number:

Section 7: MBD4 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 8: MBD6-1 and 6-2 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 9: MBD8 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 10: MBD9 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

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

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

Signed		Date	
Name		Position	
Enterprise name			

Site Inspection Certificate RS003

Site Inspection Certificates are signed and handed out by the Engineer at the Tender Site Inspection.

ATTACH YOUR SIGNED ORIGINAL SITE INSPECTION CERTIFICATE TO THIS PAGE

Failure to do so may lead to your Tender being disqualified.

Contractor Registration with Construction Industry Development Board RS004

The CIDB registration details are as follows:

Name of entity registered with CIDB: _____

Registration CRS number: _____

Registration category and class: _____

Failure to do so may lead to disqualification.

Workmen's Compensation Letter of Good Standing RS005

PAGE TO WHICH A VALID NUMBERED CERTIFICATE OF THE WORKMEN'S COMPENSATION COMMISSIONER LETTER OF GOOD STANDING MUST BE ATTACHED.

Please provide a valid certificate number of the Workmen's Compensation if registered with the department of labour, or attach valid original (or valid certified copy) of the Workmen's Compensation commissioner letter of good standing from applicable agencies e.g, FEM, RAM etc, if not registered with the department of labour.

Workmen's Compensation registration number: _____

Workmen's Compensation certificate number: _____

OR

In the case where it is not possible for an applicant to obtain the above letter of good standing from the Workmen's Compensation Commissioner, an affidavit is to be submitted advising that the business has registered with the Workmen's Compensation Commissioner.

OR

In the case where a business does not employ any employees an affidavit together with a letter from the Workmen's Compensation Commissioner addressed to the business, confirming that registration is not required, must be submitted.

Failure to do so may lead to your tender being disqualified.

Performance Security RS006

The tenderer is to issue a performance guarantee equal in value to 10 (ten)% of the tendered amount excluding VAT, such performance guarantee must be one of the options indicated on the table below. For the purposes of GCC2015 Clause 6.2 the selection below will be Contract Data provided by the Contractor.

Type of Security	**Contractor's choice** (Indicate "Yes" or "No")
Cash deposit of **10%** of the Contract Sum Attach a letter from the bank confirming availability of funds equivalent to 10 (ten) % of the tendered amount exclusive of VAT.	
Fixed Performance Guarantee of **10%** of the Contract Sum Attach a letter of undertaking from a recognized financial institution, confirming the issuing of a performance guarantee equal to in value to 10 (ten) % of the tendered amount exclusive of VAT. The letter of undertaking will not oblige the financial institution to issue a performance guarantee, but merely serves as an indication of the tenderer's ability to obtain a performance guarantee The performance guarantee is to be issued by a Bank registered in terms of the Banking Act (94 of 1990).	
Retention of **10%** of the Works Attach to this document a letter from the director/s giving the Employer consent to deduct 10 (ten) % retention from each progress payment due to the contractor until a limit of 10 (ten) % is reached.	
Cash deposit of **5%** of the Contract Sum plus retention of **5%** of the value of the Works • Attach a letter from the bank confirming availability of funds equivalent to 5 (five) % of the tendered amount exclusive of VAT. • Attach a letter from the director/s giving the Employer consent to deduct 10 (ten) % retention from each progress payment due to the contractor until a limit of 5 (five) % is reached.	
Fixed Performance Guarantee of **5%** of the Contract Sum plus retention of **5%** of the value of the Works • Attach a letter of undertaking from a recognized financial institution, confirming the issuing of a performance guarantee equal to in value to 5 (five) % of the tendered amount exclusive of VAT. The letter of undertaking will not oblige the financial institution to issue a performance guarantee, but merely serves as an indication of the tenderer's ability to obtain a performance guarantee The performance guarantee is to be issued by a Bank registered in terms of the Banking Act (94 of 1990) • Attach a letter from the directors giving the Employer consent to deduct 10 (ten) % retention from each progress payment due to the contractor until a limit of 5 (five) % is reached.	

Failure to do so may lead to your Tender being disqualified.

RS006-2 – Bank Rating

TENDERER'S FINANCIAL STANDING AND STABILITY

a In terms of the Standard Conditions of Tender, the Tenderer shall provide information about its commercial position, which includes information necessary for the Employer to evaluate the Tenderer's financial standing.

b A third party credit bureau check will be used to determine the credit worthiness of the Tenderer.

c The financial standing of the Tenderer will be assessed by third party credit checks on the main contractor

d An analysis of the Tenderer financial standing will be conducted by third party for the purposes of establishing the Tenderers financial viability and ability to meet all of its contractual obligations for the duration of the contract, should the Tenderer be awarded the contract.

e Tenders that do not meet King Cetshwayo District Municipality's financial requirements as per third party assessment, will be disqualified from further assessment.

The financial standing of the Tenderer will be assessed by evaluating the bank rating codes in order to carry out the financial risk analysis on the Tenderer. This is done as to establish the Tenderers financial viability and ability to meet all of its contractual obligation for the duration of the contract should the tenderer be awarded the contract.

Attach bank Rating with bank code A-C

	BANK CODE	DESCRIPTION OF BANK CODE
1.	A	Undoubted for the amount of enquiry
2.	B	Good for the amount of enquiry
3.	C	Good for the amount quoted if strictly in the way of business
4.	D	Fair Trade risk for amount of enquiry
5.	E	Figures considered too high
6.	F	Financial position unknown
7.	G	Occasional dishonours
8.	H	Frequent dishonours

Failure to do so may lead to your Tender being disqualified.

Municipal Account Statement RS007

Confirmation of Good Standing with Regard to Municipal Accounts

PAGE TO WHICH ANY OF THE FOLLOWING MUST BE ATTACHED

IN THE CASE WHERE:

Please select the relevant option by ticking below

A. TENDERER AS LANDOWNER FOR PURPOSE OF CONDUCTING BUSINESS FROM PREMISES

A.1 In the case where the tenderer owns the property from which the tenderer's business operates from, an original or certified copy of the tenderer's business municipal account (not older than 3 months) indicating the status of payment of all municipal rates and taxes i.e. property rates, electricity, water, refuse & sewer from the Municipality in which jurisdiction the said property is situated, must be submitted.. ☐

OR

A.2 In the instance where the tender occupies Tribal land an original/certified affidavit from commissioner of oaths, confirming that the tenderer is residing in the area where no municipal accounts are billed. If the property rates, electricity, water, refuse is charged by the municipality, the original or certified copy of the statement not older than three (3) months in the name of the service provider or any of its directors must be attached. ☐

NB: Should there be separate tax invoices from the municipality for property rates and services (taxes), you are required to submit the most recent of each of these invoices.

OR

B. TENDERER IS THE TENANT FOR PURPOSE OF CONDUCTING ITS BUSINESS FROM PREMISES ☐

B.1 In the case where the tenderer does not own property and is a tenant for the purpose of its business establishment, the tenderer to provide an original or certified copy of a certificate from its landlord certifying that all the tenants payments in respect of all municipal rates and taxes i.e. property rates, electricity, water, refuse & sewer are paid up to date, or ☐

B.2 In the case where the tenderer as tenant is responsible for its own municipal accounts with the municipality then tenderer must attach the letter from the landlord certifying the above together with original or certified copies of all most recent relevant municipal invoices i.e. property rates, electricity, water refuse & sewer.. ☐

B.3 In the case where the tenderer operates in the property owned by relative and does not pay rent or rates, an affidavit from the relative confirming such must be attached. Also the up to date original or certified copy municipal rates statement of the relative must be attached or letter from the councillor in case of the Traditional Authority ☐

B.4 In case where the potential service provider is under incubation programme an original or certified copy of the letter from the incubator confirming that the service provider is using their facilities (property). The incubator is to provide their original or certified copy of rates account or letter from the landlord.

Failure to do so may lead to your tender being disqualified.

Preferential Procurement RS008

(MBD 6.1)

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

1. GENERAL CONDITIONS

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

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The 80/20 preference point system will apply, and the lowest acceptable tender will be used to determine the applicable preference point system on this tender.

1.3 Preference points for this bid shall be awarded for:

Price; and

B-BBEE Status Level of Contribution.

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

	POINTS	
	80/20 system	**90/10 system**
PRICE	80	90
B-BBEE STATUS LEVEL OF CONTRIBUTION	20	10
Total points for Price and B-BBEE must not exceed	100	100

1.5 Failure on the part of a bidder to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or a sworn affidavit confirming annual turnover and level of black ownership in case of an EME and QSE together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

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

2. DEFINITIONS

"all applicable taxes" includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;

"B-BBEE" means broad-based black economic empowerment as defined in section 1 of the Broad- Based Black Economic Empowerment Act;

"B-BBEE status level of contributor" means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

"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 services, works or goods, through price quotations, advertised competitive bidding processes or proposals;

"Broad-Based Black Economic Empowerment Act" means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003) as amended by Act No 46 of 2013;

"comparative price" means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;

"consortium or joint venture" 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;

"contract" means the agreement that results from the acceptance of a bid by an organ of state;

"EME" means an Exempted Micro Enterprise as defines by Codes of Good Practice issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

"Firm price" means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;

"functionality" means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;

"non-firm prices" means all prices other than "firm" prices;

"person" includes a juristic person;

"QSE" means a Qualifying Small Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

"rand value" means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;

"sub-contract" means the primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;

"total revenue" bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of Section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the Government Gazette on 9 February 2007;

"trust" means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and

"trustee" means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING POINT SYSTEM

3.1 The bidder obtaining the highest number of total points will be awarded the contract.

3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;.

3.3 Points scored must be rounded off to the nearest 2 decimal places.

3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1 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

$$P_S = 80\left(1 - \frac{P_t - P_{min}}{P_{min}}\right)$$

or

90/10

$$P_S = 90\left(1 - \frac{P_t - P_{min}}{P_{min}}\right)$$

Where

Ps = Points scored for comparative price of bid under consideration

Pt = Comparative price of bid under consideration

Pmin = Comparative price of lowest acceptable bid

5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

5.1 In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (80/20 system)	Number of points (90/10 system)
1	20	10
2	18	9
3	16	8
4	12	5
5	8	4
6	6	3
7	4	2
8	2	1
Non-compliant contributor	0	0

5.2 A bidder who qualifies as an EME in terms of the B-BBEE Act must submit a sworn affidavit confirming Annual Total Revenue and Level of Black Ownership.

A Bidder other than EME or QSE 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.

5.3 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.

5.4 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.

5.5 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.

5.6 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 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.

5.7 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.

6. BID DECLARATION

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

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1

7.1 B-BBEE Status Level of Contribution: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or a sworn affidavit.

8. SUB-CONTRACTING

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

(Tick applicable box)

YES		NO	

If yes, indicate:

What percentage of the contract will be subcontracted? %

The name of the sub-contractor

The B-BBEE status level of the sub-contractor

Whether the sub-contractor is an EME or QSE

(Tick applicable box)

YES		NO	

Tick applicable EME or QSE classification of the party named in (ii)

0 an EME or QSE;

0 an EME or QSE which is at least 51% owned by black people;

0 an EME or QSE which is at least 51% owned by black people who are youth;

0 an EME or QSE which is at least 51% owned by black people who are women

0 an EME or QSE which is at least 51% owned by black people with disabilities;

0 an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;

0 a cooperative which is at least 51% owned by black people;

0 an EME or QSE which is at least 51% owned by black people who are military veterans;

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm:

9.2 VAT registration number:

9.3 Company registration number:

9.4 TYPE OF COMPANY/ FIRM

0 Partnership/Joint Venture / Consortium

0 One person business / sole propriety

0 Close corporation

0 Company

0 (Pty) Limited

[TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

9.6 COMPANY CLASSIFICATION

0 Manufacturer

0 Supplier

0 Professional service provider

0 Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:

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

9.9 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-BBE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

The information furnished is true and correct;

The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

If the B-BBEE status level of contribution 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. restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, 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

……..
SIGNATURE(S) OF BIDDERS(S)

1. ……..……..

DATE: ……...

2. ……..…….. ADDRESS: ……..

……...

……

Please attach, to this page, an original or certified copy of the valid B-BBEE status level verification certificate, issued by either:

A Verification Agency that was accredited by the South African National Accreditation System (SANAS).

Sworn Affidavit from DTI website in case of EME or QSE.

FAILURE TO COMPLETE AND ATTACH THE CERTIFICATE MAY LEAD TO DISQUALIFICATION

Certificate of Authority for Signatory RS009

This Returnable Schedule is to be completed by companies and close corporations.

Indicate the status of the Tenderer by ticking the appropriate box hereunder. The Tenderer must complete the certificate set out below for the relevant category or may attach the original or certified board resolution stating the nominated member. **Failure to do so may lead to your Tender being disqualified.**

A Company	B Joint Venture	C Close Corporation

A. CERTIFICATE FOR COMPANY

I, ..., managing director of the board of directors of

....., hereby confirm that by resolution of the board

taken on .....20....., Mr/Ms ....., has been duly authorized to sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

As witnesses:-

1. ....
Managing director

2. ....
Date

B. CERTIFICATE FOR JOINT VENTURE

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

Mr/Ms ....., authorized 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	AUTHORISING SIGNATURE, NAME & CAPACITY
Lead partner		

C. CERTIFICATE FOR CLOSE CORPORATION

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

.....hereby authorize Mr/Ms .....
to sign all documents in connection with the tender and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

Schedule of Plant and Equipment RS010

Tenderers to furnish with their tenders a complete list of the major items of construction equipment which they propose to use in the work. After his tender has been accepted, the Contractor must satisfy the Project Manager at all times that such plant and equipment, or its equivalent, is available for use.

TYPE OF construction Equipment	MAKE & DESCRIPTION / CAPACITY	NUMBER	
CATEGORY 1 – Heavy Equipment		Owned	Hired
EXCAVATOR			
COMPACTOR			
TLB			
TIPPER TRUCK			
CATEGORY 2 – Smalls		Owned	Hired
Walk behind roller 600			
Wacker type impact compactor			
18kg electrical breakers			
Pipeline Pressure Tester			

Failure to complete this form properly and correctly, may lead to the conclusion that the Tenderer does not have the necessary plant and equipment resources at its disposal, which will prejudice its tender.

Tenderer's Experience RS011

LIST OF SIMILAR PROJECTS SUCCESSFULLY COMPLETED OVER THE PAST 10 YEARS

1. Tenderers must take care to provide accurate information in this return. Incorrect contact details of references listed may have a negative impact on scoring.

2. Table RS011.1.1 is a statement of similar work successfully executed by the Tenderer. If the space provided is insufficient, add more projects on a separate sheet by photocopying this template.

3. The Tenderer must indicate the numerical list number out of a given total number of lists submitted on the right top corner of each list.

4. The Tenderer should also indicate duration of each project in weeks as this will be used to calculate the number of years of relevant experience.

5. Tenderers are to also attach completion certificates or reference letter from the client/clients agent for the completed projects.

Table RS011.1.1: List of similar Projects carried out over the past 10 years **Sheet … of …**

Employer:	Contact person (Employer's Agent)	Description of contract (name of project)	Project Value (incl. VAT)	Completion Date	Duration (weeks)
1. Employer's name:	Consultant's name:				
Contact:	Contact:				
Tel:	Tel:				
Cell:	Cell:				
Fax:	Fax:				
2. Employer's name:	Consultant's name:				
Contact:	Contact:				
Tel:	Tel:				
Cell:	Cell:				
Fax:	Fax:				
3. Employer's name:	Consultant's name:				
Contact:	Contact:				
Tel:	Tel:				
Cell:	Cell:				
Fax:	Fax:				
4. Employer's name:	Consultant's name:				
Contact:	Contact:				
Tel:	Tel:				
Cell:	Cell:				
Fax:	Fax:				
5. Employer's name:	Consultant's name:				
Contact:	Contact:				
Tel:	Tel:				
Cell:	Cell:				
Fax:	Fax:				
Total duration in number of weeks (for official use only)					

....
Signature Date

Key Personnel RS012

RS012-1 – List of Key Personnel Assigned to the Contract

1) Provide relevant information as prescribed below for the following Key Persons proposed in the tender to fulfil the following positions:

2) Attach a proposed organogram to this page.

3) Should at the time of award alternate key personnel be appointed to this contract they are to have similar or better qualifications and experience.

Table RS012.1.1: List of personnel to be assigned to this project

Name	ID No.	Current Position	No. of Years Employed	Qualifications / Experience
CATEGORY 1 – CONTRACTS MANAGER / SITE AGENT (LIC NQF 5)				
CATEGORY 2 – FOREMAN (LIC NQF 4)				
CATEGORY 3 – HEALTH AND SAFETY STAFF (SAMTRAC NQF 5)				
CATEGORY 4 – ANY OTHER LIC NQF 5 SUPERVISORS				

....

Signature Date

RS012-2 – Curriculum Vitae of Key Personnel

Contractors shall employ in labour-intensive works only those supervisory and management staff that have completed the required Skills Programme in terms of Appendix C of the “Guidelines for the implementation of labour intensive infrastructure projects under the Expanded Public Works Programme (EPWP) Third Edition 2015”:

The following levels of qualification is particularly required:

- Foremen / Supervisors: N3/Matric and "Manage Labour-Intensive Construction Processes" at NQF level 4;
- Site Agent / Construction Manager: National Diploma or 3-year Degree in Civil Engineering and NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent Quality Council for Trades and Occupations (QCTO) qualifications at NQF level 5 or 7.
- Health and Safety staff at NQF level 5 “Samtrac”

CURRICULUM VITAE OF KEY PERSONNEL

Curriculum Vitae of key personnel to be attached to this page for whom functionality points are sought:

- Contracts Manager
- Site Agent
- Foreman

and

QUALIFICATIONS OF KEY PERSONNEL – LABOUR INTENSIVE ACTIVITIES

Relevant qualification certificates to be attached to this page for each person possessing the required qualifications in the supervision or management of LIC projects:

- Site Agent
- Foreman

Proposed Amendments and Qualifications RS013

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 C.3.3 of the Standard Conditions of Tender referenced in the Tender Data regarding the Employer's handling of material deviations and qualifications.

These amendments and qualifications, if accepted by the Employer, will be incorporated in the Acceptance Form as Deviations.

Page	Clause or item	Proposal

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

....
Signature Date

Declaration of Tenderer's Past Supply Chain Management Practices RS014

(MBD8)

1 This Municipal Tendering Document must form part of all Tenders 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 Tender of any Tenderer may be rejected if that Tenderer, 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 Tender.

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

CERTIFICATION

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

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

.....	.....
Signature	Date
.....	.....
Position	Name of Tenderer

Declaration of Interest RS015

MDB4

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

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

3.2 Identity Number: .....

3.3 Position occupied in the Company (director, trustee, shareholder[2]):.....

3.4 Company Registration Number: .....

3.5 Tax Reference Number: .....

3.6 VAT Registration Number: .....

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

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

3.8.1 If yes, furnish particulars .....

.....

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

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

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

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

3.9.1 If yes, furnish particulars .....

.....

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

3.10.1 If yes, furnish particulars .....

.....

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

3.11.1 If yes, furnish particulars .....

.....

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

3.12.1 If yes, furnish particulars .....

.....

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

3.13.1 If yes, furnish particulars .....
.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract?

YES / NO

3.14.1 If yes, furnish particulars.....
.....

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

Full Name	Identity Number	State Employee Number

.....
Signature

.....
Date

.....
Position

.....
Name of Tenderer

Certificate of Independent Tender Determination RS016

I, the undersigned, in submitting the accompanying tender:

Tender No.: KCDM/MIG/02/2022: GREATER MTHONJANENI SSA4: BULK WATER SUPPLY IMPROVEMENTS – UPGRADE OF ZIMELA PUMP STATION 1, 2 & 3

(Tender number and description)

In response to the invitation for the tender made by:

King Cetshwayo District 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 Tenderer)

1. I have read and I understand the contents of the certificate;
2. I understand that the accompanying tender will be disqualified if this certificate is found not to be true and complete in every respect;
3. I am authorized by the tenderer to sign this certificate, and to submit the accompanying tender, on behalf of the tenderer;
4. each person whose signature appears on the accompanying tender has been authorized by the tenderer to determine the terms of and to sign the tender. On behalf of the tenderer;
5. for the purposes of this certificate and the accompanying tender, I understand that the word “competitor” shall include any individual or organization, other than the tenderer, whether or not affiliated with the tenderer, who:
   (a) Has been requested to submit a tender in response to this tender invitation;
   (b) Could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
   (c) Provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer.
6. The tenderer has arrived at the accompanying tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium[1] will not be construed as collusive tendering.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement 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 tender;
   (e) The submission of a tender which does not meet the specifications and conditions of the tender; or
   (f) Tendering with the intention not to win the tender.

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 tender invitation relates.

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

10. 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.

11. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders 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.

[1] 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.

.....	.....
Signature	Date
.....	.....
Position	Name of Tenderer

Preliminary Programme RS017

The tenderer shall outline in the table below or attached his proposed programme for the completion of the Works to conform with the requirements set out in the conditions of contract.

The tenderer shall take note of the Scope of Works Clause 5.2.7 items a. and b. regarding the requirements for programmes.

The successful Tenderer shall use the programme submitted below or attached as the basis for the detailed programme required in terms of the conditions of contract.

ACTIVITY NO.	DESCRIPTION OF WORK	ENVISAGED DURATION	STARTING WEEK	FINISHING

[Note: The programme must be based on the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is indicated as such as per C2.12 of the Conditions of Tender]

Declaration of Competency on Health and Safety Requirements RS018

Tenderer to provide a declaration on his competencies in establishing and maintaining a Health and Safety plan as required in terms of the Construction Regulations of 2014.

In order to demonstrate these competencies, the Tenderer is to provide with his tender (and attached to this page as a separate document) brief statements as to a safety plan and how the safety management systems will work and what control procedures they plan on using to ensure safety on the construction site.

The following generic aspects should be covered in the safety plan:

- What administrative procedures the Contractor envisage using in the implementation and maintenance of the safety plan with reference to the construction site.
- How continuous assessment of the safety plan will be assessed and implemented with respect to construction site.
- What control systems the Contractor envisage to implement on site to support his safety program.
- How the Contractor will ensure that he adheres to the construction regulations in respect of competent persons for appointments.
- What external resources the Contractor envisage on using to ensure successful implementation and sustainability of the safety plan.
- What training to employees the Contractor envisages and how he would go about to execute it.
- How Covid 19 is going to be handled on site.
- The Contractor should indicate which competent (as described in the OHS Act) persons he currently has in his employ or he plans on employing and **attach** abbreviated Curriculum Vitaes of these persons.

DECLARATION BY TENDERER:

It is confirmed that an outline of the Health and Safety plan is attached hereto. We further declare that we have the competence and necessary resources to carry out work safely in compliance with the Construction Regulations 2014 and that an approved Health and Safety Plan will be submitted prior to commencing with this contract.

....
Signature Date

Quality Assurance and Environmental Management RS019

1. Quality assurance systems employed by the Tenderer in his office in order to ensure compliance with stated employer's requirements ISO 9001 Certification: Tenderers who are certified as being compliant to the International Organisation for Standardisation's ISO 9001 quality management standard, will score higher in the functionality. Proof of certification or application with evidence of previously started process must be attached in order to qualify for functionality points. The extent of the use of this system must be attached in order to qualify for higher scores.
2. Tenderers who are following a quality management standard as set out by CESA/SABTACO will be deemed to be adequate if they indicate the extent of the use of this system which must be attached in order to qualify for satisfactory score.
3. Proof of certification of the tendering entity and its sub-contractor(s) or JV partner(s) must be submitted with the tender.
4. Note: Where the entity Tendering is a joint venture, provided one of these parties is ISO 9001 certified, and it has been indicated on the work plan submitted that the party will take responsibility for quality management.
5. Does the Tenderer have a Quality Management system which is certified in terms of ISO 9001
6. If "yes", Tenderer to supply brief summary of structure of system

YES	NO

.....

.....

.....

.....

.....

7. If "no", does the Tenderer intend to apply for certification?

YES	NO

By when? (Date) ..... ,or

8. If "no", does the Tenderer have its own systems

YES	NO

9. If "yes", please supply details of the system

.....

.....

.....

.....

.....

10. Does the Tenderer have an Environmental Management system which is certified in terms of ISO 14 000

YES	NO

11. Tenderer to supply brief summary of structure of system:

.....

.....

.....

12. If “no”, does the Tenderer intend to apply for certification? YES | NO

By when? (Date) ..... ,or

13. If “no”, does the Tenderer have its own systems YES | NO

14. If “yes”, please supply details of the system

.....

.....

.....

15. If the Tenderer does not intend to apply for certification it shall submit details of the quality / environmental management system presently in place.

16. The Tenderer shall insert here a copy of the company’s quality assurance plan, control procedures and the relevant documentation supporting its commitment to environmental management. In the event of these documents being too extensive to be included in the procurement document, an abbreviated version of the master document will be included, referring to the master document.

....
Signature Date

....
Position Name of Tenderer

Declaration Certificate for Local Production and Content for Designated Sectors RS020

(MBD6.2)

This Municipal Bidding Document (MBD) must form part of all tenders 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 and 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 9) makes provision for the promotion of local production and content.

1.2. Regulation 9.(1) prescribes that in the case of designated sectors, where in the award of tenders local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally 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 tendering 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 tender 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 the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required 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 at no cost.

1.6. A tender 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;

2. Definitions

2.1. “Tender” includes written price quotations, advertised competitive bids or proposals;

2.2. “Tender price” price offered by the tenderer, excluding value added tax (VAT);

2.3. “Contract” means the agreement that results from the acceptance of a tender by an organ of state;

2.4. “Designated sector” means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;

2.5. “Duly sign” means a Declaration Certificate for Local Content that has been signed by the 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).

2.6. “Imported content” means that portion of the tender price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;

2.7. “Local content”means that portion of the tender price which is not included in the imported content, provided that local manufacture does take place;

2.8. “Stipulated minimum threshold” means that portion of local production and content as determined by the Department of Trade and Industry; and

2.9. "Sub-contract" means the primary contractor's assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.

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

Description of services, works or goods	
Valves and valve products	70%
Steel Conveyance pipes	80%
Water meters	40%
Plastic Piping	100%

4. Does any portion of the services, works or goods offered have any imported content?

(Tick applicable box)

YES	NO

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

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

6. Where, after the award of a tender, 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 Accounting Officer / Accounting Authority provide directives in this regard.

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 TENDER NO. KCDM/MIG/02/2022

ISSUED BY: King Cetshwayo District 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 tenderer.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thedti.gov.za/industrialdevelopment/ip.jsp. Tenderers 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 the goods/services/works to be delivered in terms of the above-specified tender comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011;

(c) The local content percentages (%) 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	
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 / Municipality /Municipal Entity 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 tender 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 / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

....
Signature Date

.....
Witness 1 Date

....
Witness 2 Date

See Annexure C

Annexure C(a) **SATS 1286: 2011**

LOCAL CONTENT DECLARATION - SUMMARY SCHEDULE

(C1)	Tender No.	KCDM/MIG/02/2022										
(C2)	Tender Description:	GREATER MTHONJANENI SSA4: BULK WATER SUPPLY IMPROVEMENTS – UPGRADE OF ZIMELA PUMPSTATION 1, 2 & 3										
(C3)	Designated Product(s)	Steel pipes, valves and pumps										
(C4)	Tender Authority	King Cetshwayo District Municipality										
(C6)	Tender Exchange Rate	USD		EURO		GBP		Other				
(C7)	Special Local Content %	40%							Note: VAT to be excluded from all calculations			

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender price - each	Exempted imported value	Tender value net of exempted imported content	Imported Value	Local Value (Per Item)	Local Content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total imported content
(C8)	*(C9)*	*(C10)*	*(C11)*	*(C12)*	*(C13)*	*(C14)*	*(C15)*	*(C16)*	*(C17)*	*(C18)*	*(C19)*
	Steel reinforcement										
3.10	Various diameter high tensile bars										
	Pipe specials and valves										
7.1	250NB mild steel straight pipe, both ends flanged for a pipe length up to and including 700mm flanged										
7.2	250NB Steel segmented bend with 100mm extensions on both ends flanged										

		Calculation of local content						Tender summary			
Tender Item No's	List of Items	Tender price - each	Exempted imported value	Tender value net of exempted imported content	Imported Value	Local Value (Per Item)	Local Content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total imported content
(C8)	*(C9)*	*(C10)*	*(C11)*	*(C12)*	*(C13)*	*(C14)*	*(C15)*	*(C16)*	*(C17)*	*(C18)*	*(C19)*
7.3	250/200NB steel eccentric reducer flanged										
7.4	150NB Steel segmented bend with 100mm extensions on both ends										
7.5	200/150NB steel reducer, flanged										
7.6	200NB Bermad pump control valve										
	Pumps										
9.1	250Kw x 1450rpm VSD Motor										
9.2	KSB WKLn 150/5 pump										
9.5	220Kw x 1450rpm VSD Motor										
9.6	KSB WKLn 150/5 pump										

Expand the section above over multiple pages if required.

(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	

Tenderer to add more items should they wish to claim more local content. Attach any additional sheets to this page.

NOTE: Editable Excel versions of this annex is available on the DTI Website with guidance on how to complete the form.

NOTE: Editable Excel versions of this annex is available on the DTI Website with guidance on how to complete the form.

This form does not have to be submitted with the tender.

SATS 1286:2011

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	Tender No.	
(D2)	Tender description:	
(D3)	Designated Products:	
(D4)	Tender Authority:	
(D5)	Tendering Entity name:	
(D6)	Tender Exchange Rate:	Pula

EU R 0.00 GBP R 12.00

Note: VAT to be excluded from all calculations

A. Exempted imported content

Tender Item no's	Description of imported content	Local supplier	Overseas Supplier	Calculation of imported content: 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	Summary: Tender Qty	Exempted Imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)

(D19) Total exempt imported value R 0

This total must correspond with Annex C - C 21

B. Imported directly by the Tenderer

Tender Item no's	Description of imported content	Unit of measure	Overseas Supplier	Calculation of imported content: Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of Imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Tender Qty	Total Imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)

(D32) Total Imported value by tenderer R 0

C. Imported by a 3rd party and supplied to the Tenderer

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Calculation of imported content: Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of Imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Quantity Imported	Total Imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)

(D45) Total Imported value by 3rd party R 0

D. Other foreign currency payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Calculation of foreign currency payments: Foreign currency value paid	Tender Rate of Exchange	Summary of payments: Local value of payments
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above R 0

This total must correspond with Annex C - C 23

Signature of tenderer from Annex B

Date:

NOTE: Editable Excel versions of this annex is available on the DTI Website with guidance on how to complete the form.

This form does not have to be submitted with the tender.

SATS 1286.2011

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	Tender No.	
(E2)	Tender description:	
(E3)	Designated products:	
(E4)	Tender Authority:	
(E5)	Tendering Entity name:	

Note: 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)		R 0

(E10)	Manpower costs	(Tenderer's manpower cost)	R 0
(E11)	Factory overheads	(Rental, depreciation & amortisation, utility costs, consumables etc.)	R 0
(E12)	Administration overheads and mark-up	(Marketing, insurance, financing, interest etc.)	R 0

(E13) Total local content R 0

This total must correspond with Annex C - C24

Signature of tenderer from Annex B

Date: _____

Annual Financial Statement RS021

PAGE TO WHICH AN ANNUAL FINANCIAL STATEMENT MUST BE ATTACED (FOR A PERIOD OF 3YEARS)

The AFS must be in accordance to the nature of the business, whether they must be audited or not audited statement. (E.g. Pty companies: Need to be audited and Close Cooperation: do not need to be audited).

FAILURE TO DO SO MAY LEAD TO DISQUALIFICATION

Proposed Targeted Enterprises RS022

RS022 must be completed in full, failure to do so may lead to disqualification

RS022.1 PROPOSED TARGETED ENTERPRISES

Tenders are required to employ Targeted Enterprises on this contract; failure to do so shall lead to tenderer being completely disqualified. The Targeted Enterprises to be utilized should meet the requirements of Preferential Procurement Regulations, 2017 and registered with CIDB with minimum grading of 1 ME to 3 ME, EME or QSE that is at least 51% Black owned. At least 30% of contract value less items listed in RS022.3 must be subcontracted to the Targeted Enterprises. The objective is to bring about meaningful transformation in the Construction Industry through the following:

- Meaningful economic participation
- Transfer of technical, management and entrepreneurial skills
- Creation of sustainable Black Enterprises

	Proposed extent of works to be allocated to subcontractor	**Include value of works allocated to sub- contractor**	**CIDB Grading**
1.			
2.			
3.			
4.			
5.			
	SUB TOTAL		
	ADD P&G		
	TOTAL SUB-CONTRACTING VALUE		

The Targeted Enterprise ratio will be calculated based on the tendered sum of the works less the VAT, Contingencies, Deductible Materials and CPA.

King Cetshwayo District Municipality will make available the list of all contractors registered on CSD database comprising of contractors from King Cetshwayo District Municipality jurisdiction, to provide the required goods and services of the applicable designated groups. Each supplier shall be expected to be eligible or qualify to upgrade to the next CIDB grading at the completion of the identified scope of works.

....
Signature Date

RS022.2 ADEQUACY AND QUALITY OF MENTORSHIP AND SKILLS TRANSFER PROGRAMME

1. Tenderers are required to employ designated Subcontractors on this contract with the targeted enterprise(s). The designated sub-contractors to be utilized should be black owned business and registered with CIDB with minimum grading of 1ME to 3ME.
2. A contract Participation Goal of at least 30% for subcontracting to these designated subcontractors has to be achieved by the Tenderer. The objective is to bring about meaningful transformation in the construction industry through the following:
   - Meaningful economic participation
   - Transfer of technical, management and entrepreneurial skills
   - Creation of sustainable Black Enterprises
3. In pursuance of the above objectives, the Tenderer has to develop a mentoring and skills transfer programme which is a practical training programme for targeted black owned SMME construction companies preferably located in King Cetshwayo District Municipality.
4. The mentorship programme must clearly specify the role of the targeted enterprise(s) showing the areas of development in relation to the work packages assigned to the targeted enterprise(s)
5. The on-job training is to be organized and managed by the Developed Enterprise; in contracts awarded and managed by KCDM, but works are executed with the guidance and assistance of experienced Main Contractors at the tendering, mobilization, construction and completion phases.
6. Depending on the nature of contract, the training programme should among other things cover areas such as: understanding Technical Specifications; Standard Specifications; Interpretation of Technical Drawings; Tendering Procedures; Pricing and Unit Rates Build-up; Construction of Civil Works in the Water Industry: Reinforcement, Formwork and False-work; Clearing and Site Establishment; Site Organization and Administration; Surveying and Setting Out; Project Planning and Work Programming/ Scheduling; Contract Supervision and Administration; Environmental Issues; Financial Planning; Project Cost Control; Cash Flow Management; Measurement of Works and Pricing; Preparation of Payment Certificates; Preparation of Claims and Claims Management; Procurement of Equipment and Materials; Personnel Management; Accident and Safety Precaution; Communication. This is just a guide for the design of the mentorship programme.
7. The mentoring and skills transfer programme must indicate what evidence will be produced to show that training did take place. This could for instance be in the form of SAQA accredited modules by relevant SITAs.
8. The Main Contractor (Developed Enterprise) is strongly encouraged to choose relevant SITA accredited modules for training of targeted SMMEs in which case the SITA's NQF level certificates indicating the credits attained could be produced as evidence of the training of the targeted SMMEs. Examples could be NQF2, 3 or 5 in labour intensive construction (LIC) methods
9. The mentorship and skills transfer programme will be assessed based on the submitted methodology or plan. It must be robust, well thought out and should meet most elements of the description given above depending on the nature of work:
10. A capacity building evaluation/ assessment form is to be designed by the main contractor in agreement with the targeted enterprise(s). This must be included in the tender document. The evaluation/ assessment form has to be filled in by all the contractors every month and after completion of the project. The form is to be used for assessing progress made with the training as well as identifying additional training (or gaps) requiring more training.
11. **The mentorship and skills transfer programme (refer to item no. 5 above) as well as the capacity building evaluation form (refer to item no. 10 above) must be attached below.**

....

Signature Date

RS022.3 DETERMINATION OF TARGETED PROCUREMENT

1. The targeted procurement ratio will be calculated based on the tendered sum of the works less the following:

1.1 Preliminary & General

1.2 Value of the deductible materials as listed in Table RS022.30 below:

2. Tenderers must provide the rates for quantities and value of items earmarked for exclusion from the targeted procurement calculation.

   Failure to do so will lead to the assumption that all quantities contained in the BoQ are eligible for application of the targeted procurement.

Table RS023.30 Schedule of items excluded in the calculation of the Targeted Procurement

Section	Description	Amount
	xxx	
	xxx	
	xxx	
	Sub Total	

RS022.4 CONTRACT PARTICIPATION FOR TARGETED ENTERPRISES

Sub Total 1 value of Contract (excluding VAT, Contingencies and CPA), ...

Specialists Items (Deductible Materials): .....

Total value of contract participation by targeted enterprise: .....

Percentage (%) contract participation by targeted enterprise: .....

Broad description of work to be performed by the targeted enterprise:

.....

.....

.....

.....

.....

.....

.....

.....

.....

Failure to complete the entire RS022 in full and may lead to disqualification.

Should percentage of sub-contracting not equal or exceed the specified minimum percentage of 30%, the tender will be considered non-responsive in terms of subclause C.3.8 of the Conditions of Tender and such a tender shall be rejected

Tenderer's Participation in Job Creation Using Local Labour RS023

The Contractor shall be required to participate in job creation (employment of local labour) by executing various portions of the Works using local labour (unskilled or semi-skilled), recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project). Proof of citizenship or work visa may be audited during the contract period.

The creation of one job shall mean the temporary employment, for any period of time, of one such unskilled or semi-skilled labourer from the local community.

The Tenderer shall note the requirements for Job Creation Reporting for EPWP as set out in the Requirements of the Expanded Public Works Programme (EPWP) of the project specifications.

The number of jobs to be created using such local labour is inclusive of the local labour employed to execute various portions of the Works by both the main Contractor and any subcontractors, including the small development subcontractors.

The number of jobs to be created using such local labour shall include for a minimum percentage allocation to the following individual targeted groups:

55% Women;
55% Youth; and
2% Disabled.

The minimum required content of such local labour for this project shall be calculated as follows:

$$\text{Minimum required content of such local labour (\%)} = \frac{(100 \text{ x amount spent on wages for such local labour (excluding VAT)})}{\text{total value of the project (excluding VAT)}}$$

The minimum required content of such local labour for this project is stated in the Conditions of Contract Clause 4.10.4.
(Compiler to insert the target minimum percentage based on detailed calculations of the local labour component anticipated for each scheduled pay item, including the pay items contributing to the provisional sum associated with the construction Works carried out by Targeted Enterprise subcontractors appointed).

For purposes of completing the table on the next page containing the Tenderer's declaration with respect to participation in job creation using local labour, the total value of the project shall be the amount of the Tender Offer.

TENDERER'S DECLARATION WITH RESPECT TO PARTICIPATION IN JOB CREATION USING LOCAL LABOUR:

The Tenderer shall complete the table below reflecting the anticipated local labour force to be employed on this contract, including such local labour employed by subcontractors.

I/We hereby tender to participate in job creation through the employment of local labour by creating the following number of jobs using unskilled or semi-skilled labourers, recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project), including for a minimum allocation of 55% Women, 55% Youth and 2% Disabled:

Local labour comprising unskilled or semi-skilled labourers recruited from the local community	Anticipated number of jobs to be created	Total number of person-days anticipated	Wage rate per person-day (excluding VAT) (Rand)	Total wage cost (excluding VAT) (Rand)
Contractor's local labour content				
Subcontractors' local labour content				
Total anticipated wage cost of local labour content (excluding VAT)				R
Tender Offer (excluding VAT)				R
Hence anticipated local labour content expressed as a percentage of the Tender Offer (excluding VAT) Note: Should this percentage not equal or exceed the specified minimum percentage, the tender will be considered non-responsive in terms of subclause C.3.8 of the Conditions of Tender and such a tender shall be rejected.				%
Specified minimum local labour content				5%

A penalty shall be applied to any shortfall in the local labour content achieved, as set out in the Requirements of the Expanded Public Works Programme (EPWP) of the project specifications. The penalty shall not apply to shortfalls in the allocations to the individual target groups (i.e., Women/Youth/Disabled), only to shortfalls in the total local labour content achieved.

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the Tenderer, confirms that he/she understands the conditions for such participation and confirms that the tender satisfies the conditions for participation in job creation through the employment of local labour.

Name: .....

Duly authorized to sign on behalf of: .....

....
Signature Date
(Of person authorised to sign on behalf of the Tenderer)

Failure to complete, sign and date this form shall result in the tender being considered non-responsive in terms of subclause C.2.14 of the Conditions of Tender and such a tender shall be rejected.

PART C1: AGREEMENTS AND CONTRACT DATA

TABLE OF CONTENTS

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C1.1 Form of Offer and Acceptance	C2
C1.2 Contract Data	C8
C1.3 Conditions of Contract	C14
C1.4 Contractual Documentation	C19

IMPORTANT NOTE ON C1.1:

ALL Tenderers MUST complete and sign Form A: OFFER (the first page hereafter).

Form B: ACCEPTANCE will be signed by the Employer and then only in the case of the successful Tenderer.

Form C: SCHEDULE OF DEVIATIONS must be signed by the Employer as well as the successful Tenderer after award of the contract.

Form D: CONFIRMATION OF RECEIPT must be signed by the successful Tenderer on receipt of a fully completed original copy of the Agreement including the Schedule of Deviations, if any.

A tender in which Form A: OFFER has not been completed and signed by the Tenderer, will not be valid and will be disqualified in the discretion of the Employer.

C1.1: FORM OF OFFER AND ACCEPTANCE

FORM A: OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of **TENDER NO. KCDM/MIG/02/2022: GREATER MTHONJANENI SSA4: BULK WATER SUPPLY IMPROVEMENTS – UPGRADE OF ZIMELA PUMPSTATION 1, 2 & 3**

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 Service Provider under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT IS:

(In words) ....

.....Rands;

(In figures) R .....

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:

(Insert name and address of organization) .....

Name & Signature of Witness

.....

Date .....

For official use		
INITIALS OF KCDM OFFICIALS AT THE TENDER OPENING SESSION		
1.	2.	3.

FORM B: ACCEPTANCE

By signing this part of the 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:

C.1 Agreement, and Contract Data, (which include this Agreement)
C.2 Pricing Data, including the Bill of Quantities
C.3 Scope of Work
C.4 Site Information
C.5 Annexures

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 5 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorized representatives of both parties.

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 other 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 and unless agreed mutually elsewhere in writing between the Employer and the Tenderer, this agreement comes into effect on the earliest of: (a) Two weeks following the date on which the Tenderer acknowledges the receipt of a formal letter awarding the contract; (b) 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 receipt of either the letter from the Employer alluded to in (a) or the document alluded to in (b) above 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, effective from the date of signature below by the Employer.

Signature: *(of person authorized to sign the acceptance)*

.....

Name: *(of signatory in capitals)*

…….....

Capacity: *(of Signatory)*

…….....

Name of Employer: *(organization)* King Cetshwayo District Municipality

Address: Corner of Kruger Rand & Barbados Bay Road, CBD, Richards Bay

Postal Address: Private Bag X1025, Richards Bay, 3900

Telephone number: 035 799 2500 **Fax number:**.....

AS WITNESS

Signature:.....**Name:** *(in capitals)* .....

Date: .....

FORM C: SCHEDULE OF DEVIATIONS

The extent of deviations from the tender documents issued by King Cetshwayo District Municipality prior to the tender closing date is limited to those permitted in terms of the Tender Data and the Conditions of Tender.

A Tenderer's covering letter will not necessarily 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.

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.

Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

1 Subject `

Details: .....

.....

2. Subject .....

Details: .....

.....

3. Subject .....

Details: .....

.....

By the duly authorized representatives signing this Schedule of Deviations, King Cetshwayo District Municipality and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and King Cetshwayo District Municipality 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:

Signature: .....

Name: .....

Capacity: .....

Tenderer: *(Name and address of organization)*

..... Witness:

Signature:.....

Name: .....

Date: .....

FOR KING CETSHWAYO DISTRICT MUNICIPALITY

Signature: .....

Name: .....

Capacity: .....

..... Witness:

Signature:.....

Name: .....

Date: .....

FORM D: CONFIRMATION OF RECEIPT

The Tenderer, (now Service Provider), 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 on this

FOR THE CONTRACTOR:

Signature: …….....

Name: .....

Capacity: .....

Signature and name of witness:

Signature: …….....

Name: .....

C1.2: CONTRACT DATA

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

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

PART 1: DATA PROVIDED BY THE EMPLOYER

REF.CLAUSE NO.	DATA BY EMPLOYER	
1.1.13	**The Defects Liability Period is:**	12 months
1.1.14	**The time for achieving Practical Completion is**:	6 months
1.1.1.15	**The name of the Employer is:**	King Cetshwayo District Municipality
1.1.1.26	**The Pricing Strategy is:**	Re-measurement Contract
1.2.1.2	**The address of Employer:**	
	Physical:	Postal:
	King Cetshwayo House, Cnr Krugerrand & Barbados Bay Streets, CBD	Private Bag X 1025 Richards Bay, 3900
	Telephone No: (035) 799 2500	Fax No: (035) 799 1409
1.1.1.16	**Name of the Employers Agent**:	Ilifa Africa Engineers (Pty)Ltd
1.2.1.2	**Address of the Employers Agent**:	
	Physical:	
	21 Kingfish Creek Meerensee Richards Bay 3901	
	Tel No.: (035) 753 1083 Fax No.: 035 753 1094 e-mail: rbay@ilifa.biz	
3.2.3	The Employer's Agent shall obtain the specific approval of the Employer before carrying out duties according to the following Clause of the General Conditions of Contract: Clause 6.3.1, issuing of a Variation Order with financial implications.	
Clauses 4.1.1 and SCC 4.1.1:	**CONTRACTOR'S GENERAL OBLIGATIONS** Add…. The penalty for failing to achieve the monetary value of the target set by the Employer for local labour content in terms of Part F: Requirements of the Expanded Public Works Programme (EPWP) of section C3.3 Particular Specifications in Part C3: Scope of Works, is 5% of the monetary value by which the achieved monetary value falls short of the target monetary value.	
		Continue …

REF. CLAUSE NO.	DATA BY EMPLOYER
5.3.1	**The documentation required before commencement with Works execution are:**
	1. Health and Safety Plan (Refer to Clause 4.3) 2. Initial programme (Refer to Clause 5.6) 3. Cash flow projection aligned to programme 4. Insurance (Refer to Clause 8.6) 5. Performance Guarantee
5.3.2	**The time to submit the documentation required before commencement with Works execution is:** 14 Days
5.8.1	**Non-working days are:** Saturdays and Sundays
	The special non-working days are: Public holidays and the year-end break which commences on the first working day after 15 December and ends on the first Tuesday after 5 January of the next year.
5.9.4	**The length of time for the Employer's Agent to issue additional information:** 14 days
5.13.1	The **penalty** for failing to complete the Works will be 0.05% of the offered total of prices excluding VAT per calendar day.
5.16.3	**The latent defect period is: ten (10) years** for civil engineering works.
6.8.2	**Contract Price Adjustment** is **NOT** applicable.
6.10.1.5	**The percentage advance on materials not yet built into the Permanent Works is:** 80% provided a session in favour of the Employer is provided from both the supplier and the Contractor.
6.10.3	**The retention money:** The percentage retention on the amounts due to the Contractor is 10% up to a limit of 5% of the contract value with 50% being released on issuing of Certificate of Completion.
6.10.5	The defects Liability Period is specified as being 12 Months.
	Continue …

REF. CLAUSE NO.	DATA BY EMPLOYER
8.6.1	**INSURANCE EFFECTED BY THE EMPLOYER** a) Notwithstanding anything elsewhere contained in this Contract without limiting the obligations liabilities or responsibilities of the Contractor in any way whatsoever (including but not limited to any requirement for the provision by the Contractor of any other insurances) the Employer shall effect and maintain as appropriate in the joint names of the Employer the Contractor and where the relevant Sub-contractors the following insurances which are subject to the terms, limits, exceptions and conditions of the Policy. CONTRACT WORKS AND SASRIA SPECIAL RISKS Insurance - which will provide cover against accidental physical loss or damage to the Works, Temporary Works and materials intended for incorporation in the Works. PUBLIC LIABILITY Insurance - which will provide indemnity against legal liability in the event of accidental death of or injury to third persons and/or loss of or damage to third party property arising directly from the execution of the contract and occurring during the period of insurance with a limit of indemnity of R3 000 000.00 in respect of all claims arising from any one occurrence or series of occurrences consequent on or attributable to one source or original cause. b) The Employer shall pay the premium in connection with the insurance affected by the Employer. A provisional sum is included in the Bill of Quantity and will have to be paid over to the Insurance Brokers by the awarded contractor. c) The Contractor shall not include any premium charges for this insurance except to the extent that he may deem necessary in his own interests to effect supplementary insurance to the insurance effected by the Employer. The Employer reserves the right to call for full information regarding insurance costs included by the Contractor. d) Any further clarification of the scope of cover provided by the Policies arranged by the Employer should be obtained from the Employer or their Insurance Brokers, Sankofa Insurance Brokers, Telephone (011) 025 6566 e-Mail nngwenya@sankofaib.co.za. e) In the event of any occurrence which is likely to or could give rise to a claim under the insurances arranged by the Employer the Contractor shall:- (i) In addition to any statutory requirement or other requirements contained in the Contract immediately notify the Employer's Insurance Brokers or the Insurers by telephone, telex or telefax giving the circumstances nature and an estimate of the loss or damage or liability; (ii) complete a Claims Advice Form available from the Insurance Brokers to whom the form must be returned without delay; and (iii) Negotiate the settlement of claims with the Insurers through the Employer's Insurance Brokers and shall when required to do so obtain the Employer's approval of such settlement. The Employer and Insurers shall have the right to make all and any queries on the site of the Works or elsewhere as to the cause and the results of any such occurrence and the Contractor shall co-operate in the carrying out of such enquiries. f) The Contractor will be liable for the amount of the Deductible (First Amount Payable) in respect of any claim made by or against the Contractor or Sub-contractors under the insurance effected by the Employer. The Deductible (First Amount Payable) for which the Contractors are responsible and which are applicable in respect of each and every occurrence or series of occurrences attributable to one source or original cause giving rise to loss or damage or liability indemnifiable are as follows: - 1) Under the Contract Works Insurance shall be:- i) Elemental perils R 5 000.00 ii) Theft, Malicious Damage R 5 000.00 iii)Any other Cause R 5 000.00

REF. CLAUSE NO.	DATA BY EMPLOYER
	2) Under the Public Liability Insurances in respect of loss of or damage to property shall be:- i) Underground Services R 5 000.00 ii) Any Other Cause R 5 000.00 3) Under any other insurance shall be as specified in such insurance policy. g) Any amount which becomes payable to the Contractor or any of his Sub-contractors as a result of a claim under the Contract Works Insurance shall if required by the Employer be paid net of the Deductible to the Employer who shall pay the Contractor from the proceeds of such payment upon rectification repair or reinstatement of the loss or damage but this provision shall not in any way affect the Contractor's obligations and liabilities or responsibilities in terms of the Contract. **INSURANCE EFFECTED BY THE CONTRACTOR** a) The Contractor and Sub-contractor shall where applicable provide as a minimum the following: i) Insurance of Construction Plant and Equipment (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement; ii) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act (COID) Act No 130 of 1993; iii) Employers Common Law Liability Insurance with a limit of indemnity of not less than R 1 000 000.00; iv) Motor Vehicle Liability Insurance comprising (as a minimum) "balance of Third Party" Risks including Passenger Liability indemnity of not less than R 1 000 000.00 (one million Rand) ; and i) Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Contract Site the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by the endorsement to the relevant Policies of Insurance. b) The insurance to be provided by the Contractor and his Sub-contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and shall be maintained in force for the duration required (including any period of maintenance). The Contractor shall within fourteen (14) days of commencement of the contract produce to the Employer the relevant Policies of Insurance. c) If the Contractor fails to effect and keep in force the insurances referred to then the Employer may effect and keep in force any such insurances and pay such premiums as may be necessary for that purpose and from time to time deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is R Nil.
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 250,000.00
8.6.1.3	The limit of indemnity for liability insurance is R 10 000 000 for any single claim, the number of claims to be unlimited during construction and Defects Liability Period
10.4	**Dispute resolution by amicable settlement, failure of which will require to further the dispute through adjudication and thereof to arbitration.**
10.5.3	**The number of Adjudication Board Members to be appointed is: 1**

PART 2: DATA TO BE PROVIDED BY CONTRACTOR

REF. CLAUSE No	DATA BY CONTRACTOR
1.1.1.9	**Name of Contractor**:
1.2.1.2	**Address of Contractor:**
	Physical: ..... Postal: .....
	. ...
	. ...
	e-mail: ….. Telephone No: …..... Fax No:….....
1.1.1.14	**Time for achieving Practical Completion of the whole of the Works is**: _____(Max 6 months)

6.2.1 **The security to be provided by the Contractor shall be the following:**

Type of Security (Indicate if Value Added Tax is excluded from the Contract Sum and the value of the works for calculating the percentages)	**Contractor's choice** (Indicate "Yes" or "No")
Cash deposit of **10%** of the Contract Sum Attach a letter from the bank confirming availability of funds equivalent to 10 (ten) % of the tendered amount exclusive of VAT.	
Fixed Performance Guarantee of **10%** of the Contract Sum Attach a letter of undertaking from a recognized financial institution, confirming the issuing of a performance guarantee equal to in value to 10 (ten) % of the tendered amount exclusive of VAT. The letter of undertaking will not oblige the financial institution to issue a performance guarantee, but merely serves as an indication of the tenderer's ability to obtain a performance guarantee The performance guarantee is to be issued by a Bank registered in terms of the Banking Act (94 of 1990).	
Retention of **10%** of the Works Attach to this document a letter from the director/s giving the Employer consent to deduct 10 (ten) % retention from each progress payment due to the contractor until a limit of 10 (ten) % is reached.	
Cash deposit of **5%** of the Contract Sum plus retention of **5%** of the value of the Works • Attach a letter from the bank confirming availability of funds equivalent to 5 (five) % of the tendered amount exclusive of VAT. • Attach a letter from the director/s giving the Employer consent to deduct 10 (ten) % retention from each progress payment due to the contractor until a limit of 5 (five) % is reached.	
Fixed Performance Guarantee of **5%** of the Contract Sum plus retention of **5%** of the value of the Works • Attach a letter of undertaking from a recognized financial institution, confirming the issuing of a performance guarantee equal to in value to 5 (five) % of the tendered amount exclusive of VAT. The letter of undertaking will not oblige the financial institution to issue a performance guarantee, but merely serves as an indication of the tenderer's ability to obtain a performance guarantee The performance guarantee is to be issued by a Bank registered in terms of the Banking Act (94 of 1990) • Attach a letter from the directors giving the Employer consent to deduct 10 (ten) % retention from each progress payment due to the contractor until a limit of 5 (five) % is reached.	

C1.3: CONDITIONS OF CONTRACT

The Conditions of Contract are the General Conditions of Contract for Construction Works, Third Edition, 2015.

The additional clauses to the General Conditions of Contract are:

PREAMBLE

The Special Conditions of Contract contains clauses hereinafter defined and forms an integral part of the Conditions of Contract. In the case of any discrepancy or conflict with any part of the General Conditions of Contract, the Special Conditions of Contract shall take precedence and shall govern.

CONTRACTOR'S RESPONSIBILITY FOR SETTING OUT Add to Clause 9.1.5.1

The Contractor shall take special precautions to protect all permanent survey beacons, bench-marks, stand boundary pens and trigonometrical beacons regardless whether such pegs or beacons were placed before or during the execution of the contract. If any such beacons or pegs which would not otherwise have been affected by construction of the works, have been disturbed by the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

NATURAL VEGETATION (ADDITIONAL SUB CLAUSE) Add new Clause 8.1.6

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

Only those trees and shrubs directly affected by the works and such others as the Engineer/Employer 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".

ENGAGEMENT OF EMPLOYEES

DELAY THROUGH OPPORTUNITIES AFFORDED TO OTHER PERSONS Add to Clause 10.1.3

"Whenever the Contractor considers that he is suffering a delay in the smooth running of his work as the result of the execution of any work on the Site by other persons he shall report to the Engineer/Employer in writing within twenty-four (24) hours of the occurrence thereof the circumstances and extent of such delay. The Engineer/Employer shall take such steps to resolve the problem as he considers necessary. Failure on the part of the Contractor to report to the Engineer/Employer such delay at the time of its occurrence shall invalidate any claim to any extension of time in terms of **Clause 10.1.1**".

SCC 4.1.1 Extent of Contractor's obligations

Add the following new paragraphs to the end of Clause 4.1.1:

"If the Contractor fails to achieve the monetary value of the target set by the Employer for local labour content in terms of the Requirements of the Expanded Public Works Programme (EPWP) in the Particular Specifications, the Contractor shall be liable to the Employer for a sum calculated in accordance with the Contract Data and the aforementioned Scope of Works as a penalty for such underachievement."

Add new Clause 4.11.2

"The Contractor shall at all times exercise strict control over his employees to prevent, as far as possible, any unruly or unlawful behaviour by or amongst the labourers, local community members or leadership thereof and other employed by him.

The Contractor shall not engage or otherwise employ on the Works any person who, at the time of signing the contract, was employed by the Employer upon the Works, unless the Contractor obtains the written consent of the Employer or Employer's Representative in respect of the employment of such person".

INSURANCES Amend Clause 8.6

Clause 8.6 of the General Condition of Contract will be superseded by a principle-controlled construction insurance which is provided by the King Cetshwayo District Municipality on all contracts.

Tenderers are to specifically note the detail of insurances affected by the employer as depicted under **Clause** 8.6.1 as "insurance effected by the Contractor".

Additional Special Conditions of Contract

The following additional Special Conditions of Contract clauses SCC 1.1 and SCC 5.3 shall apply only in those circumstances where the Employer is required to apply for a construction work permit in terms of Construction Regulation 3(1):

SCC 5.3 Commencement of the Works

Delete the entirety of Clauses 5.3.1, 5.3.2 and 5.3.3 and replace them with the following:

"SCC 5.3.1 Commencement of the Works

Upon the Employer's Agent's instruction, the Contractor shall, save as may be otherwise provided in the Contract, or be legally or physically impossible, commence carrying out the Works. Such instruction shall be provided not later than 14 days after the Commencement Date. Such instruction shall be subject to:

SCC 5.3.1.1 The timely submission by the Contractor, and approval by the Employer's Agent, of documentation required before commencing to carry out the Works and before the Employer applying for a permit to do construction work, as set out in the Contract Data,

SCC 5.3.2 Unacceptable documentation

If the documentation referred to in Clause SCC 5.3.1 is not submitted within the number of days stipulated in the Contract Data from the date that the Agreement, made in terms of the Form of Offer and Acceptance, comes into effect, or if such documentation is found to be unacceptable, the Employer may terminate the Contract in terms of Clause 9.2.

SCC 5.3.3 Time to instruct commencement of the Works

Where the Contractor delays the submission by the Employer of the application for a permit to do construction work and such permit is not received within 14 days following the Commencement Date such that the Employer's Agent's instruction to commence carrying out the Works cannot be given, without prejudice to the Employer's rights to terminate the contract under Clause 9.2, the Employer's Agent shall delay issuing the instruction to commence carrying out the Works until such time as the permit to do construction work has been received. The Contractor shall have no entitlement under Clause 5.12 to an extension of time for Practical Completion.

EXTENSION OF TIME DUE TO INCLEMENT WEATHER

Add the following to sub-Clause 5.12.2.2

(b) Abnormal climatic conditions.

No extensions of the time for completion shall be granted on the grounds of normal rainfall conditions, but extension of time in terms of **Clause 5.12** of the General Conditions of contract on the grounds of abnormal rainfall or wet conditions shall be calculated separately for each calendar month or part thereof, according to the following formula. It shall be calculated as follows for the time for completion, including any extension thereof:

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

V = Extension of time for calendar days of the calendar month concerned. If the value negative and the absolute value thereof is greater than Nn, V is taken as negative

Nw = Actual number of days during calendar month on which a rainfall of Y mm or more is recorded.

Nn = Average number of days in the calendar month concerned on which a rainfall of Y more is recorded in terms of existing rainfall data

Rw = Actual rainfall for the calendar month concerned in mm

Rn = Average rainfall for the calendar month in mm deduced from existing rainfall data.

For the purposes of the contract Nn, Rn, X and Y shall have the values as stipulated below.

The total extension of time is the algebraic sum of the monthly totals for the period concerned, extension of time for parts of a month shall be calculated by using pro rata values of Nn and Rn. If the algebraic sum of the monthly totals is negative, no reduction of the time for completion as a result of rainfall shall be applicable.

This formula does not take any delays as a result of flood damage, which may cause further or simultaneous delays, into consideration and flood damage shall be treated separately for purposes of extension of time for completion.

The factor (Nw – Nn) is considered as a fair allowance for deviation from the normal for the number of days on which the rainfall exceeds Y mm. The factor (Rw – Rn)/X is considered as a fair allowance for deviation from the normal for the number of days on which the rainfall does not exceed Y mm, but on which wet conditions will hamper or disrupt work.

The Contractor shall keep daily rainfall records and submit it to the Employer's Representative at every site meeting. No additional payment shall be made for the supply and installation of the rain gauge or for the keeping of the rainfall records and all costs must be included in the scheduled items:

Information of the records of the nearest rainfall station are given below for the Contractor's information: * WB42 climate statistics from the South African Weather Services.

Rainfall station : Richards Bay

Average annual rainfall : 1056.3 mm

Period : 2011 - 2021

Average number of days per year with rainfall exceeding:

Y = 10mm
X = 20mm

MONTH	Nn (No)	Rn (mm)	MONTH	Nn (No)	Rn (mm)
January	3.4	109.6	July	1.6	59.8
February	3.2	128.4	August	0.8	39.9
March	2.4	73.7	September	2.5	88.8
April	2.4	81.5	October	3.5	132.5
May	1.7	104.4	November	2.6	78.4
June	1.6	42.4	December	3.0	116.9

EXTENSION OF TIME DUE TO DISRUPTION OF LABOUR

Add the following to Sub Clause 5.12.2.4

"Labour disruptions on a regional or national level due to political unrest, organised mass action or related incidents will be considered to be beyond the Contractor's control.

Any strike within the confines of the Contractor's company and/or this project only, will be deemed to be within the Contractor's control".

DEFECTS LIABILITY PERIOD Add the following to Sub Clause 7.9

7.9.1 Emergency repairs during defects liability period

7.9.1.1 Classification

Any defect resulting in an interruption in the supply of services will be deemed an emergency repair, and the timing of the works is then of an urgent nature. Such classification will be at the discretion of the Engineer and communicated as such to the Contractor.

7.9.1.2 Availability of Contractor for emergency repairs

During the defects liability, the Contractor will ensure that a member of his staff will at all times of day or night be contactable through a cell phone in the event of having to effect an emergency repair.

The Contractor shall as a minimum comply with the following requirements:

i) A minimum of 1 artisans and 1 skilled labourer shall be available to attend to an emergency repair at all times during normal hours and after hours.

ii) Suitable tools, plant, transport, test equipment, spares and repair kits shall be available at all times to do the necessary emergency repairs.

iii) Above labour and resources shall be available on all weekdays including Saturdays, Sundays and public holidays and the names, addresses and contact information shall be made available to the Employer and Engineer for this purpose.

7.9.1.3 Procedure for commencement and execution of works

Upon notification of a defect by the Employer, the Engineer or his representative will instruct the Contractor to attend to the said emergency repair, which instruction will be verbal, and thereafter confirmed in writing.

The Contractor must within 6 hours from such notification arrive on site so as to define the extent of the repair required and must immediately make arrangements to have such a repair rectified, which repair must be effected within 12 hours thereafter.

7.9.1.4 Communication in the event of emergency repairs

The Contractor will immediately upon arrival inform the Engineer of the extent of the problem and also of the anticipated timeframe required to effect the repairs thereto.

Immediately upon completion of the repairs, the Contractor has to provide a verbal notification to the Engineer to the fact that the works have been completed and confirm same within 12 hours in writing.

7.9.1.5 Failure to effect emergency repairs

In the event that the Contractor should fail to attend to the emergency repairs as described above and within the response times noted, the Employer shall be entitled to carry out such work by his own workman or by other persons without further notification to the Contractor and to recover the cost thereof from the Contractor.

CESSION FOR CASH ADVANCEMENTS

No cessions for cash advancements will be entertained by the employer for whatever reason. Cessions will only be accepted for payment of material and nominated sub-contractors, and payment will only be effected on delivery and fixing of material in the required position.

OCCUPATIONAL HEALTH AND SAFETY ACT

The Contractor shall comply with all the requirements of the Occupational Health and Safety Act (Act No. 85 of 2014) and the Regulations framed there under.

The Contractor shall also ensure that any Sub- Contractor employed by him shall also comply with the Act and the Regulations.

The contractor shall submit an approved Health and Safety plan prior to commencement with this contract.

TENDER ACCEPTANCE

The Employer does not bind itself to accept the lowest tender or any tender or furnish any reasons for the acceptance or rejection of any tender.

C1.4: CONTRACTUAL DOCUMENTATION

C1.4.1 CONSTRUCTION GUARANTEE

Tender No. KCDM/MIG/02/2022

WHEREAS **King Cetshwayo District Municipality** (hereinafter referred to as the Employer") entered into, a Contract with:

….....

(hereinafter called "the Contactor") on the: ..... day of: ..... 20 .....

for .....

at .....

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS . . . . . has / have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE . . . . . do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-principal Debtors to the Employer under renunciation of the benefits of division and exclusion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and / or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the completion date of the works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the completion date which the Employer may make, give, concede or agree to under the said Contract.

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

3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.

4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.

5. Our total liability hereunder shall not exceed the Guaranteed Sum of . . . . . .

   . . . . . Rand (in words); R . . . . . (in figures)

6. The Guarantor. reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon our liability hereunder shall cease.

7. We hereby choose our address for the serving of all notices for all purposes arising here from as

   . . . . . .

   . . . . . .

   . . . . . .

IN WITNESS WHEREOF this guarantee has been executed by us at . . . . . on

this day of . . . . . 20 . . . . . .

Signature . . . . . .

Duly authorized to sign on behalf of . . . . . .

Address . . . .

. . . . . .

. . . . . .

As witnesses:

1 . . . . . .

2. . . . . .

C1.4.2 AGREEMENT OF INDEMNITY IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT 2014

THE KING CETSHWAYO DISTRICT
MUNICIPALITY

duly represented herein by …… in his
capacity as

……..… (hereinafter referred to as
"EMPLOYER")

and

……..

duly represented herein by …… in his capacity as

……..…
(hereinafter referred to as the "MANDATORY")

The EMPLOYER and the MANDATORY hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act 2014 (Act 85 of 2014, hereinafter referred to as "the Act"), that as far as the work described in 1 hereafter, the following arrangements and procedures shall apply between them to ensure compliance by the MANDATORY with the provisions of the Act, namely:

1. DESCRIPTION OF WORK:

……..……..……..……..……..……

……..……..……..……..……

……..……

……..……

2. DEFINITIONS:

2.1. EMPLOYER : means any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him, but excludes a labour broker as defined in Section 1(1) of the Labour Relations Act, 1956 (Act No 28 of 1956).

2.2. MANDATORY : includes an agent, a contractor or a sub-contractor for word, but without derogating from his status in his own right as an employer or a user.

3. ARRANGEMENTS AND PROCEDURES:

3.1. The MANDATORY as an employer in his own right, undertakes to acquaint the appropriate officials and employees of the MANDATORY with all relevant provisions of the Act and the regulations promulgated in terms of the Act;

3.2. The MANDATORY undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations will be fully complied with;

3.3. The MANDATORY 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 from itself being obliged to comply with any of the aforesaid duties, obligations and prohibitions; and

3.4. The MANDATORY agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the MANDATORY has complied with his undertakings as set out more fully in paragraphs 1 and 2 above, which steps may include, but not be limited to, the right to inspect any appropriate site or premises.

3.5. The MANDATORY undertakes to furnish the EMPLOYER with a letter of good standing in terms of Section 89 of the Compensation for Occupational Injuries and Diseases Act 2014 (Act No 130 of 2014) before any work in terms of this agreement is commenced.

3.6. The MANDATORY undertakes to appoint a designated responsible person in terms of the Act, and to furnish the EMPLOYER with a copy of such appointment before any work in terms of this agreement is undertaken

THUS DONE AND SIGNED AT RICHARDS BAY ON THIS …….. DAY OF ……..…… 20……

AS WITNESSES:

1. .....……..... ……..
(For and on behalf of the **EMPLOYER**)
2. .....……..

THUS DONE AND SIGNED AT RICHARDS BAY ON THIS …… DAY OF ……..…… 20……..

AS WITNESSES:

1. .....……..

2. .....……..

(For and on behalf of the **MANDATORY**)

C1.4.3 TRANSFER OF RIGHTS AND INDEMNITY FOR MATERIALS ON SITE TRANSFER OF RIGHTS FOR MATERIAL ON SITE

Claim for materials on site, Payment Certificate No: …….…….. Date: ……

Contract No: …… for (*contract title*) ……

……

I, the undersigned (*name of signatory*) ……..…….. in my capacity as

…… of (*name of Contractor*)

…….. duly authorised hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto,

unto and in favour of (*name of Employer*) ……..……..

Insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutum possessorium*.

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration or liquidation or of any effect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

The transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the materials and goods as Materials on Site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the permanent works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table:

DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT	SUPPLIER
TOTAL VALUE OF MATERIALS AND GOODS					

Signed by ……. Date …… for and on behalf of the Contractor,

Witnesses by ……..…….…… Date ……...

[Note: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 49.1.5 of the General Conditions of Contract 2015.]

INDEMNITY FOR MATERIALS ON SITE

We the.....……..(Bank or Insurance Company)

do hereby bind ourselves as surety in solidum and co-principal debtors to recompense the employer in the event of his not acquiring ownership of materials for whatever reason, or in the event of his lawfully being required to make payment of any sum of money to any third party in order to obtain or retain ownership of full and free possession of the said materials, in circumstances where the employer has paid the Contractor for the said materials on site in terms of Clause 52 (1)(e) of the General Conditions of Contract, and for all losses, damages and expenses that may be suffered or incurred by the Employer as a result of such payment for the said materials on site, renouncing all benefits from the legal exceptions ordinis se excursionis et divisions "No value received" and all other exceptions which might or could be pleaded against the validity of this guarantee, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted; provided that the liability of the undersigned under this guarantee is limited to and shall not exceed

R..... (.....……..……)

and will lapse after issue of the Certificate of Completion of the Contract, unless the surety is advised in writing by the Employer before issue of the said Certificate of his intention to institute claims and the particulars thereof, in which event this guarantee shall remain in force until all such claims are paid or settled.

This undertaking is not negotiable nor transferable and must be returned to us upon payment of the above-mentioned amount.

Bank/Insurance Company: .....

Address:
.....

..... Date: .....

PART C2: PRICING DATA

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C2.1: PRICING INSTRUCTIONS

1. Measurement and payment shall be in accordance with the relevant provisions of Clause 8 of each of the SANS 1200 Standardised Specifications for Civil Engineering Construction referred to in the Scope of Work. The Preliminary and General items shall be measured in accordance with the provisions of SANS 1200-A, *General.*

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

%	=	percent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kilolitre
km	=	kilometre
km-pass	=	kilometre-pass
kPa	=	kilopascal
kW	=	kilowatt
l	=	litre
m	=	metre
mm	=	millimetre
m²	=	square metre
m²-pass	=	square metre-pass
m³	=	cubic metre
m³-km	=	cubic metre-kilometre
MN	=	meganewton
MN.m	=	meganewton-metre
MPa	=	megapascal
No.	=	number
Prov sum	=	Provisional sum
PC sum	=	Prime Cost sum
R/only	=	Rate only
sum	=	lump sum
t	=	ton (1000 kg)
W/day	=	Work day

3. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

4. The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items.

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

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

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

7. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.

8. The quantities set out in these Bills of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bills of Quantities.

9. Reasonable compensation will be received where no pay item appears in respect of work required in the Bills of Quantities in terms of the Contract and which is not covered in any other pay item.

10. The short descriptions of the items of payment given in these Bills of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.

11. Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the SANS 1200 Standardised Specifications.

ITEMS SCHEDULED FOR CONSTRUCTION USING LABOUR-INTENSIVE METHODS

Those parts of the Works to be constructed using labour-intensive methods are marked in the Schedule of Quantities with the letters LI, either in a separate column or as a prefix or suffix against every item so designated. The Works or parts of the Works so designated are to be constructed using labour-intensive methods only, unless otherwise specified in the Scope of Work.

The items marked with the letters LI include:

(a) Items in the COLTO Standard Specifications that would normally be carried out using labour-intensive construction methods.

(b) Items in the COLTO Standard Specifications that would normally be carried out using plant but which have been modified specifically so as to require the use of labour-intensive construction methods instead of plant for some or all of the work components of the item.

(c) New items that have been written for this contract specifically requiring the use of labour-intensive construction methods rather than plant for some or all of the work components of the item.

The items marked with the letters LI are not necessarily an exhaustive list of all the activities which could be carried out using labour-intensive methods. Where a minimum percentage for local labour content is specified, additional activities may need to be identified to be carried out using labour-intensive methods rather than plant in order to meet such target.

Those 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 works, is a breach to the contract. The items marked with the letters “LI” are not necessarily an exhaustive list of all the activities, which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.

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

C2.2: BILLS OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	**SANS 1200A,**	**SECTION 1: PRELIMARY & GENERAL**				
1,1		**FIXED-CHARGE ITEMS**				
1,1,1	8.3.1	Contractual Requirements	Sum	1		
1,1,2	8,3,2,1	Facilities required by the Engineer				
1,1,2,1	PS2,1,1,2	Nameboards as per detail	No.	2		
1,1,2,2		Engineer's site office	Sum	1		
1,1,3	8.3.2.2 PS2.1.2.1	Facilities for Contractor				
1,1,3,1		Offices and Storage Sheds	Sum	1		
1,1,3,2		Workshops	Sum	1		
1,1,3,3		Ablution and Latrine Facilities	Sum	1		
1,1,3,4		Tools and Equipment	Sum	1		
1,1,3,5		Water Supplies, Electric Power and Communications	Sum	1		
1,1,3,6		Dealing with Water (Sub-clause 5.5)	Sum	1		
1,1,3,7		Pollution (Sub-clause 5.6)	Sum	1		
1,1,3,8		Access (Sub-clause 5.8)	Sum	1		
1,1,4	8.3.3	Other fixed-charge obligations	Sum	1		
1,1,5	8.3.4	Remove Engineer's and Contractor's Site Establishment on Completion	Sum	1		
	PS2.1.4.7	**HEALTH AND SAFETY**				
1,1,6		Preparation and submission of Health and Safety Plan for approval	Sum	1		
1,1,7		Implementation of Health and Safety Training	Sum	1		
1,1,8		Provision of Personal Protective Clothing and Equipment	Sum	1		
TOTAL CARRIED FORWARD						

SECTION 1: PRELIMINARY AND GENERAL

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
1,1,9		Provision of Fences, Signs and Barricades	Sum	1		
1,1,10		Establishment of Health and Safety Administration	Sum	1		
1,1,11		Other Health and Safety Fixed-charge obligations	Sum	1		
1,2	SANS 1200A PS2.1.4.2	**TIME-RELATED ITEMS**				
1,2,1	8.4.1	Contractual Requirements	Month	3		
		Operate and Maintain Facilities on Site:				
	8.4.2.2	b) Facilities for Contractor for duration of Construction, except where otherwise stated				
1,2,2		Offices and Storage Sheds	Month	3		
1,2,3		Workshops	Month	3		
1,2,4		Ablution and Latrine Facilities	Month	3		
1,2,5		Tools and Equipment	Month	3		
1,2,6		Water Supplies, Electric Power and Communications	Month	3		
1,2,7		Dealing with Water (Sub-clause 5.5)	Month	3		
1,2,8		Pollution (Sub-clause 5.6)	Month	3		
1,2,9		Access (Sub-clause 5.8)	Month	3		
1,2,10		Company and Head Office overhead costs	Month	3		
1,2,11		Other time-related obligations	Sum	1		
		HEALTH AND SAFETY				
1,2,12		Implementation of Health and Safety Plan	Month	3		
1,2,13		Provision of Construction Safety Officer(s)	Month	3		
TOTAL CARRIED FORWARD						

SECTION 1: PRELIMINARY AND GENERAL

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
1,2,14		Implementation and Maintenance of Health and Safety training	Month	3		
1,2,15		Maintenance of Personal Protective Clothing and Equipment	Month	3		
1,2,16		Maintenance of Fences, Signs and Barricades	Month	3		
1,2,17		Implementation and Maintenance of Health and Safety Administration	Month	3		
1,2,18		Other Health and Safety Time-related obligations	Month	3		
1,2,19		Submission of Health and Safety File on completion	Month	3		
1,3		**ENVIRONMENTAL**				
1,3,1		Allow for Environmental compliance (refer to Environmental Management Plan in tender document)	Month	3		
1,4		**SUMS STATED PROVISIONALLY BY ENGINEER**				
1,4,1		Allow for CLO	PC	1	25 000,00	25 000,00
1,4,2		Overheads, charges and profit on item 1.39 above	%			
1,4,3		Allow for management and supervision of CPG contractors	Sum	1,00		
1,4,4		Allow for provision of 2 x laptops	Prov. Sum	1,00	50 000,00	50 000,00
		For work to be done by Contractor				
1,4,5		Specified Soil Testing as directed by the Engineer at an approved Laboratory	Prov Sum	1	5 000,00	5 000,00
1,4,6		Overheads, charges and profit on item 1.41 above	%			
1,4,7		Alllow for testing and compliance cerificate of the entire electrical insallation	Sum	1		
1,4,8		Allow for As-built drawings	Sum	1		
1,4,9		Allow for Final Commissioning & Training with KCDM staff & Engineer	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION 2: EARTHWORKS				
2	SANS 1200D	**EARTHWORKS FOR GANTRIES**				
	SANS 1200D	**EXCAVATION, FILLING, ETC**				
2,1	SANS 1200C 8.2.1	Clear and grub area from vegetation and spray approved herbicide	ha	0,4		
	SANS 1200D 8.3.3(a) PS2.3.6.2 PS2.3.6.4	Restricted excavation in all materials (0 - 1.5m deep) and dispose of surplus/unsuitable material for the following:				
2,1		Crawl beam bases	m³	15		
2,2		Plinth	m³	18		
		Compaction of surfaces :				
2,3		Scarify to a depth of 150mm and level and recompact earth under crawl beam bases and plinth	m³	6		
	8.3.2(b)(2)	Hard rock excavation				
2,4		Neatly break out existing concrete floor slab for the construction of concrete plinth	m³	4		
2,5		Break out 300x300mm area of existing concrete roof slab for the construction of new colum and dispose of rubble at an approved dumping site.	m³	0,5		
2,6		Break out 300x300mm area of existing concrete surface bed for the construction of new column and dispose of rubble at an approved dumping site.	m³	0,5		
TOTAL CARRIED FORWARD						

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		Filling, etc.				
	8.3.2(a)	Approved earth filling obtained from the excavations and/or prescribed stock piles on site, including haulage not exceeding 500m from the perimeter of the excavations, well watered and compacted in layers not exceeding 150mm to a density as specified				
2,7		Filling around crawl beam base and stub column and compacted to 100% MOD AASHTO maximum density at optimum moisture content	m^3	3,6		
	8.3.4(a) PS2.3.6.3 PS2.3.6.4	Import G5 material from commercial sources and compact in layers not exceeding 150mm to 98% MOD AASHTO				
2,8		Under crawl beam bases	m^3	6,3		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 3: CONCRETE, FORMWORK & REINFORCEMENT

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3	**SANS 1200G**	**SECTION 3: CONCRETE, FORMWORK & REINFORCEMENT**				
	8.4.3 PS2.5.1.1	**Concrete Class 30MPa/19mm in:**				
3,1		Crawl beam bases	m³	3		
3,2		Plinth	m³	24		
3,3		Concrete Column	m³	0,75		
		CONCRETE SUNDRIES				
	8.4.4 PS2.5.3.4	Finishing top surfaces of concrete smooth with a wood float				
3,4		Top of plinth	m²	19,5		
3,5		Reinstated roof slab and surface bed	m²	0,3		
	8.2 PS2.5.6.1	**SMOOTH FORMWORK (DEGREE OF ACCURACY II)**				
	8.2.2 PS2.5.6.1	**Smooth formwork to sides:**				
3,6		Crawl beam base and stub column	m²	33		
3,7		Plinth	m²	9		
3,8		Concrete column	m²	12		
	8.5 PS2.5.6.5	**MOVEMENT JOINTS, ETC**				
		Against concrete column				
3,9		10mm Bitumen impregnated softboard or Jointex up to 13mm to top of joint and sealed with Sikaflex Pro3 I-Cure, or similar approved, strictly to be done by approved sealant contractor to specification	m	15		
TOTAL CARRIED FORWARD						

SECTION 3: CONCRETE, FORMWORK & REINFORCEMENT

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
	8.3 PS2.5.6.2	**STEEL REINFORCEMENT**				
		Mild /high tensile steel reinforcement to structural concrete work				
3,10		Various diameter high tensile bars	t	1,605		
	SANS 1200GA	**CONCRETE (SMALL WORKS)**				
	8,7	**GROUTING**				
3,11	8.7a PS2.5.6.8	40MPa cementitious non-shrink grout under base plate and above crawl beam including into pockets and chamfered edges all around	m^3	1		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 4: MASONRY

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4		**SECTION 4: MASONRY FOR PUMPSTATION BUILDING**				
		REINSTATEMENT OF BRICKWORK				
		Burnt clay masonary units to match existing				
4,1	PSS1.5.1	Double leaf wall	m²	10,5		
		Brickwork reinforcement				
4,2		150mm Wide reinforcement built in horizontally	m	45		
		Prestressed fabricated lintels				
4,3		110 x 70 x 3300 mm pre-stressed concrete lintels built into brickwork	No.	6		
	SANS 1200C	**Site Clearance**				
4,4	8.2.8	Demolish existing double leaf wall and dispose off at an approved dumping site	m²	18		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 5: STRUCTURAL STEELWORK

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200H & HA	**SECTION 5: STRUCTURAL STEELWORK**				
	8.3.1.2 PS2.6.1.1 PS2.6.1.2 PS2.6.2.1	Supply and fabrication of steelwork complete with all the necessary cleats, brackets, gussets, packs, bolt holes, etc. using grade S355JR steel to be hot-dipped galvanized, for the following:				
5,1		203 x 133 x 30 kg/m I-Beam	t	3,045		
5,2		45 x 45 x 3mm Angles	kg	19		
5,3		305 x 165 x 41 kg/m I-Beam	kg	120,9		
5,4		300 x 300 x 12 mm Base plate	kg	51		
5,5		500 x 350 x 25mm Base plate	kg	103,5		
5,6		1487 x 230 x 4mm plate	kg	33		
5,7		PC200 x 75mm channel	kg	16,8		
5,8		270 x 75 x 6mm plate	kg	6		
5,9		20mm thick pipe Support Connection plate	kg	36,6		
5,10		12mm thick stiffener plates	kg	28,5		
5,11	PS2.6.5.5 PS2.6.5.6	Re-use 152 x 152 x 30 H colunms	kg	650		
5,12		Allow for dye-pen testing to fillet welding to shop fabricated trusses and columns (10% of all weld lengths)	Prov Sum	1		R 50 000,00
	8.3.4	**Erection Bolts**				
5,13		M12 Expansion anchors	No.	12		
5,14		M12 Grade 8.8 hot dipped galvanised steel bolts,nuts and washers	No.	18		
5,15		M14 Grade 8.8 hot dipped galvanised steel bolts,nuts and washers	No.	24		
5,16		M16 Grade 8.8 hot dipped galvanised steel bolts,nuts and washers	No.	24		
5,17		M16 A4-70 Studs, Anchored 150mm deep with IKA-CV	No.	288		
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6		**SECTION 6: METALWORK**				
		DOUBLE REBATED GALVANIZED MILD STEEL DOOR FRAME:				
		Purpose made 1,2mm thick pressed mild steel double rebated door frame for a 230mm thick wall. Manufactured to SANS 1129 and primed with red oxide.				
6,1		Frame for door 2920 x 3607mm high	No	3		Rate Only
		MILD STEEL DOORS				
6,2		Fabricate, supply and install 1.2mm pressed mild steel doors fitted with slide lock complete as per detail. Louvers in doors with insect proof mesh. Finnished with 1 x coat Plascon enamelcoat sinchromate under coat and 2 x coat Plascon merit universal eggshell enamel colour: dark green.	No.	3		Rate Only
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 7: PIPE SPECIALS AND VALVES

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7	**PS2.8**	**SECTION 7: PIPE SPECIALS AND VALVES**				
	PS2.8.3.6	Rates to include the installation and testing complete etc. Refer to pipe schedule				
7,1		Item A1: 250NB mild steel straight pipe, both ends flanged for a pipe length up to and including 700mm, flanged	No	3		
7,2		Item A2: 250NB Steel segmented bend with 100mm extensions on both ends, flanged	No	3		
7,3		Item A3: 250/200NB steel escentric reducer, flanged	No	3		
7,4		Item A4: 150NB Steel segmented bend with 100mm extensions on both ends, flanged	No	3		
7,5		Item A5: 200/150NB steel reducer, flanged	No	3		
7,6		Item A6: 200NB "Bermad" pump control valve	No	3		
7,7		Item A7: 200NB steel pipe with 2 x nipples to suit flow switch and pressure switch, both ends flanged	No	3		
7,8		Repairs to existing pipework and fittings	PC	1	40 000,00	
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 8: ELECTRICAL SUPPLY

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
8		**SECTION 8: ELECTRICAL SUPPLY**				
8,1		**LV EQUIPMENT**				
8,1,1		PUMP MOTOR CONTROL PANEL				
		Install the following equipment into existing Pump Station MCC				
8,1,1,1		Supply and Install 25 kW motor drive panel as per the project specificationds and drawing No. UG0745/E1. The equipment shall be from the same Manfacturer as per the existing equipment. The panel shall comprise of the following: Main Protection Breaker, Contactor, Soft Start VSD plus protection control equipment, relays and indicating lamps.	No.	3		
8,1,1,2		Carry out wiring changers to the existing motor controls panel to allow for the additional pump. The control logic shall be a duty cycle whereby any two pumps can run with the third as a standby back	No.	3		
8,1,1,3		Interlock new pump control circuits into the existing telemetery system	No.	3		
8,1,1,4		Allow for supply & installation of Pressure Transducers and Pressure switches to each pump station installation.	No.	6		
8,1,1,5		Allow for Testing & Commissioning of the Pump installation at each pump station	Item	3		
8,1,1,6		Allow for supply & installation of Flow switch Transducers and Flow switches to each pump station installation.	No	6		
8,1,1,7		Distribution Board DB No. 1. Repairs to existing board and labeling of circuits including blank cover to DB.	No	1		
TOTAL CARRIED FORWARD						

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
8,1,1,8		Distribution Board DB No. 2. Repairs to existing board and labeling of circuits including blank cover to DB.	No	1		
8,1,1,9		Distribution Board DB No. 3. Repairs to existing board and labeling of circuits including blank cover to DB.	No	1		
8,2		**LV CABLES RETICULATION/CABLE TRAYS/LADDER**				
		Supply and Installation of galvanised cable trays / ladder including mounting brackets, bolts and all fixings in order to complete the installation as indicated on the drawing.				
8,2,1		Cable Ladder 300mm wide complete with bends where necessary	m	45		
8,2,2		Cable Tray 150mm wide x 50mm deep. Complete with bends	m	60		
8,3		**LOW VOLTAGE CABLING**				
		Supply and Install PVC/SWA/PVC copper Sleeves / Cable Trays.				
8,3,1		95mm² x 4C PVC SWA ECC Pump Motor	m	185		
8,3,2		6mm² x 2C PVC SWA ECC Heater	m	83		
8,3,3		2.5mm² x 7C PVC SWA ECC Control Cables	m	250		
8,3,4		1.5mm² x 2 Pr Instrument Control Cables	m	180		
		Termination of PVC/ SWA/ PVC Copper Cables				
8,3,5		95mm² x 4C PVC SWA ECC Pump Motor	No	12		
8,3,6		6mm² x 2C PVC SWA ECC Heater	No	6		
8,3,7		2.5mm² x 7C PVC SWA ECC Control Cables	No	9		
TOTAL CARRIED FORWARD						

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
8,3,8		1.5mm² x 2 Pr Instrument Control Cables	No	24		
8,4		**LIGHTING & SMALL POWER**				
		Supply and Installation of Luminaires complete as specified and indicated on the drawings including all mounting brackets, spacers, fixings and supports.				
8,4,1		Area Flood Light mounted as a replacement fitting for existing fittings at each pumps station Type / 100w / LED / 5000K .	No	12		
8,4,2		Dust & Mositure Proof Light fittings. Replace existing light fitting ballasts and tubes with new LED tube	No	48		
8,4,3		Supply & Install new Dust & Mositure Proof LED Light fittings to match existing fittings.	No	6		
		Conduits (Power) **Rigid PVC conduit including bends, draw boxes with covers, etc. fixed.**				
8,4,5		20mm Diameter conduit	m	34		
		Socket Outlets Boxes				
8,4,6		Replace Faulty Socket outlets to match existing.	No	6		
		PVC insulated stranded copper conductor drawn into conduits, Power Skirting and P9000 Galv. trunking including terminations and connections.				
8,4,7		2,5mm² Conductor	m	10 250		
8,4,8		Replace faulty 20A Photo-electric daylight-sensative switch complete as specified.	No	2		
TOTAL CARRIED FORWARD						

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
8,5		**LIGHTING PROTECTION**				
		Supply Installation of the Lightning Protection by a Specialist				
8,5,1		50mm² Aluminium Conductor fixed to walls, roof, down pipes etc..	m	30		
8,5,2		Bonding joints, etc. complete for 50mm² conductor including lugs, nuts, bolts and washers.	No	8		
8,5,3		3m copper coated earth electrodes driven into ground complete with brass coupling between rods.	No	8		
8,5,4		Additional 1.5m copper coated earth electrodes driven into ground complete with brass coupling between rods with prior approval from the electrical engineer.	No	2		
8,5,5		35mm² Copper conductor jumpers between the earth electrodes and aluminium droppers Test Point.	m	10		
8,5,6		Bonding joints, etc. complete for 35mm² conductor including lugs, nuts, bolts and washers.	No	4		
8,5,7		Test Point Enclosure: Mount fibre Glass enclosure type "York" 300mm AFFL at each drop. Terminate Aluminium / copper conductors using 8mm Stainless steel bolts / washers & nuts	No	4		
8,5,8		Earthing / Bonding of water pipes DBs and Ki	Item	1		
TOTAL CARRIED FORWARD						

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
8,5,9		Allow for the testing and commissioning of the lightning protection installation per building and witnessed by the engineer.	Item	1		
		The following services and repairs shall be carried out on the existing generators and change over panels. The existing pumps have been modified to run simutainuosly which means the generator must operated manualy as the generator was sized to supply power for one pump running				
8,5,10		The generators are enclosed in a shipping container the container are not vermin proof. Both the interior and exterior require pressure cleaning and sprayed with insect repelant.	item	2		
8,5,11		The Generators require a major service replacing all filters, engine coolant, oil replacementand re-testing & commissioning. Issue test certificates & condition assessment.	item	2		
		The Pump Motor Control Panel has a Power Factor connect system. On Pump station No. 2 the system has been isolated but no faulty has been report.				
8,5,12		The contractor to investigate the reason for the isolation and submitted an assessment report & quotation to repair.	item	1		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 9: PUMPS

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
9		**SECTION 9: PUMPS**				
		Zimela Pump station 1				
9,1		Installation of 250kW x 1450rpm VSD Motor	No.	1		
9,2		Installation of KSB WKLn 150/5 pump	No.	1		
9,3		Modications to existing pumps	Prov Sum	1	48 000,00	
9,4		Test and commission existing and new motor and pump	Sum	1		
		Zimele Pump Station 2				
9,5		Installation of 220kW x 1450rpm VSD Motor	No.	1		
9,6		Installation of KSB WKLn 150/5 pump	No.	1		
9,7		Modications to existing pumps	Prov Sum	1	48 000,00	
9,8		Test and commission existing and new motor and pump	Sum	1		
		Zimela Pump Station 3				
9,9		Installation of 220kW x 1450rpm VSD Motor	No.	1		
9,10		Supply and install KSB WKLn 150/5 pump	No.	1		
9,11		Modications to existing pumps	Prov Sum	1	48 000,00	
9,12		Test and commission existing and new motor and pump	Sum	1		
9,13		Allow for Contract Participation Goal	Prov. Sum	1	2 300 000,00	
TOTAL CARRIED FORWARD TO SUMMARY						

SUMMARY

ITEM	DESCRIPTION	AMOUNT
1	PRELIMINARY AND GENERAL	
2	EARTHWORKS FOR GANTRIES	
3	CONCRETE, FORMWORK & REINFORCEMENT	
4	MASONRY	
5	STRUCTURAL STEELWORK	
6	METALWORK	
7	PIPE SPECIALS AND VALVES	
8	ELECTRICAL SUPPLY	
9	PUMPS	
	SUB-TOTAL A	
	ADD: CONTINGENCIES @ 10%	
	SUB-TOTAL B	
	ADD: VAT @ 15%	
	TOTAL	

PART C3: SCOPE OF WORK

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C3 SCOPE OF WORKS

C3.1 DESCRIPTION OF WORKS

C3.1.1 Employer's objectives

The employer's objectives are to deliver adequate public infrastructure and services to communities residing within its boundaries, and in this instance to refurbish the bulk infrastructure in Zimele Pump station 1, 2 and 3 in order to increase the supply the communities.

C3.1.2 Overview of the works

The works comprises the water supply capacity increase for the Greater Mthonjaneni Region which require bulk infrastructure improvements

C3.1.3 Extent of the works

Material will be supplied by the contractor, the detail of which is indicated on the Schedule of Quantities and Specifications. This material should be directly delivered to the contractor's site office and the contractor will allow for offloading, handling, storage and stacking at the point of delivery, and the further distribution thereof to locations where this material is required, and finally for the complete installation of this material, which should include for all labour, plant and auxiliary items required.

The contract is for the supply of all labour, plant and materials to complete the works comprising of the completion, testing and commissioning of the following components of work:

<u>General</u>

- Site establishment and removal of establishment on completion.
- Complying with relevant health and safety regulations.
- Management and supervision of contract.

<u>Included Work</u>

This contract provides for:

- The maintenance of records and accurate measurements of the works for certification by the Engineer.
- The compilation of as-built drawings on completion of the works.
- The supply and application of all safety equipment and clothing applicable to the works.
- The supply of all plant, equipment, materials, transport, labour, incidentals, fuels etc. and supervision to carry out the works.
- The removal of all redundant material, rubble and spoil to the designated Municipal dump area, or other designated area as directed.
- The construction and testing.
- Payment of import and custom duties.
- Transportation and delivery to the designated site in and in the vicinity of the site as required in terms of scope of works.

- Supervision of erection of the contract works, i.e. offloading from transport, safe storage, handling to situation, installing, setting to work, testing, maintaining prior to the practical completion date and all other work incidental thereto.

Scope of Work

- New suction pipework for pump no.3
- New electric motors for Zimela pump station no1, 2 & 3
- New pump or motor base for pump no.3
- New delivery pipework for pump no.3
- New Bermad control valve for pump no.3 including pressure gauges, flow switch and pressure switch
- Install MCC for pump no.3 into existing panel,
- Repairs to existing pipework and fittings,
- Modifications to existing pumps
- Telemetry system between Zimela pump station 1, 2 & 3

C3.1.4 Location of the works

The project site is situated within the King Cetshwayo District Municipality, KZN and located within Mthonjaneni Local Municipality. The co-ordinates for the pump stations are as follows:

Zimele pump station no.1 - S 28°46'17.0" Latitude and E 31°28'29.88" Longitude.

Zimele pump station no.2 - S 28°45'10.05" Latitude and E 31°27'34.83" Longitude.

Zimele pump station no.3 - S 28°43'50.53" Latitude and E 31°26'58.64" Longitude.

C3.2 ENGINEERING

C3.2.1 Design services and activity matrix

Responsibilities for the design and activity matrix can briefly be classified as follows:

- Final design for fixed works : Employer
- Design for temporary works : Contractor
- Preparation of as-built drawings : Contractor

C3.2.2 Employers design

The employers design is depicted on the tender drawings, and provides for detailed design of all of the fixed works. The drawings will be issued as construction drawings upon the award of the contract.

C3.2.3 Contractors design

The contractor to note that the reservoir site is found to be dominated by predominated upper residual horizon comprising of clayey silt. The lower ground horizon comprises of fine-grained clayey sand.

The contractor to at the outset satisfies the Engineer as to the construction methodology to be followed, in particular with regards to the tie-in and disconnection of existing services and will not proceed until this has officially been approved. Approval thereof will however not transfer the responsibility for safe working practice from the contractor, who will remain responsible thereof.

C3.2.4 Drawings

The drawings used for setting up the Schedule of Quantities are as follows:

DRAWING NO.	DESCRIPTION
R10-007-06-Z2C-300-000	GENERAL NOTES
R10-007-06-Z2C-300-001	ZIMELE BOOSTER NO.1 – SITE LAYOUT
R10-007-06-Z2C-300-002	ZIMELE BOOSTER NO.2 – SITE LAYOUT
R10-007-06-Z2C-300-003	ZIMELE BOOSTER NO.3 – SITE LAYOUT
R10-007-06-Z2C-300-151	PIMP STATION PLAN AND SECTIONS
R10-007-06-Z2C-300-202	CRAWL BEAM LAYOUT, SECTIONS AND DETAILS
R10-007-06-Z2C-300-262	TYPICAL DETAIL: SIGN SUPPORT STRUCTURE
R10-007-06-Z2C-300-263	TYPICAL DETAIL: EPWP SIGN BOARD

C3.2.5 As-built drawings and information

All information in possession of the contractor that is required by the Engineers representative on order to complete the as-built drawings and to prepare a completion report for the employer must be submitted to the engineer's representative before a Completion Certificate will be issued for the works.

C3.3 PROCUREMENT

C3.3.1 Preferential procurement procedures

The works shall be executed in accordance with the conditions attached to preferences granted in accordance with the preferencing schedule.

C3.3.2 Scope of mandatory subcontract work

Competitive Tenders shall be invited in respect of each of the above portions of the works in accordance with the relevant provisions of the latest edition of the CIDB Standard for Uniformity in Construction Procurement.

The Employer together with the Contractor shall evaluate the Tenders received in accordance with the provisions of the Standard Conditions of Tender contained in Annex F of Standard for Uniformity in Construction Procurement. The evaluation panel shall comprise equal representatives from the Employer and from the Contractor.

The Contractor shall without delay, enter into contract with the successful Tendering subcontractor based on their accepted Tender submission. The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.

C3.3.3 Sub-contracting

As required by Clause 4.4 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 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.

C3.4 CONSTRUCTION

C3.4.1 Standard Specification

The standard specifications on which this contract is based are the Standard Specifications for Civil Engineering Construction (SANS 1200).

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 SABS) 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; and Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor

C3.4.2 Project Specifications

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

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

The standard specifications which form part of this contract have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

PART A: PROJECT SPECIFICATIONS

PS1.1 WORKS SPECIFICATIONS

PS1.1.1 Applicable national and international standards

All construction work must be undertaken in accordance with the Standard Specifications for Civil Engineering Construction SANS 1200. Together with the amendments as indicated in PART A: Project Specifications, PART B1: Variations and Additions to Standardised Specifications, of this document.

Although not bound in nor issued with the Document, the following Sections of the Standardized Specifications of SANS 1200 shall form part of this Contract:

STANDARDIZED SPECIFICATIONS APPLICABLE TO THIS CONTRACT

SANS 1200A	:	General
SANS 1200C	:	Site Clearance
SANS 1200D	:	Earthworks
SANS 1200G	:	Concrete (Structural)
SANS 1200H	:	Structural Steelwork
SANS 1200HC	:	Corrosion Protection of Structural Steelwork
SANS 1200L	:	Medium Pressure Pipelines

The SANS classification as indicated above shall be the latest revision of the relevant standard.

The term “project specification/s” appearing in any of the SANS 1200 Standardized Specifications shall be replaced with the term “scope of work”.

The abovementioned Standardized Specifications make several references to the Specification Data for data, provisions and variations that make these standards applicable to this contract. The Specification Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and these standards.

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; and Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor.

Standard Specification for Civil Engineering Construction (SANS 1200 Series)

Model Preambles of Trades - 1999 Edition

National Building Regulations

PS1.2 PLANT AND MATERIALS

PS1.2.1 Plant and materials provided by the employer

No plant or material will be provided by the employer.

PS1.2.2 Materials and samples

All tests must be done in accordance with TMH 1 “Standard Methods of Testing Construction Materials”.

The contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the engineer with certificates showing that the materials do so comply.

Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the engineer's office on the site free of charge.

Where proprietary products have been specified, similar products may be used subject to the prior written approval of the engineer.

Unless otherwise specified, all proprietary materials shall be used and placed in strict accordance with the relevant manufacturer's current published instructions.

Unless anything to the contrary is specified, all manufactured articles or materials supplied by the contractor for the permanent works shall be unused.

Earth, stone, gravel, sand, and all other materials excavated or present on the site or within the road reserve, or in borrow areas shall not become the property of the contractor, but will be at his disposal only in so far as they are approved for use on the contract.

Existing structures on the site shall remain the property of the employer and except as and to the extent required elsewhere in the contract, shall not be interfered with by the contractor in any way.

Materials to be included in the works shall not be damaged in any way and, should they be damaged on delivery or by the contractor during handling, transportation, storage, installation or testing they shall be replaced by the contractor at his own expense.

All places where materials are being manufactured or obtained for use in the works, and all the processes in their entirety connected therewith shall be open to inspection by the engineer (or other persons authorised by the engineer) at all reasonable times, and the engineer shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications”.

The contractor shall satisfy himself that any quarry selected for use provides the necessary mined material in accordance with the specification.

PS1.3 CONSTRUCTION EQUIPMENT

PS1.3.1 Requirements of equipment

The Contractor shall ensure that any equipment, plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations 2014 shall apply. The Contractor shall ensure that operators are competent and that certificates are kept on site in the health & safety file. All relevant Contractors must ensure the same.

PS1.3.2 Equipment provided by the employer

No equipment will be provided by the employer.

PS1.4 EXISTING SERVICES

PS1.4.1 Known services

It is not foreseen that any existing underground service will require removal, realignment or temporary replacement. However, it will be required by the Engineer that before any work can commence, in close proximity to the proposed work, that the contractor verify the actual position of each service and bring to the attention of the Engineer any service that is not recorded.

As the contractor is not authorised to remove or replace these facilities he shall:

(i) Give preliminary notice, in writing to the relevant service provider, that the services on the site will require removal or protection prior to works being carried out in the vicinity of each station. The contractor shall advise the service provider of:

a) The number of services and their locations and
b) The proposed dates when works will commence in the vicinity of each service.

(ii) In addition to the above preliminary notice, give the service provider 14 days written notice of the intention to commence work in the vicinity of each facility.

(iii) Upon completion of the work in the vicinity of each facility, the contractor shall notify the service provider, in writing, that work is complete and the service may be reinstated.

PS1.4.2 Damage to services

Any cost of repairs, replacement and/or installation of the stations and equipment resulting from the contractor’s negligence or unauthorised action shall be to the contractor’s account.

PS1.5 SITE ESTABLISHMENT

PS1.5.1 Services and facilities provided by the employer

The Employer will not provide any of the following services.

- electricity
- water supply
- telecommunication services
- ablution facilities
- accommodation
- medical / first aid facilities
- fire protection services
- security

PS1.5.2 Contractor’s camp

The campsite earmarked for this contract will be located within the project footprint. The campsite will be identified after the appointment of the contractor.

PS1.6 SERVICES AND FACILITIES PROVIDED BY THE CONTRACTOR

PS1.6.1 Contractor’s camp

The Contractor needs to take full cognisance of the local regulations regarding the clearing of bush and felling of trees. No trees may be removed without the Engineer's written permission. In establishing and maintaining the camp site due cognisance of the requirements of the project specification and EMP are to be taken.

The standard of the Contractor's camp, offices, accommodation, ablution, and other facilities must comply with the requirements of the authorities concerned. Details of the above shall also be submitted to the Engineer for approval.

PS1.6.2 Facilities for the Engineer

Engineers site office

PS1.6.3 Electricity

The Contractor must make his own arrangement with the Mthonjaneni Local Municipality for a supply from their network if so required.

The Contractor may allow in his tender under the relevant items in the Preliminary & General Section of the Schedule of Quantities for a metered connection. The rate(s) must provide full compensation for the installation, maintenance of the connection and meter, the removal of the connection on completion of the contract, the reading of the meter and monthly consumption charges payable to the Mthonjaneni Local Municipality.

Supply is not guaranteed and the Contractor must provide at his own expense sufficient backup generators to prevent any loss that might occur due to an interruption of supply should he deem this to be a potential risk to his construction activities.

PS1.6.4 Water

The Contractor must make his own arrangement with the Mthonjaneni Local Municipality / King Cetshwayo District Municipality for a supply from their network if so required.

The Contractor should allow for a metered water connection in his tender under the relevant items in the “Schedule of Quantities”.

The rate(s) must provide full compensation for the installation, maintenance of the connection and water meter, the removal and making good of the connection on completion of the contract, the reading of the water meter and monthly consumptions charges payable to the Mthonjaneni Local Municipality / King Cetshwayo District Municipality. Supply is not guaranteed and the Contractor must provide at his own expense sufficient storage capacity to prevent any loss that might occur due to an interruption of supply should he deem this to be a potential risk to his construction activities.

The Contractor shall further make his own arrangements regarding the possible conveyance and storage of water where required. Water for construction purposes obtained from the metered supply or from raw water sources by arrangements with the Mthonjaneni Local Municipality / King Cetshwayo District Municipality.

PS1.6.5 Sanitary arrangements

No formal water borne sewer connection is available. If so required, the Contractor must make his own arrangement for a conservancy tank to be installed at the camp site and must make allowance for the regular draining of the conservancy tank by means of honey sucker tankers and dispose of the sewerage at the inlet works of the Melmoth WWTW.

The rate(s) must provide full compensation for the installation, maintenance of the all the sewer pipework and conservancy tank, regular draining of the conservancy tank, the removal of the sewer pipework and conservancy tank upon completion of the contract.

The Contractor shall provide portable chemical latrines. All latrines must, for the duration of the contract, be kept in a clean and hygienic condition to the satisfaction of the Engineer. Sufficient facilities shall be provided for the contractor’s employees in compliance with the local health department regulations.

The Contractor shall arrange for a suitable toilet for use by the Engineer. (This may be shared with the Contractor).

PS1.6.6 Waste-water control

Liquid waste may not be disposed of directly into the ground or watercourses. Liquid waste that is removed from site must be disposed of into the nearest municipal sewage reticulation system unless it does not comply with the Mthonjaneni Local Municipality / King Cetshwayo District Municipality discharge standards.

All runoff from truck washing areas and wash water from concreting vehicles and other equipment shall be collected and directed to a settling dam, HDPE lined, 10m x 4m x1m deep. Lining to be HI-DRILINE 400 (400 microns) with joints sealed using the HYPERFLEX jointing system. The overflow pipe is to be connected to a temporary 160mm diameter uPVC pipe with discharge to a suitable watercourse.

All liquid waste from vehicle maintenance and runoff from workshops, fuel depot etc. is to be collected and disposed of via a licensed waste disposal contractor. Where possible this liquid should be sent for recycling. On completion of the contract, the dam is to be removed.

PS1.6.7 Fire protection

The Contractor shall provide adequate firefighting equipment in his working area (including first response vehicle equipped with firefighting equipment). The type, capacity, location and number of items of firefighting equipment shall be to the satisfaction of the Employer's and relevant Forestry Safety / Fire Manager. The Contractor shall also ensure that his employees are trained in the operation of the equipment.

Special attention will have to be given when working in areas adjacent to the commercial plantations and adequate firefighting equipment to be available for emergencies.

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.

PS1.6.8 Refuse and wastes

Separate waste disposal facilities are required for dry/wet concrete; bricks; general rubble and general domestic refuse such as paper, tins, plastics and glass.

The Contractor will make arrangements with a waste disposal company for the removal of waste at regular intervals to the solid waste disposal site currently used by Mthonjaneni Local Municipality / King Cetshwayo District Municipality.

PS1.6.9 Accommodation and transport

The Employer will not provide any accommodation for the Contractors employees.

No accommodation for employees is to be provided on the Construction site or the Contractors lay-down area

A 24 hour, seven days a week presence of security personnel will be permitted if required by the Contractor.

Transport of contractor's local employees to the Construction Site or lay-down area will be the responsibility of the Contractor.

PS1.6.10 Site facilities

The Contractor is responsible for providing appropriate toilets and ablution facilities and for the maintenance thereof. This aspect is also covered in the Environmental regulations and the Contractor is to specify the details of what is intended to be provided in the Contractors Environmental Management Plan.

The Contractor is responsible for providing suitable site offices at the Contractors lay-down area for the Engineer and his own personnel with all required fittings, furniture and office equipment and services for his employees and for the maintenance and cleanliness thereof.

The Contractor is responsible for providing a suitable shaded eating area in the Contractors-lay-down area with tables and seating and for the maintenance and cleanliness thereof.

PS1.6.11 Security

The Contractor is responsible for the security related to the Construction Site and the Contractors lay-down area.

The Contractors lay-down area must be protected by a suitable security fence and the fence is to be covered with green shade cloth as specified in the Environmental Regulations in this Contract.

The Employer is not liable for losses of the Contractor's or his Subcontractor's plant, equipment or materials from his designated working area, although it has been fenced off.

The Contractor is to set up an appropriate system to secure the Construction Site and the Contractors lay-down area to manage and control all incoming and outgoing personnel, visitors and traffic. The Contractor is to provide details of what he proposes in this regard and the Contractors authority includes the right to search any person or vehicle before entry or exit and to refuse entrance to Site to any person not meeting security requirements.

When objects have been found or lost at Site this shall be reported immediately to the Construction Managers Site Office and a register should be kept to this effect from time to time as required, the Engineer will issue appropriate directives or procedures regarding security and access to Site, which promulgations will be strictly adhered to by the Contractor.

Any breach of security must be reported to the Engineer immediately.

PS1.6.12 Safety and first aid

All site facilities must confirm to the Occupational Health and Safety Act (Act No 85 of 1993). The Contractor shall provide first aid facilities complying with the requirements of this Act for his employees as well as the employees of his Sub-contractors and/ or visitors on site.

PS1.6.13 Storage facilities

The Contractor is responsible for ensuring that all equipment and materials required under his Contract are delivered to his working area and for the receipt, offloading and storage of the delivered goods.

PS1.6.14 Laboratory facilities

Although it shall not be a requirement of this Contract that the Contractor supply and maintain a testing laboratory on site, the proposed off-site commercial laboratory to be used shall be approved by the Engineer prior to any testing for this Contract being conducted therein.

The Contractor shall provide and allow for his own facilities, operations and procedures for the testing of materials and the process control testing of materials and workmanship in order to ensure compliance with the requirements of the specifications. The Engineer will only carry out control testing. Laboratory facilities and testing apparatus can either be provided on the Site of Works or the Contractor may make use of a private laboratory to be approved by the Engineer.

The Engineer will not consider any claims related to delays to the Works due to test results being awaited. It is in the Contractor’s own interest to ensure that samples and/or the necessary facilities are provided timeously.

Should the Contractor decide to use an outside or private laboratory, the tendered amount shall include for the Contractor's overheads, profit and all costs associated with the use of the outside laboratory (including transport of samples).

PS1.6.15 Vehicles and equipment

"Construction Plant" includes all types of plant including but not limited to, cranes, piling rigs, excavators, road vehicles, and all lifting equipment.

The Principal Contractor shall ensure that all such plant complies with the requirements of the OHS Act 85/1993 and Construction Regulations 2014. The Principal Contractor and all relevant Contractors shall inspect and keep records of inspections of the construction plant used on site. Only authorized/competent persons are to use machinery under proper supervision. Appropriate PPE and clothing must be provided and maintained in good condition at all times.

PS1.6.16 Hired plant and machinery

The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations 2014 shall apply. The Principal Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the health & safety file. All relevant Contractors must ensure the same.

PS1.6.17 Advertising rights

The Contractor shall not publish, or cause to be published, any papers, articles or information relating to this project, nor permit any advertising mentioning the subject of this Contract, nor display, or permit to be displayed, any advertisements on the Site, or elsewhere, in connection with this Contract, without the prior permission, in writing, of the Employer. The Contractor shall be responsible for the observance of this Clause by his employees and by his Sub-Contractors.

PS1.6.18 Notice boards

The Contractor shall provide two contract name boards. Detail of the Name board is bound in at Section C5, Annexure A of this document. The Engineer will clarify the positions of the boards on the site.

PS1.7 SITE USAGE

The extent of the works is indicated on the appropriate drawings and the contractor has to restrict his activities to within practical limits and servitude so as to ensure the least possible area is disturbed.

Further commercial plantations outside the township boundary are considered no-go areas for the duration of the contract.

PS1.8 WATER FOR CONSTRUCTION PURPOSES

Refer to PS6.4. Contractor will be responsible for making his own arrangements in this regard.

PS1.9 SURVEY CONTROL AND SETTING OUT OF THE WORKS

Control beacons for setting out the proposed works will be shown to the Contractor on official handing over of the site. The Contractor shall be responsible for setting out of the works. A registered Land Surveyor shall replace control or any property beacons damaged by the Contractor during the course of construction at his cost.

PS1.10 CONSTRUCTION MANAGEMENT

Construction management of the works

PS1.10.1 Applicable SANS 1921 standards

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; and Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor.

PS1.10.2 Planning and programming

A detailed programme is required within 7 days after the commencement date. The programmed shall not be in the form of a bar chart only, but shall show clearly the anticipated quantities of work to be performed each week, together with the manner in which the listed plant is to be used, as well as the anticipated earnings for the various sections of work.

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 work, the quantities of work performed per week 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 2 days 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 for completion as defined in Clause 5.6 of the General Conditions of Contract plus 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 programme shall be sufficient reason for the Engineer to take steps as provided in Clause 5.7 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 of the Engineer to instruct 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.

Tenderers shall, with their tenders, submit to the Engineer a preliminary programme in the form of a bar chart indicating for each portion of the works, the proposed order and rate of progress of the various construction activities. The programme shall be consistent with the construction period tendered to complete the contract.

The successful tenderer shall be required to take cognisance when preparing the construction program and shall note the following:

The programme shall be in the form of a bar chart (Gantt chart) or any other time-activity form acceptable to the Engineer, and shall clearly show:

i) The proposed rate of progress in order to complete the works within the required period as tendered, showing the various activities, their durations and proposed resourcing levels (major plant and labour) for each element of the works. Sufficient detail shall be provided to enable the Engineer to be able to gauge construction progress. All activities, including establishment on site, trimming and finishing and the completion of all minor ancillary works are to be included in the programme.

ii) The sequence of activities and any dependencies (time or resource related) between them.

iii) The critical path activities.

iv) Key dates in respect of work to be carried out, or information, etc., to be provided, by others.

v) Other information specifically required by the Engineer.

In drawing up the programme the contractor shall make allowance for the following:

a) Construction of all works is to be completed in 12 months.

i) All special non-working days are defined in C1.3.1: Conditions of Contract, Part 3: Contract Specific Data, Clause 5.8.1.

ii) The expected delays defined in Section C3: Scope of Works Part A, PS 10.6.22: Extension of time resulting from inclement weather.

iii) Known physical conditions or artificial obstructions.

iv) Occupational, Health & Safety approvals.

v) The accommodation and safeguarding of public traffic.

b) Restrictions on the supply of material from commercial sources.

vi) Allowance must be made to accommodate sub-contractors working on the site such as electrical and gas contractor.

vii) Environmental requirements as per Specification.

viii) Geotechnical aspects which could have an impact on the works.

ix) On site access as per own requirements and construction methodology.

x) Critical aspects which could have an impact on the works.

xi) Accommodation of traffic for access and egress from Medway Road.

The following details shall be submitted together with the programme:

(i) The number of working hours per day, working days per week, assumed holiday or shut down periods on which the programme is based.

(ii) The overall labour and major plant resource levels and production rates on which the programme is based.

(iii) The detailed traffic accommodation proposals on which the programme is based.

(iv) A budget forecast of the value of completed work, excluding CPA and contingencies but including VAT, month by month, for the full contract period.

These additional items shall also be revised when any revision is made to the programme.

Failure to comply with these requirements entitles the Engineer to use a programme based on his own assumptions to evaluate claims for extension of time for completion of the works, or for additional compensation.

Minor revisions to the approved programme may be introduced from time to time by mutual agreement between the Contractor and the Engineer. Should the Engineer believe that a major revision of the programme is required, the Contractor will be notified in writing and an updated programme shall be submitted within two weeks of receipt of such notification.

It should be noted that it is in the Contractor's interest to provide a comprehensive programme giving as much information as possible about the times allowed for the various activities as well as resource or other limitations affecting the programme, since the approved programme may be used to evaluate any claims in terms of the General Conditions of Contract for extension of time.

The Contractor shall submit to the Engineer, at least three working days before each monthly site meeting, copies of the following:

The contract programme with progress charts and programme graphs updated to reflect the actual progress to date.

A summary of progress on site over the month preceding the site meeting. The report shall be in the form of a detailed narrative to the contract programme.

Details of activities running late, indicating what steps have been or will be taken to ensure that the work is completed within the specified time.

A report on all labour, plant and materials on site.

All other appendices to the monthly site meeting minutes, as required by the Employer."

c) Programme revisions

The programme will be reviewed at the monthly site meetings at which the contractor shall provide sufficient detail that will allow the comparison of completed work per activity against the original approved programme. The contractor shall indicate what resources and programme changes he intends to implement in order to remedy any activity that has fallen behind. The engineer may demand from the contractor a major revision of the programme. Such a revision shall be submitted for approval within fourteen days of the demand."

PS1.10.3 Sequence of the works

No phased construction is anticipated.

PS1.10.4 Software application for programming

Microsoft Projects will be the software platform used for preparing and providing the programme in accordance with the requirements as set out in the specification.

PS1.10.5 Methods and procedures

PS1.10.5.1 Contractors' areas and housekeeping

Before moving onto Site, the Contractor shall indicate how he intends to utilise the Construction site and Contractors lay-down area. The Contractor shall indicate proposed locations of offices, ablutions and toilets, stores, car park, equipment park, pre-cast yard etc. for the Engineer's approval.

All persons on Site are expected to contribute towards keeping the Site orderly and tidy. Rubbish, such as cartons, papers, tins and bottles shall be suitably disposed of.

The Contractor and his Subcontractors shall only store waste material, rubbish, spoil, etc, at places and in a manner designated by the Engineer.

Rubble and waste construction materials may not be buried or burnt.

The Contractor shall ensure that his working area and that of his Subcontractors' is kept neat, tidy and clean at all times.

If the Contractor fails to maintain satisfactory standards of housekeeping to the reasonable satisfaction of the Engineer, then the Engineer may undertake this work with other resources and back-charge the cost to the Contractor.

The Contractor's work is not completed until he has tidied and cleaned his working area to the reasonable satisfaction of the Engineer.

PS1.10.5.2 Access

The Engineer shall have the right to enter at any reasonable time, any part of the Contractor's working area or offices.

PS1.10.5.3 Hours of work

Although the Site will be accessible 24 hours a day, the Contractor is required to define his standard working hours which must comply with statutory requirements.

The Contractor is reminded that every employee shall take at least 24-hour continuous rest in any period of seven days.

Requests for working outside these agreed hours shall be made to the Engineer at least 24 hours in advance in the prescribed format.

The Contractor shall ensure that adequate supervision is provided outside normal working hours.

PS1.10.5.4 Restricted areas

Various areas of the Site may be designated from time to time as restricted for some reason. Notices of these areas will be issued by the Engineer in writing. All personnel are expected to observe the conditions laid down in these notices.

The Contractor's employees must follow the defined roads and walkways when coming to or leaving their normal workplace. Taking short cuts through other sections of the Works is not permitted.

PS1.10.5.5 Emergency procedures and safety

The Contractor will prepare issue procedures for warnings of emergency, evacuation arrangements, communication arrangements and responsibilities for action in an emergency.

The Contractor shall submit a list of names and telephone numbers of persons to be contacted in case of accident or emergency outside normal working hours.

PS1.10.5.6 Access to and within the site

Access to the site of the works can be obtained from the R66 provincial road.

The contractor must evaluate the construction space, site conditions and constraints together with any other aspect that may influence his construction activities and or methodology and allow for it in his tendered rates. No additional claims will be considered in this regard.

No separate payment shall be made for this as all costs related thereto shall be deemed to be covered by the tendered rates.

PS1.10.5.7 Possible areas for stockpiling or spoiling of material

Suitable areas for the temporary stockpiling of topsoil will be in areas as agreed with the Engineer.

All spoil material shall be hauled to and disposed of at the Municipal Refuse Site.

Excesses clean sand material, which is to be spoiled, shall be transported and stockpiled on a site indicate and approved by the municipality.

PS1.10.5.8 Dust control

The Contractor shall apply water using a water tanker at regular intervals to access and construction roads where dust is causing a nuisance. The application rate should be sufficient to keep the routes dust free during the movement of construction equipment.

PS1.10.5.9 Delivery of material

The Contractor shall ensure that all material delivered and removal vehicles carrying loose material are suitably covered to prevent the loss of material. The rates tendered shall include for suitable covers including for sub-contractors supplying or removing materials.

PS10.6.10 Source of materials

The Contractor will be responsible for locating of all materials complying with the relevant minimum requirements to be used in this contract. No separate payments shall be made for this as all costs related thereto shall be deemed to be covered by the tendered rates.

PS1.10.5.11 Borrow site and spoil areas

All spoil material shall be hauled to and disposed of at the Municipal Refuse Site located in Melmoth. Any spoil sites other than the Municipal Refuse Site shall be determined on site in conjunction with the Engineer. The Contractor shall be permitted to use only those spoil areas approved by the Engineer.

PS1.10.5.12 Nature of ground conditions

No geotechnical assessment of the site was undertaken. Before tendering the Contractor must form his own opinion by his independent enquiry and observation as to the character of the strata through which the excavations are to be made.

PS1.10.5.13 Groundwater

Some groundwater seepage through the ground profile should be anticipated after periods of rainfall.

The elevation of groundwater seepage is influenced by the rainfall and during the wet season the elevation of the perched water table can rise particularly after prolonged heavy storm events.

The subsoil conditions in existence must be evaluated by the contractor for any aspect that may influence his construction activities and or methods of construction allowance for de-watering of trenches and excavations so as to make allowance therefore in his tendered rates.

No separate payment shall be made for this as all costs related thereto shall be deemed to be covered by the tendered rates.

PS1.10.5.14 Flooding

The site is prone to very high rainfalls during summer. With the typical high-water tables, the excavations may easily become flooded. The Contractor shall take the necessary temporary precautions to direct storm water away from his excavations, work areas, temporary works and haul roads.

PS1.10.5.15 Dealing with water

Where necessary, the Contractor shall construct temporary drainage channels to divert ground water from his excavation, work areas, temporary works and haul roads and should this be necessary excess water must be pumped out.

No compensation for any variation of the actual conditions during construction from data given will be considered. Neither will additional compensation be considered for data omitted or inaccurately given. The rates tendered shall allow for the requirements of this clause and all incidentals.

PS1.10.5.16 Maintenance

The Contractor shall be responsible for maintenance of the works until final completion of the works.

PS1.10.5.17 Finishing and tidying

On no account must rubble and spoil materials, other materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily impede the activities of other Contractors or Authorities.

Finishing and tidying must not simply be left until the end of the construction period. The Contractor will be entitled, subject to prior agreement with the Engineer and within reasonable limits, to request that work in a particular area and/or work of a particular discipline, be inspected for partial completion. The specified defects liability period in respect of any specific section of the Works shall commence on the date on which the relevant section is accepted by the Engineer as being completed, i.e. fully commissioned, including finishing and tidying.

On completion of the contract the Contractor shall ensure that all materials used in the construction of the temporary site office, workshop and storage yard are removed from site. Waste materials such as construction debris and soil contaminated with oil and fuel are to be disposed of at the solid waste disposal site used by the Mthonjaneni Local Municipality / King Cetshwayo District Municipality. Prior to the handover of the Site to the Employer, the Contractor and-the Engineer will conduct a post construction audit to determine if any additional measures are to be taken. The Completion Certificate will only be issued after this stage.

PS1.10.5.18 Security Regulations

PS1.10.5.18.1 General

All personnel on Construction Site or Contractors lay-down area must possess an identification card supplied by the Contractor. Particulars to be reflected on the identification card include at least the surname and initials of the employee together with an identity number and occupation and a recent photograph.

Only persons with legitimate business on the Construction Site or Contractors lay-down area and in possession of positive identification are allowed access to these areas.

PS1.10.5.18.2 Vehicles

Contractors' and visitors' cars are not allowed within the Construction Site area. Cars must be parked in the car park at the Construction lay-down area.

A limited number of Contractor vehicles will be allowed entry to the Construction Site and suitable vehicle entry discs should be issued by the Contractor at the discretion of the Engineer on receipt of an application signed by the Contractor.

No motor cycles, two wheel or four-wheel types will be allowed on the Site.

PS1.10.5.18.3 Visitors

Visitors are subject to all rules of identification, safety and discipline and if occasional must be accompanied by a host who has undergone formal Safety induction for the Construction Site. Regular visitors can apply for a permanent identification card but are then obliged to attend the Construction Site Safety induction program. A visitor is regarded to be a "regular" visitor if he/she visits the Construction Site once or more per week.

Visitors must be provided with, or provide their own, mandatory Personal Protective Equipment.

PS1.10.5.18.4 Recruiting

No recruiting of personnel will be allowed at the Construction Site or Contractors lay-down area.

PS1.10.5.19 Site Instruction Book

The Contractor shall supply, at his own expense an A4 size triplicate book which shall be kept in the site office. All correspondence between the Engineer's and Contractor's site staff shall be entered into this book, and each entry signed and dated by both parties. It shall be available from the first day of the contract and at all times be accessible to the Engineer.

The original shall be issued to the Contractor, the first copy is to be forwarded to the office of the Engineer and the second copy shall remain in the book. Engineer's version of the entries that have been lost will be assumed correct and binding. If the Contractor should lose the book it will be considered a grave offence on his part. In such case the Engineer's version of the entries that have been lost will be assumed correct and binding.

PS1.10.5.20 Daily records

A site diary is to be compiled jointly by the contractor's and the employer's representative on site and is to be signed and agreed by both parties. The original signed copy is to be retained by the employer's representative.

The contractor is to keep daily records of people and equipment on site in a format to be agreed by the employer's representative, and provide copies to the employer's representative when requested.

PS1.10.5.21 Permits

No security/entrance permits are required by the contractor's personnel to enter the site.

PS1.10.5.22 Extension of time for completion

PS1.10.5.22.1 Climatic records and claims for extension of time arising from climatic conditions

The Contractor shall record all rainy and windy periods during the execution of the Works. The recordings shall be submitted to the Engineer's Representative on a weekly basis, together with a statement recording the Contractor's opinion of the effect on the progress of the Works and on his construction program of any climatic conditions which he may consider to be abnormal and/or to constitute a reason for an extension of the time for Completion of the Works.

Claims for an extension of Time for Completion due to climatic condition whether it may be an initial or final claim in accordance with Clause 5.12 of the General Conditions of Contract (GCC), shall be submitted to the Engineer's Representative on a weekly basis, notwithstanding any provisions or conditions contained in the GCC to the contrary, in order that such claims may be investigated at the time.

Should the Contractor wish to invoke or submit a claim for extension of time for the completion of the Works due to the Works being delayed by reason of climatic conditions he shall do so in writing giving, inter alia, the following details:

(1) (a) The periods and time work or the works was stopped and proceeded with.
(b) A report on resources on site, active and/or in readiness, at the time of the alleged delay or disruption,

The reports shall be certified by the Engineer's representative.

(2) The reasons construction could not or cannot (as the case may be) proceed or commence, with reference to the approved construction program activities and an identification of the crucial path activity affected.

(3) The circumstances surrounding any instruction by a third party to stop work due to inclement weather such as Industrial Council Officers, etc.

Only when works shall have been completed in terms of Sub-Clause 5.5.1 of the GCC shall the extension of time for completion resulting from climatic conditions, if any, be finalized by the Engineer.

PS1.10.5.22.2 Principles and method for granting extension of time resulting from climatic conditions

"Normal climatic conditions" shall not be deemed to constitute "circumstance of any kind" in terms of Sub-Clause 5.12 of the Conditions of Contract.

Extension of time resulting from "abnormal climatic conditions" in terms Clause 5.12 of the Conditions of Contract shall be determined in accordance with the rainfall formula contained in PS10.6.23.

PS1.10.5.23 Weather conditions

No extensions of the time for completion shall be granted on the grounds of normal rainfall conditions, but extension of time in terms of Clause 5.12.2.2 of the General Conditions of contract on the grounds of abnormal rainfall or wet conditions shall be calculated separately for each calendar month or part thereof, according to the following formula. It shall be calculated as follows for the time for completion, including any extension thereof:

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

V = Extension of time for calendar days of the calendar month concerned. If the value of V is negative and the absolute value thereof is greater than Nn, V is taken as negative Nn.

Nw = Actual number of days during calendar month on which a rainfall of Y mm or more is recorded.

Nn = Average number of days in the calendar month concerned on which a rainfall of Y mm or more is recorded in terms of existing rainfall data

Rw = Actual rainfall for the calendar month concerned in mm

Rn = Average rainfall for the calendar month in mm deduced from existing rainfall data.

For the purposes of the contract Nn, Rn, X and Y shall have the values as stipulated below.

The total extension of time is the algebraic sum of the monthly totals for the period concerned, extension of time for parts of a month shall be calculated by using pro rata values of Nn and Rn. If the algebraic sum of the monthly totals is negative, no reduction of the time for completion as a result of rainfall shall be applicable.

This formula does not take any delays as a result of flood damage, which may cause further or simultaneous delays, into consideration and flood damage shall be treated separately for purposes of extension of time for completion.

The factor (Nw – Nn) is considered as a fair allowance for deviation from the normal for the number of days on which the rainfall exceeds Y mm. The factor (Rw – Rn)/X is considered as a fair allowance for deviation from the normal for the number of days on which the rainfall does not exceed Y mm, but on which wet conditions will hamper or disrupt work.

The Contractor shall keep daily rainfall records and submit it to the Engineer at every site meeting. No additional payment shall be made for the supply and installation of the rain gauge or for the keeping of the rainfall records and all costs must be included in the scheduled items:

Rainfall station : Richards Bay
Average annual rainfall : 1056.3 mm
Period : 2011 - 2021

Average number of days per year with rainfall exceeding:

Y = 10mm
X = 20mm

MONTH	Nn (No)	Rn (mm)	MONTH	Nn (No)	Rn (mm)
January	3.4	109.6	July	1.6	59.8
February	3.2	128.4	August	0.8	39.9
March	2.4	73.7	September	2.5	88.8
April	2.4	81.5	October	3.5	132.5
May	1.7	104.4	November	2.6	78.4
June	1.6	42.4	December	3.0	116.9

PS1.10.6 Quality plans and control

The Contractor shall maintain an effective quality system which meets the ISO 9000 Series or equivalent standard, to ensure and demonstrate that material or services provided conform to the specified requirements.

It is a requirement of the contractor to provide the Engineer within 21 days of contract award a detailed Quality Control Plan for prior approval before construction commences. The Quality Plan should include a responsibility matrix for each construction activity showing and identifying all actions, processes, frequencies and test types required.

The above should also include all hold, witness, surveillance, approval, testing and verification points required.

PS1.10.6.1 Soil testing on site

All soil testing shall be carried out in accordance with TMH.1 and only by an accredited soil testing laboratory.

Quality tests must be conducted on all the materials that are to be used for the earthworks and or layer works and these test results must be submitted to the Engineer for prior approval before the materials can be used.

During construction quality tests shall be carried out by the contractor in accordance with the test frequencies stated in PSD 7.5 and these tests will be deemed to be included in the contractor's rates for each item priced in the Schedule of Quantities.

PS1.10.7 Environment

The contractor will be responsible for construction according to an Environmental Management Plan in terms of Part C5 Annexure C of the project specifications.

The contractor must take the utmost care to minimise the impact of his establishment and other construction activities on the environment and must adhere to the requirements as set out in Part C of the project specifications.

PS1.10.8 Accommodation of traffic on public roads occupied by the contractor

READ WITH SANS 1921 - 2 : 2004

General

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.

The Contractor's tendered rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.

The Contractor shall ensure that all roads adjacent to or crossing the site and which are affected by the Works and/or Temporary Works and by the Contractor's activities at the borrow area, are kept in a safe condition for pedestrians and vehicular traffic.

Accommodation of vehicular and pedestrian traffic shall perform in accordance with SANS 1200. The Contractor shall organize his work so as to reduce the inconvenience to traffic to a minimum, and no public road shall be completely closed without prior approval by the Engineer. The Contractor shall provide and maintain in proper condition all necessary barricades, lights, warning signals and all direction signs necessary to enable traffic to follow the routes of diversion throughout their length. The Contractor shall provide flagmen at all deviations and/or obstructions, all signs shall be in two languages as may be advised by the Employer, and all traffic signs and control of traffic shall be in accordance with the South African Road Traffic Signs Manual. The Contractor shall provide temporary bypasses where necessary to provide access for vehicular and pedestrian traffic.

PS1.10.9 Other contractors on site

No other contractors will be on site.

PS1.10.10 Recording of weather

The contractor shall erect a rain gauge and record the rainfall. This information together with other details of the prevailing weather conditions shall be recorded in the daily site diary.

PS1.10.11 Management meetings

Management meetings are to be held weekly at a time convenient to all concerned, to discuss planning and health and safety amongst other things. Attendance by the contractor's and the employer's representative on site is mandatory and other interested parties will be by invitation.

PS1.10.12 Forms for contract administration

The employer's representative will make available standard forms for 'Site Diary', 'Site Instructions', should he deem this to be necessary during the contract.

PS1.10.13 Electronic payments

Approved payment claims will be made electronically into the contractor's bank account.

PS1.10.14 Guarantees

Contractor to provide a guarantee in accordance with the Condition of Contract in accordance with the provisions of the Form of Guarantee in a sum equal to the amount stated in the Contract Data.

PS1.10.15 Payment certificates

Payment certificates to be submitted by the contractor to the Engineer by the 25th of the each month. The RE to verify and approve certificate which he will then submit for approval to the Project Leader for final approval. The target date for submission of payment certificates to King Cetshwayo District Municipality will be the 2nd of the following month. There are no financial cut off dates for payment submission to King Cetshwayo District Municipality and payment will be made by the Employer 30 days after submission of an approved invoice.

The payment process in brief will consist of the following steps:

- Contractor submits certificate to RE for approval.
- Contractor makes final adjustments if any and prepares invoice.
- Certificate issued to Employers Agent for final certification and submission to King Cetshwayo District Municipality PM.
- PM approves payment and, then issues instruction to the financial department to process payment.

Details of measurements, proof of payment for items contained in provisional sums, proof of ownership of materials on site and documentation pertaining to contract price adjustment and special materials, are required as substantiation of claims for payment.

PS1.10.16 Retention

An amount equal to 10% (ten percent) up to a limit of 5% (five percent) of the value of each certificate (with a maximum as per the Appendix to Tender) will be withheld by the Employer until the issue of the Certificate of Completion where after 50% will be released and 50% will be held until the issue of the Final Certificate.

A guarantee will be acceptable in lieu of retention money.

PS1.10.17 Insurance provided by the employer

Insurance of “The Works”

The Employer will be responsible for insurance of the works in terms of Sub-Clause 8.6 of the General Conditions of Contract.

PS1.11 HEALTH AND SAFETY

Health and safety requirements and procedures

PS1.11.1 General statement

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in Part C1 (C1.4.2)

PS1.11.2 Health and Safety Specifications and Plans

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in the tender documents in Annexure D.

(b) Tenderer's Health and Safety Plan

The Tenderer shall submit with his tender his own documented Health and Safety Plan he proposes to implement for the execution of the work under the contract. His Health and Safety Plan must at least cover the following:

(i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 7 to 28;

(ii) pro-active identification of potential hazards and unsafe working conditions;

(iii) provision of a safe working environment and equipment;

(iv) statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (Regulation 5);

monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;

details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 6 and other applicable regulations; and details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

PS1.11.3 Cost of compliance with the OHSA Construction Regulations

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

PS1.12 PRIME COST SUMS (PC)

PS1.12.1 Definition

Prime Cost Sums (PC or PC Sums) is a sum provided for material, work and or services to be executed by a nominated sub-contractor, a statutory authority or a public undertaking or for materials or goods to be obtained from an approved supplier.

PS1.12.2 Mark up

The Contractor is eligible to mark up for profit, administration, supervision of works, etc. on the Prime Cost Sums and allowance is made in the schedule of quantities for mark up in the form of a percentage (%) on the Prime Cost Sums.

PS1.12.3 Local Sub-Contractors

On the Prime Cost Sums, the Engineer will provide the Contractor, shortly after appointment of the Contractor, with details, specification and or schedule of quantities for the work to executed under the Prime Cost Sums.

On works identified for the use of emerging local sub-contractors, the Contractor will be required to obtain quotes only from local sub-contractor who is registered on the King Cetshwayo District Municipality supplier database. The Contractor must, during the request for quotation, clearly state to the sub-contractors the proposed scope of work along with all the terms and conditions the Contractor feels necessary to form part of the contract between The Contractor and the sub-contractor after appointment.

In certain circumstances, the Employer may request that more than one sub-contractor be appointed to execute the work on the Prime Cost Sums.

Upon receiving the bid proposals from the sub-contractors, the Contractor, the Employer and the Engineer, will collectively evaluate each bid and will determine which bid or bids are successful to be appointed as sub-contractor or sub-contractors for the Prime Cost Sums.

PS1.12.4 Specialist sub-contractors and or suppliers

On the Prime Cost Sums, the Engineer will provide the Contractor, shortly after appointment of the Contractor, with details, specification and or schedule of quantities for the work to executed under the Prime Cost Sums.

On works requiring the use of specialist sub-contractors and or suppliers, the Contractor will be required to obtain at least three quotes. Where possible, the Contractor must try to obtain quotes from sub-contractors and or suppliers located within the boundaries of the King Cetshwayo District Municipality. The Contractor must, during the request for quotation, clearly state to the specialist sub-contractors and or suppliers the proposed scope of work along with all the terms and conditions the Contractor feels necessary to form part of the contract between The Contractor and the specialist sub-contractors and or suppliers after appointment.

In certain circumstances more than one specialist sub-contractors and or suppliers will be required to execute the work on the Prime Cost Sums.

Upon receiving the bid proposals from the specialist sub-contractors and or suppliers, the Contractor, the Employer and the Engineer, will collectively evaluate each bid and will determine which bid or bids are successful to be appointed as specialist sub-contractors and or suppliers for the Prime Cost Sums.

PS1.12.5 Nominated sub-contractors and or suppliers

On the Prime Cost Sums, the Engineer will provide the Contractor, shortly after appointment of the Contractor, with details, specification and or schedule of quantities for the work to executed under the Prime Cost Sums.

On works requiring the use of nominated sub-contractor and or supplier, the Contractor will be required to obtain a quote from the nominated sub-contractor and or suppliers. The Contractor must, during the request for quotation, clearly state to the nominated sub-contractor and or supplier the proposed scope of work along with all the terms and conditions the Contractor feels necessary to form part of the contract between The Contractor and the nominated sub-contractor and or supplier after appointment.

PART B: AMENDMENTS TO THE STANDARD SPECIFICATION AND OTHER ADDITIONAL SPECIFICATIONS

In certain clauses in the Standard Specifications, allowance is made for a choice to be specified in the Project Specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this contract are contained in this part of the Project Specifications. It also contains the necessary additional specifications required for this contract.

The clauses and payment items dealt with in this part of the Project Specifications are prefixed “PS” and numbered sequentially. The number corresponding to the relevant clause or item number in the Standard Specifications is given in parenthesis.

New clauses and payment items not covered by clauses or items in the Standard Specifications have also been included here.

Additional specifications where applicable are prefixed “P” and numbered alphabetically.

PART B1 VARIATIONS AND ADDITIONS TO THE STANDARDIZED SPECIFICATIONS

SUB-CLAUSE REFERENCE

The sub clause in brackets refers to the sub-clause in the particular in the standardized specifications of SANS 1200.

PS2.1 GENERAL (SANS 1200 A)

PS2.1.1 MATERIALS

PS2.1.1.1 Quality of Materials and Workmanship (Clause A 3.1)

Unless otherwise specified, directed or approved, all materials and workmanship on the Works shall comply with the appropriate SANS Specification or Code, or in the absence thereof, the appropriate BS Specification or Code, and shall bear the official mark of the appropriate standard. The latest revisions of all specifications and codes shall apply.

All materials, shall, except where otherwise specified, be new and of the best quality and shall be suitable to withstand and to operate satisfactorily under all possible climatic and weather conditions which can reasonably be expected at the Site.

All storage, handling, transport, erection or installation of the plant, equipment and materials shall be carried out in accordance with the supplier's or manufacturer's instructions, provided that the Engineer may vary such instructions should he deem such variations necessary. Where supplier's or manufacturer's instructions are in conflict with the Specifications, the requirements of the Specifications shall apply unless otherwise agreed to by the Engineer. Any such conflict shall be brought to the Engineer's notice by the contractor.

PS2.1.1.2 Name board

The Contractor must erect one Name board in an approved position. The size, paintwork and details must adhere to the recommendations of the standard name board as recommended by the South African Institute of Civil Engineers and the King Cetshwayo District Municipality. The description of the project and the names and titles of the Client, Engineer and Contractor must be painted on the name board and must be according to the drawings.

PS2.1.2 PLANT

PS2.1.2.1 Contractor’s Offices, Stores and Services (Clause A4.2)

The latrine and ablution facilities provided by the contractor shall comply in number and type to the requirements of the relevant current legislation for such facilities.

PS2.1.2.2 Telephone

A mobile telephone service is to be made available on site at all times.

PS2.1.3 CONSTRUCTION

PS2.1.3.1 Setting Out of the Works (Clause A5.1.1)

The setting out of the Works will be done from the coordinates provided on the working drawings. A datum level peg in the vicinity of the Works will be provided.

The Engineer may vary the final exact location of any part of the Works taking the local conditions into consideration. The contractor shall therefore notify the Engineer immediately after any preliminary setting outof all of the Works has been done and before detailed setting out or construction work has been commenced. Only after approval of that portion of the Works by the Engineer may the detailed setting out and construction be commenced. All setting out shall be done from reference points specified on the drawings.

Where new works to be erected under this contract are to join up with existing structures and or services, the contractor is bound to measure all relevant dimensions and levels of the existing structures and or services and to check the squareness of the existing structures and or services before commencing any work. Any discrepancies which are found between the dimensions and levels given on the drawings for the new Works and those of the existing structures and or services and or service shall immediately be brought to the attention of the Engineer who shall then finalize the dimensions of the new structure.

PS2.1.3.2 Services (Clause A5.4)

Where services have to be deviated or re-routed temporarily or permanently, such work shall only be carried out with the prior approval of the Engineer and the appropriate Authority and in a manner as directed or approved by the Engineer and the appropriate Authority.

All necessary final arrangements with the appropriate Authority for such deviation or rerouting shall be made by the contractor.

PS2.1.3.3 Safety (Clause A5.7)

The contractor shall adhere to the Employer's safety regulations, and shall attend the Employer’s Safety Induction Course for contractors and sub-contractors. The contractor shall sign the acknowledgement form in terms of the Employer’s regulations when required by the Employer.

PS2.1.3.4 Name board

The Contractor shall maintain the name board in good condition throughout the duration of the Contract and remove it in the same date as completion of the Contract.

PS2.1.4 MEASUREMENT AND PAYMENT

PS2.1.4.1 Fixed-Charge and Value-Related Items (Clause A8.2.1)

The sums tendered in respect of fixed-charge and value-related items shall not be increased should extension of time granted for the completion of the Works.

Initial payments in respect of fixed-charge and value-related items, excluding the item for removal of site establishment, will be limited to a combined maximum of 7,5% of the Tender Sum for the Works and the balance, if any, will be paid after 50% of the Tender Sum for the Works has been certified for payment.

PS2.1.4.2 Time-Related Items (Clause A8.2.2)

The sum tendered in respect of a time-related item will be increased should extension of time be granted for the completion of the Works, provided that the activity for which the relevant sum was tendered has to be maintained during the extended period. The relationship between the increased sum for a time-related item to the tendered sum for such item shall be the same as the relationship of the extended time for completion of the Works to the original time allowed for completion of the Works.

PS2.1.4.3 Setting Out of Works (New Clause)

All costs in connection with setting out of the Works shall not be paid separately and shall be included as overhead costs in the rates and prices in the Schedule of Quantities.

PS2.1.4.4 Telephone (Clause A8.3.2.1 b and Clause A8.4.2.1 b)

All costs relating to the mobile telephone service shall be included in the sum for “other time-related obligations”.

PS2.1.4.5 Name board (Clause A8.3.2.1 c and Clause A8.4.2.1 c)

All cost relating to the supply, erecting and maintaining the name board for the duration of the project shall be measured per unit.

PS2.1.4.6 Testing (Clause A8.4.5)

The cost of all sampling and testing to be carried out by the contractor or by approved laboratories shall be included in the sum for "other time-related obligations" and no separate payments will be made in connection therewith. This also applies to the casting, curing and testing of concrete test cubes as well as for material classification, compaction and density tests.

PS2.1.4.7 Occupational Health and Safety Requirements

Amounts tendered with respect to Occupational Health and Safety requirements relating to the Works shall be paid as fixed-charge items and as time-related items as the Works proceed.

The fixed-charge items shall comprise:
General Safety Unit: Sum

The sum shall cover all initial costs necessary in complying generally with the Occupational Health and Safety Act (1993, as amended) and the Construction Regulations (2003).

Preparation of Health and Safety Plan Unit: Sum

The sum shall cover all activities necessary in preparing a Health and Safety Plan, including hazard and potential hazard identification, development of a Risk Assessment, Standard Working Procedures and Method Statements.

The time-related items shall comprise:
General Safety Unit: Sum

The sum shall cover all activities necessary for compliance with the Occupational Health and Safety Act (1993, as amended) and the Construction Regulations (2003) as the Works proceed.

Training Unit: Sum

The sum shall cover all activities necessary for compliance with the requirements of the Health and Safety Specification in terms of Training as the Works proceed.

Monitoring and Review Unit: Sum

The sum shall cover all activities necessary for compliance with the requirements of the Health and Safety Specification in terms of Monitoring and Review as the Works proceed.

PS2.2 SITE CLEARANCE (SANS 1200 C)

PS2.2.1 MATERIALS

PS2.2.1.1 Disposal of Material (Clause C3.1)

Re-usable materials originating from the demolition or removal of structures, manholes, as well as pipelines, valves, cables, external light poles and the like shall remain the property of the Employer and shall be neatly stacked on the Site in a position indicated by the Engineer.

Rubble from demolished concrete and masonry structures shall be removed from the Site and disposed of by the contractor as directed by the Engineer.

PS2.2.2 CONSTRUCTION

PS2.2.2.1 Individual Trees (Clause C5.2.3.2)

The penalty for trimming, damaging or removing trees which are indicated by the Engineer to be preserved, shall be R20 000,00 per tree.

PS2.2.2.2 Clear and Grub (Clause 5.3 and 5.4)

Clear, grub 2m wide surface area along pipe route which includes removal of vegetation, boulders and trees with a girth up to 1m as shown on the Drawings.

PS2.2.3 MEASUREMENT AND PAYMENT

PS2.2.3.1 Basic Principles (Clause C8.1)

The transportation of cleared and grubbed materials and debris and the disposal thereof by the contractor away from the site shall not be measured separately and all costs in connection therewith shall be included in the rates for the relevant items.

PS2.3 EARTHWORKS (SANS 1200 D)

PS2.3.1 INTERPRETATIONS

PS2.3.1.1 Definitions (Clause D2.3)

Where a slope or batter is given in the Specifications or on the Drawings as a ratio, the first figure refers to the vertical e.g. 1,5:1 means 1,5 vertical to 1 horizontal.

PS2.3.2 MATERIALS

PS2.3.2.1 Bulk Excavation Classification

The classification for all bulk excavation shall be in accordance with SANS 1200, Clause D3.1.

PS2.3.2.2 Replacing Overbreak in Excavations for Foundations (Clause D3.2.2)

Under no circumstances are foundations or other supports to be founded on earth fill or rockfill or made up ground of any description without the written approval of the Engineer or unless Engineering fill is specified. Where instructed by the Engineer, the Contractor shall replace overbreak with mass concrete of the grade as directed, at his own expense.

PS2.3.2.3 Backfill Below Surface Beds (Clause D3.2.4)

Unless otherwise specified, fill or backfill material below surface beds shall be in accordance with the requirements of Clause D3.2.2 i.e. Material Suitable for Replacing Overbreak in Excavations for Foundations.

PS2.3.3 CONSTRUCTION

PS2.3.3.1 Safety and Traffic Control (Clause D5.1.1 and D5.1.6)

The Contractor shall control the access by the general public to the Site in collaboration with and as approved by the Engineer. No unauthorised persons may enter the construction Site.

Where trenches cross roads, the Contractor shall so arrange his work so that at least one traffic lane is available at all times.

PS2.3.3.2 Detection, Location and Exposure of Services (Clause D5.1.2.2)

If existing services are not indicated on the Drawings, the Contractor shall inform the Engineer of the lack of data concerning existing services and he shall request the Engineer to point out known existing services, before commencing excavation. Should the Contractor fail to do so, he shall rectify and repair any damaged services at his own expense.

PS2.3.3.3 Damage to Roads or Services and Reinstatement (Clause D5.1.2.4 and D5.1.5)

Where the Contractor is required to rectify or repair damaged services or roadwork, such repair work shall be carried out in such a manner that all road layers or services are reinstated to their previous condition in all respects and to the satisfaction of the Engineer.

Should the Contractor damage any of the existing buildings, structures or services either through negligence or, in the opinion of the Engineer, through lack of reasonable precautions, the Contractor shall repair the same to the satisfaction of the Engineer and bear the cost of such repair work.

PS2.3.3.4 Surplus Excavated Material (Clause D5.1.4.3)

All surplus excavated material which according to the Engineer's instructions is not dumped at a Municipal or similar waste site shall be dumped in one area only, unless otherwise approved or directed. Scattered dumping of material will not be permitted. After completion of the work all dumped material shall be neatly levelled by the Contractor to a slope as approved or directed by the Engineer so that the entire surface area of the surplus material is smooth and free of excessive projections or depressions. The edges of the surplus material shall not be irregular and the sides of the surplus material shall be neatly trimmed to a slope as approved or directed by the Engineer.

Dumping sites must be properly drained and interception or ponding of water will not be allowed.

PS2.3.3.5 Excavation (Clause D5.2.2.1c)

Where permanent structural concrete or a blinding layer is to be cast on or against an excavated surface, the allowable tolerance for a projection into the excavation profile shall be ± 10 mm.

PS2.3.3.6 Backfilling around Structures (Clause D5.2.3.2)

Unless otherwise directed or indicated, all other backfilling around structures shall be compacted to at least 95% of Modified AASHTO maximum density.

The use of heavy compaction plant adjacent to structures is subject to the approval of the Engineer but such approval shall not relieve the Contractor of his obligations in terms of the Contract and the Contractor shall remain fully responsible for the safety of the structure.

PS2.3.4 TOLERANCES

PS2.3.4.1 Moisture Content and Density (Clause D6.2)

Degree of Accuracy I will be applicable to the Works.

PS2.3.4.2 Positions, Dimensions, Levels, etc. (Clause D6.1)

The work shall be finished to the Degree of Accuracy II and the permissible deviations shall be within the limits given in Clause 6.1 of SABS 1200 D for Degree of Accuracy II.

PS2.3.5 TESTING

PS2.3.5.1 Taking and Testing of Samples (Clause D7.2)

The results of all tests carried out by the Contractor shall be made available to the Engineer as soon as possible after the tests have been carried out. All compaction tests for his own construction quality control shall be at the expense of the Contractor.

PS2.3.6 MEASUREMENT AND PAYMENT

PS2.3.6.1 Basic Principles (Clause D8.1)

All costs for temporary storage and double handling of excavated material which is destined for use in the Works at some later stage shall be included in the excavation rates.

All costs in respect of levelling, trimming and covering of surplus material shall be included in the excavation rates.

All excavations will be measured nett in accordance with the dimensions and specifications and no extra payment will be made for excavation for the provision of working space.

No additional payment shall be made for the replacement of overbreak necessary to provide working space or for other overbreak by the Contractor.

All costs in respect of shoring of excavations shall be included in the excavation rates.

PS2.3.6.2 Restricted Excavation (Clause D8.3.3)

Restricted excavation for footings, foundations, pipe trenches and the like shall be measured to depths indicated in the Schedule of Quantities or per m^3. The depths stated shall be measured from either the level of the top of the bulk fill or the bulk excavation level or the underside of concrete surface beds as the case may be.

PS2.3.6.3 Importing of Materials (Clause D8.3.4)

Where material has to be imported from commercial sources, the Contractor shall identify suitable sources of such material. The rate for importing material shall cover the cost of locating suitable material, handling and transportation to Site regardless of distance and origin.

The rate for the importing of materials from commercial sources also includes the placing and compaction of the material for the different areas of use and separate rates are applicable to each compaction density.

PS2.3.6.4 Freehaul, Shorthaul and Overhaul (Clause D5.2.5.2)

The transportation of surplus excavated material to dumping sites and filling material from designated borrow pits or commercial sources shall be deemed to be freehaul up to a distance of 500m. Short haul shall be haulage further than 500m up to and including 1km and shall be measured per m^3. Overhaul shall be payable for distances longer than 1km and shall be measured in m^3.km. Haulage distance to be approved by the Engineer before dumping or excavation commences.

PS2.4 EARTHWORKS (PIPE TRENCHES) (SANS 1200 DB)

PS2.4.1 MATERIALS

PS2.4.1.1 Material for Reinstatement of Roads and Paved Areas (Clause DB3.6)

Road layers and the wearing surface must conform to the requirements of the relevant authorities and the materials used must be similar to the existing material.

PS2.4.1.2 Treatment of Excavated Material (Clause DB3.7)

Where excavated material can be rendered suitable for backfilling by screening, or other treatment and where no suitable material within a free haul distance of 0, 5 km from the point of placing is available, the Engineer may require the Contractor to treat the excavated material to render the same suitable for backfilling provided that at least 60% by volume of the material is recovered after treatment. Where otherwise suitable excavated material from a trench is, in the opinion of the Engineer, contaminated due to the Contractor's method of working, the abovementioned treatment shall be carried out at the Contractor's expense.

PS2.4.2 CONSTRUCTION

PS2.4.2.1 Water in Trenches (Clause DB5.1.2)

Water in pipe trenches may cause movement of the pipes due to flotation and backfilling must therefore be carried out as soon as possible. Should movement of pipes occur the Contractor shall, unless otherwise directed by the Engineer, remove the pipes from the trench and relay the same, in accordance with the Specification, all at his own expense.

PS2.4.2.2 Minimum Cover and Trench Base Width (Clause DB5.2)

Bedding is required for pipes irrespective of diameter. The trench base width for pipes smaller than 125mm shall be 500mm. A side clearance between pipes and trench walls of 200mm shall be provided unless otherwise indicated on the Drawings or directed by the Engineer.

For the calculation of base width, pipe diameters shall be taken as the nominal diameters as specified in the Bill of Quantities.

Where more than one pipe is laid in a trench the clearance between pipes shall be as shown on the Drawings or directed by the Engineer and the trench base widths shall be calculated accordingly.

PS2.4.2.3 Over Excavation of Trenches (Clause DB5.5)

Where pipe trenches are excavated by the Contractor to depths or widths in excess of those specified, directed or indicated on the Drawings, such over excavations shall be backfilled with suitable approved selected material in layers not exceeding 150mm uncompacted thickness and compacted to the density of the adjacent material or as directed by the Engineer.

Where the Engineer deems this method of backfilling inadequate he may require the over excavations, or parts thereof, to be filled with mass concrete of the grade as directed.

All backfilling of over excavations shall be at the Contractor’s expense.

PS2.4.2.4 Backfilling (Clause DB5.6)

The requirements of Clause PS 3.4.1.1 shall also apply.

Surplus excavated material, which complies with the requirements of Clause 3.2.1 of SANS 1200D, shall be used as compacted backfill material under the paving included in the Works.

Excavated material which does not comply with the above requirements shall be carted off Site and dumped where directed by the Engineer.

PS2.4.2.5 Compaction (Clause DB5.7)

Backfilling to pipe trenches shall be compacted to 93% of Mod AASHTO max. density, up to finished ground level, in areas not subjected to traffic loads.

In areas subjected to traffic loads, the backfilling shall be compacted to 95% of Mod AASHTO max. density to the underside of the road formation for a distance of at least 1,0 m past either extremity of the road formation.

PS2.4.2.6 Reinstatement of Paved Areas (Clause DB5.9.5.1)

Where trenches are to be excavated through existing paved areas which are to be reinstated, the existing surface shall be neatly saw cut. The saw cut joints shall be so spaced to allow for the specified width of the trench excavation to be carried out. Due care shall be taken during excavation, and any subsequent operations, to avoid any damage to the paved areas which remain.

After backfilling of the trench is completed, the pavement shall be reinstated to its original condition.

PS2.4.2.7 Excavation in all Materials for Pipes (Clause DB5.4)

Trench excavation for water pipelines at existing services shall be conducted by hand methods where indicated by the Engineer as not to damage any existing services or structures and shall include the complete excavation of the trench including the exposure of the connection point at existing services. Material from trench excavation shall be treated if necessary and re-used as backfill material which shall be compacted as specified.

Any damage to existing structures or services shall be the responsibility of the Contractor and shall be fixed to the satisfaction of the Engineer and paid for by the Contractor.

PS2.4.2.8 Protection and Support of Existing Structures and Services (New Clause)

Any structure or service in the way of trench excavations shall only be moved with written authorization from Engineer. Excavation shall take place where possible around these and shall be carefully done so as not to cause any damage to the structures or services and they shall be so supported that the new services can be installed without any damage / removal of / to the existing structure and services. The Contractor shall be held responsible for any damage to existing services and structures.

PS2.4.3 TESTING

PS2.4.3.1 Testing (Clause DB7.1)

All compaction tests for his own construction quality control shall be at the expense of the Contractor.

Control tests by the Engineer shall be paid for separately from the Provisional Amount provided for this purpose.

PS2.4.4 MEASUREMENT AND PAYMENT

PS2.4.4.1 Computation of Quantities (Clause DB8.2.2)

The length used for computation shall be the face to face distance between the outer faces of valve chambers and the like. The excavation for valve chambers the like shall be measured separately as part of the applicable unit.

Trench excavations will be measured per m^3. Side allowances and trench base widths shall be as specified in Clause PS 3.4.2.2 and as indicated on the Drawings or directed by the Engineer. Excavations will be measured in two steps only with a maximum excavation depth of 3m.

PS2.4.4.2 Treatment of Excavated Material (Clause DB8.3.3)

Separate payment shall be made where the Contractor is requested to treat excavated material to render the same suitable for backfilling per cubic metre of treated material measured in accordance with specified theoretical dimensions.

PS2.4.4.3 Reinstatement of Paved Areas (Clause DB8.3.6)

The saw cutting of existing paving prior to breaking shall be measured and paid per linear metre. Breaking up of existing paving shall be measured and paid per square metre. The rate shall include for the disposal of all waste material.

The reinstatement of the paving shall be measured and paid per m^2 for the various thicknesses and types of paving and the foundation layers.

PS2.4.4.4 Existing Services or Structures that Intersect a Pipe Trench (Clause DB8.3.5(a))

The rate for excavating at existing services or structures that intersect a pipe trench shall include the method of excavation necessary to avoid damage to the existing service or structures, all protective measures and supports required to avoid damage, any selected fill required around the existing service or structures and any revisions, delays or disruptions of the programme of the Works, including any matters arising or related thereto. Excavations at services or structures which are no longer in use shall not be measured. Only excavations at services and structures which are exposed by the trench excavations shall be measured.

PS2.4.4.5 Existing Services or Structures that Adjoin a Pipe Trench (Clause DB8.3.5 (b))

The rate for excavating at existing services or structures that adjoin a pipe trench shall include the method of excavation required to avoid damage to the existing service or structures, all protective measures and supports required to avoid damage, any selected fill required around the existing service or structures and any revisions, delays or disruptions of the programme of the Works, including any matters arising or related thereto. Excavations at services or structures which are no longer in use shall not be measured.

PS2.4.4.6 Supply of Backfill Material by Importation

The provision of backfill material by importation from a borrow pit or commercial source shall be measured and paid for per m^3 in accordance with the specified theoretical dimensions, as an extra-over on the excavation and backfill item for pipe trenches.

PS2.5 CONCRETE (STRUCTURAL) (SANS 1200 G)

PS2.5.1 MATERIALS

PS2.5.1.1 Cement (Clause G3.2)

Only Portland Cement shall be used in the Works, unless otherwise indicated or directed by the Engineer.

Cement shall not be older than 12 weeks before being used.

PS2.5.1.2 Aggregates (Clause G3.4)

The use of plums in concrete work will not be permitted.

PS2.5.1.3 Admixtures (Clause G3.5)

Admixtures may be used subject to the following conditions:

a. All information regarding the admixtures to be used is to be provided in terms of Sub-clause G3.5.1.

b. The beneficial results to be expected from the use of the admixture shall be clearly stated.

c. Proof is submitted that these results will be obtained with the particular concrete in the Works under the conditions expected on the Works.

d. The use of the admixture shall not adversely affect the durability or any other property of the concrete.

e. The admixture shall conform with the applicable A.S.T.M. or other relevant specification.

f. The admixture shall be used in strict conformity with the manufacturer's instructions.

PS2.5.1.4 Air-entraining Agents (Clause G3.5.2)

The use of air-entraining agents shall not be permitted.

PS2.5.1.5 Grout

All grouting must be carried out using a pre-packaged non shrink cement-based product which is chloride-free.

PS2.5.1.6 Bondbreaker

Material for the debonding of adjacent concrete elements shall be "Ravenol" bituminous paint or equal approved material

PS2.5.2 PLANT

PS2.5.2.1 Formwork (Clause G4.5)

Formwork shall be provided for all concrete surfaces sloping more than 30^{o} with the horizontal, unless otherwise approved or directed by the Engineer.

Wire connectors through concrete shall not be allowed. All ferrules or other fastening devices shall present a neat, uniform and tidy pattern.

All holes created by the removal of shutter fixing devices shall be thoroughly grouted with sand/cement grout of the same colour as the surrounding concrete. The ratio of cement to sand in the grout shall be the same as that used in the concrete. The concrete surface at the holes shall be made flush and neat to the satisfaction of the Engineer. In underground or water retaining structures, the grouting operation shall render the structure watertight.

All exposed corners of concrete structures shall be splayed with 20 mm x 20 mm fillets unless otherwise indicated or directed by the Engineer. No sharp corners will be allowed.

The use of old, buckled, twisted or otherwise damaged steel or timber shutters on off-shutter concrete will not be permitted and all formwork shall be approved by the Engineer before concreting is commenced.

Should the soil conditions on site not be suitable for the casting of footings, foundations and bases against excavated faces, the Engineer shall instruct the Contractor to utilise rough vertical formwork.

If requested by the Engineer, the Contractor shall submit to the Engineer the design and details of the formwork for approval before any work is commenced.

PS2.5.3 CONSTRUCTION

PS2.5.3.1 Reinforcement (Clause G5.1)

Welding of reinforcement will not be permitted.

PS2.5.3.2 Formwork (Clause G5.2)

The finish to concrete where smooth formwork is specified shall be to Grade I Degree of Accuracy as defined in Clause 6 and shall be rubbed down with carborundum blocks at a time approved by the Engineer.

PS2.5.3.3 Concrete (Clause G5.5)

Concrete used in the Works, shall be strength concrete of the following grades:

GRADE	SPECIFIED 28 DAY COMPRESSIVE STRENGTH MPa)	NOMINAL AGGREGATE SIZE mm)
40/20	40	20
30/20	30	20
25/20	25	20
20/20	20	20
15/20	15	20

The grades of concrete to be utilised in various parts of the Works shall be as indicated on the Drawings or as directed by the Engineer.

All mix proportions for strength concrete shall be subject to the approval of the Engineer, but such approval shall not relieve the Contractor of his responsibilities in terms of the Contract. The proposed mix designs shall be submitted to the Engineer prior to the commencement of concreting operations.

Changes in plant, aggregate or mix proportions shall only be made with the prior approval of the Engineer.

Unless otherwise specifically agreed to by the Engineer in writing, all concrete shall be produced at the site of construction. If the use of ready mixed concrete is allowed, such concrete shall be in accordance with the requirements of the Specifications.

Unless otherwise indicated or directed by the Engineer, all foundation surfaces, excluding surface beds and brickwall foundations, shall be covered with a blinding layer before reinforcement is placed, in accordance with the details shown on the Drawings or as indicated by the Engineer. All foundation surfaces shall be inspected and approved by the Engineer before blinding layers or other concrete is placed. All shuttering and fixed reinforcement must also be inspected and approved by the Engineer before concreting.

At least 48 hours notice is required by the Engineer in respect of all such inspections.

The use of curing compounds shall be subject to the prior approval of the Engineer.

Construction joints shall only be allowed at positions indicated on the Drawings or approved by the Engineer, where construction joints are unavoidable. Walls shall be stopped off at right angles.

The Contractor shall prepare two trial mixes for each grade of concrete specified in the Works no later than 1 month prior to the commencement of casting of concrete on the Works. The aggregates and plant, as erected and approved on the Site, shall be utilised for this purpose. The Contractor shall make and test six 150 mm concrete cubes for each of the trial mixes. Three cubes of each trial mix shall be tested at 7 days and the remaining three tested at 28 days.

PS2.5.3.4 Concrete Surfaces (Clause G5.5.10)

Except where otherwise specified or indicated, all exposed unshuttered concrete surfaces shall, immediately after placing of the concrete, be levelled and shall be floated after the surface has set sufficiently. Floating shall be performed in one direction and float marks shall be parallel and of good appearance. Under no circumstances must it be relied upon to finish-off the exposed unshuttered concrete surfaces with a separate cement-sand screed.

Where a wood floated concrete surface is shown on the Drawings or directed by the Engineer, hand floating of the surface shall first be completed and after the hand floated surface has hardened sufficiently, wood floating shall be performed to produce a dense, uniform surface free of any marks.

Where a steel floated concrete surface is shown on the Drawings or directed by the Engineer, hand floating of the surface shall first be completed and after the hand floated surface has hardened sufficiently, power floating shall be performed to produce a dense, uniform surface free of any marks.

PS2.5.3.5 Grout

The non-shrink grout to the holes created by removal of shutter fixing shall be applied strictly in accordance with the manufacturer’s requirements. Particular attention shall be paid to the avoidance of the formation of air pockets under the plates and to the timing of the grout application.

PS2.5.3.6 Surface Retarder for Exposed Aggregate Finish

The surface retarder shall be applied strictly in accordance with the manufacturer’s requirements. Particular attention shall be paid to the removal of the unset cement on the surface at the correct time.

PS2.5.3.7 Joint Fillers and Sealers (New Clause)

All joint fillers and sealers shall be installed in accordance with the manufacturer's requirements, to the approval of the Engineer. The joint sealer shall be applied to form a homogenous unit without discontinuities or openings and shall be finished to a neat level surface and aligning with the faces of the joints.

PS2.5.3.8 Rubbing Down of Exposed Concrete Surfaces

All exposed concrete surfaces shall be rubbed down with carborundum blocks to a smooth appearance and a uniform colour. No cement wash will be allowed on exposed concrete surfaces.

PS2.5.4 TOLERANCES

PS2.5.4.1 General (Clause G6.1.1)

The Contractor shall construct all exposed shutter finish concrete surfaces to Degree II Accuracy

The Contractor shall remedy or remove and replace at his own expense, all concrete work which does not satisfy the prescribed tolerances, as directed or approved by the Engineer.

PS2.5.4.2 Permissible Deviations (Clause G6.2.3)

The following specific permissible deviations shall apply to components or elements stated:

Element or Component	Permissible Deviation (mm)
Level of top of stub columns or walls	± 3
Position of holding down bolts (Plan and elevation)	± 2

PS2.5.5 TESTS

PS2.5.5.1 Testing (Clause G7.2)

The Contractor shall be responsible for testing of cubes at approved laboratories for his own construction quality control, at his own expense, and he shall mould and cure the same.

Control tests by the Engineer shall be paid for separately from the Provisional Amount provided for this purpose.

The Engineer shall require six concrete test cubes for each individual concreting operation. Three of these cubes shall be tested at 7 days and three at 28 days.

Should 7 day strengths be obtained at any stage, which indicate, in the opinion of the Engineer, that the specified characteristic strength will not be achieved, the Engineer may stop concreting operations until 28 day strengths of such concrete are available, without compensation for losses or delays.

PS2.5.6 MEASUREMENT AND PAYMENT

PS2.5.6.1 Formwork (Clause G8.1.1)

The rubbing down of concrete to obtain a smooth formwork finish, with carborundum blocks shall be measured separately per square metre.

The splaying with 20 x 20 mm fillets shall not be measured separately and shall be included in the formwork rates.

The rate for rough vertical formwork where excavation surfaces are not suitable for casting of concrete shall include the necessary working space and support of the formwork.

PS2.5.6.2 Reinforcement (Clause G8.1.2)

The items for reinforcement will be measured irrespective of diameter bar or as listed in the schedule of quantities.

PS2.5.6.3 Concrete (Clause G8.1.3)

The cleaning of construction joint surfaces shall not be measured separately and all costs in connection therewith shall be included in the concrete rates.

PS2.5.6.4 Unformed Surface Finishes (Clause G8.4.4)

Wood and steel floated surface finishes shall be measured and paid separately per m^2 of the completed and finished concrete surface.

PS2.5.6.5 Joints (Clause G8.5)

Joints shall be measured and paid per linear meter. The rate shall include the joint filling and sealing materials and the provision of an approved separator between the joint filling and sealing materials. Joints shall be included in the relevant rate. Formwork will be measured separately.

PS2.5.6.6 HD Bolts and Miscellaneous Metal Work (Clause G8.8)

HD Bolts and expandable anchor bolts shall be measured and paid per unit. The rate shall include the cost of the bolts, washers, nuts, all threading and drilling, shaping, anchor sleeves, casting in and all labour and finishing complete.

Trimmer angles and other miscellaneous steelwork cast into concrete shall be measured and paid per kilogram. The rate shall include the cost of the supply of the item, the casting in and all labour and finishing. The measured mass shall include the basic mass of the item and any plates or brackets attached thereto as indicated on the Drawings or directed by the Engineer.

PS2.5.6.7No Fines Concrete and Benching (New Clause)

No fines concrete or benching of uniform thickness will be measured per m^2. No fines concrete or benching of varying thickness will be measured per m^3.

The rate shall include the supply of materials, cost of mixing, placing and compaction.

PS2.5.6.8 Grouting

Grouting will be measured per m^3.

PS2.6 STRUCTURAL STEELWORK (SANS 1200 H)

PS2.6.1 MATERIALS

PS2.6.1.1 Structural Steel (Clause H3.1)

All steel used for the fabrication of structural steel components shall comply with the requirements of EN10025 for steel EN10025-2-S355JR except for cold-formed members which will be of commercial grade steel.

PS2.6.1.2 Welding Consumables (Clause H3.5)

General purpose electrodes, complying with SANS 455, shall be used for welding, unless otherwise agreed to by the Engineer in writing. All fillet weld sizes indicated relate to the weld throat thickness.

PS2.6.2 CONSTRUCTION

PS2.6.2.1 Design Drawings (Clause H5.1.1)

The Engineer shall provide the Contractor with drawings indicating the general arrangement of the structure including the structural sizing and connections. The drawings shall be sufficient for the design of all connections. Should the Contractor become aware of any discrepancies concerning the dimensions on drawings, these must immediately be drawn to the Engineer's attention. Before any shop details or fabrication is commenced, the Contractor shall check the dimensions on Site, in particular where any new structure extends from any existing structure or where new profiles are to be added to existing members. Again, should any discrepancies exist between the dimensions on the drawings and those pertaining to the existing structures on Site, these discrepancies shall immediately be brought to the Engineer's attention before the commencement of shop details in order to finalize the dimensions of the new structure.

PS2.6.2.2 Contractor Provides Shop Details (Clause H5.1.2)

The making of the shop drawings shall not be sublet without the permission of the Engineer. These drawings shall give all the necessary information for the fabrication, erection and corrosion protection of the structure and shall be in accordance with SANS 10162-1. The Structural Use of Steel.

PS2.6.2.3 Fabrication (Clause H5.2)

The Grade of structural steel shall remain positively identifiable at all stages of fabrication.

All cladding rails, purlins and crane beams shall be fabricated in sections continuous over two spans.

PS2.6.2.4 Cutting (Clause H5.2.3)

The edges of flame cut plates shall be dressed to remove notches.

PS2.6.2.5 Holes for Fasteners (Clause H5.2.4)

The punching of holes is not acceptable and all holes shall be drilled.

All new holes required for fasteners in the existing elements shall be drilled. Under no circumstances will flame cutting of holes be allowed.

PS2.6.2.6 Welding (Clause H5.3.4)

All welding shall be carried out in accordance with BS5135 and SANS 044, Parts I, II, and III (Chapter 1). Where the BS and SABS Specifications are contradictory, the SABS Clause shall apply.

Field welding shall be carried out with a direct current welding machine and shall only be allowed for secondary structural elements.

For all important welds the Contractor shall compile welding procedures, prepare samples and have welding procedure tests carried out by the SABS, in accordance with SANS 10044 - Part III (Chapter 1), all at his own expense.

Surfaces to be welded shall be free of filings, rust, grease, paint and other materials which may be detrimental to the quality of the weld. Mill scale which cannot be removed by brushing may remain on the metal.

Elements shall remain in alignment and be free of warps and bends on completion of the welding and all weld splash shall be removed.

The welders shall be coded for these particular Works in accordance with SANS 10044 - Part IV.

PS2.6.2.7 Setting-Out (Clause H5.4)

The Contractor shall check the positions and levels of all existing components of the existing structures within one week of the Site being made available for the erection of the structural steelwork, and he shall ensure that the erection of the new steelwork may take place without any difficulty and problems.

In addition to the above, the requirements of Clause PS2.6.2.1 shall be strictly adhered to.

The accuracy of all anchor bolts in individual foundations shall be such that they may be adjusted to their correct positions within the space of the recesses provided in the stub columns.

The levels of the stub columns if applicable and the positions and levels of anchor bolts shall be within the tolerances set out in C3.6.4.2 of this Specification.

The Contractor shall check the levels, positions and dimensions of all existing bolt holes in the existing structure where the new steelwork is to connect to the existing structure. This shall be done as soon as possible after the Site has been made available to the Contractor for construction.

PS2.6.2.8 Structural Steel Profiles for Re-use

Profiles provided by the Employer for re-use in the Works shall be transported from the Site to the Contractor's workshop. The profiles shall be reworked in accordance with the details on the Drawings. Where existing parts attached to the profiles are to be removed, the excess weld material shall be removed and all surfaces made good.

Any additional holes required in the existing steel structures shall be drilled. Under no circumstances will flame cutting of holes be allowed.

PS2.6.3 TOLERANCES

PS2.6.3.1 Other Tolerances (Clause H6.2.2)

Grade II Degree of Accuracy shall apply, and the overall fabrication and assembly tolerance shall be ± 2 mm in line and level.

PS2.6.4 TESTS

PS2.6.4.1 Testing of Welds (Clause H7.3)

The SABS shall act in conjunction with the Engineer as the inspection authority in accordance with SANS 10044 Part III with regard to weld tests and inspections. The Contractor shall lodge an order with the SABS for the testing of welds at the Engineer's request only, as soon as he is instructed by the Engineer to do so. All inspection slips issued by the SABS shall be forwarded to the Engineer.

PS2.6.5 MEASUREMENT AND PAYMENT

PS2.6.5.1 Computation of Quantities (Clause H8.2)

All plates and gussets will be measured to the actual final size of the plate provided.

The costs involved in the measurement of the existing levels, positions and dimensions of existing bolt holes shall not be measured and paid separately and shall be included in the rates for the supply and fabrication of the new steelwork in the Schedule of Quantities.

PS2.6.5.2 Supply and Fabrication of Steelwork (Clause H8.3.1.2)

The rates for the supply and fabrication of steelwork shall include the cost of delivery to Site.

PS2.6.5.3 Non-Destructive Testing (Clause H8.3.10)

The non-destructive testing by the SABS, at the request of the Engineer, shall be allowed for by means of a provisional sum in the Schedule of Quantities. Payment shall be made by the Employer to the SABS on submission of a statement from the SABS to the Engineer. No handling charges by the Contractor will be paid or entertained.

The costs of compiling and carrying out procedure tests for welds shall not be measured and shall be borne by the Contractor as set out in Clause PS2.6.2.6.

PS2.6.5.4 Payment for Interim Delivery of Structural Steel Materials

Prior to ultimate delivery to the Site as specified in the Contract, the Engineer shall agree to interim delivery of structural steel materials.

The Contractor shall:

a) store at a suitable approved location and adequately protect such structural steel materials against fire, loss, theft, damage and deterioration;

b) insure such structural steel materials to a value to be determined by the Engineer on behalf of, in the name of, and for the benefit of the Employer under as “all risks” insurance policy which shall be kept in force by the Contractor for the full term of such storage;

c) label and mark such structural steel materials to the satisfaction of the Engineer so as to identify it as being the Employer’s property; and

d) the Contractor shall bear the cost of so storing and protecting, insuring and labelling such structural steel materials.

As soon as possible after being requested to do so by the Contractor, the Engineer will inspect the structural steel materials so stored, insured, labelled and marked by the Contractor. If the Engineer finds no fault with the Contractor's performance under the aforegoing terms of this clause, the Engineer will certify an amount for payment in respect of such structural steel materials, as if they had been delivered on Site, subject to the Contractor submitting acceptable proof of ownership of such materials.

Upon payment being made by the Employer to the Contractor under a certificate in which is included an amount certified for payment as aforesaid, delivery of such structural steel materials shall simultaneously take place by CONSTITUTUM POSSESSORIUM so that possession and ownership thereof shall thereupon pass to and vest in the Employer for whose benefit the Contractor shall continue to store, protect and insure such structural steel materials until delivery thereof to the Site by the Contractor. The Employer's representatives and the Engineer shall have access thereto at all times and any loss or destruction of, or damage to such structural steel materials shall be made good by the Contractor at his expense.

The Employer, or the Engineer on his behalf, shall require the Contractor to sign and deliver to the Engineer a certificate in further evidence of the Employer's ownership of any structural steel material which is the subject of interim delivery. Such certificate shall be delivered upon demand against or at any time after delivery as aforesaid.

PS2.6.5.5 Structural Steel Profiles for Re-use

Hot rolled profiles provided by the Employer and which are to be re-used shall be measured and paid per kilogram mass. The rate shall include the transport costs from and to the Site, the cost of the reworking of the profiles in accordance with the Drawings, the cost of the removal of any elements attached to the profiles, making good of surfaces, the drilling of any holes and any items required to render the profiles suitable for re-use.

The drilling of holes in the existing structures on Site prior to erection shall be measured and paid per unit. The rate shall include the provision of scaffolding and all plant, labour and material for the operation.

Stiffener plates and members attached to the existing columns and beams shall be measured and paid per kilogram mass. The rate shall include the supply and delivery to Site. Erection of these plates and members shall be measured separately and shall be inclusive of scaffolding and labour.

PS2.6.5.6 Remedial Works to existing structures

Build-up Brackets

The rates for the build-up brackets will include the supply of the plates, preparation of existing surfaces and protection as per paint specific.

PS2.7 CORROSION PROTECTION OF STRUCTURAL STEELWORK (SANS 1200 HC)

PS2.7.1 CONSTRUCTION

PS2.7.1.1 General (Clause HC5.4.1)

All steelwork surfaces shall be prepared by hand or power tool cleaning at the fabricator's shop.

PS2.7.1.2 Cleaning by Hand or with Power Tools (Clause HC5.4.3.2)

The Standard of hand or power tool cleaning shall be Grade St 2 in accordance with the Swedish Standard SIS 05 59 00 -1967.

PS2.7.1.3 Coating System (Clause HC5.7)

One coat of zinc phosphate primer shall be applied as soon as possible after the surface preparation of the steelwork. The primer shall comply with the requirements of SANS 1319. The minimum dry film thickness of the coat shall be 30 micron. Any damage to the prime coat during handling or erection shall be repaired and any rust and undesirable material removed and the damaged portions repainted to the prescribed film thickness. The primer shall be applied in the fabricator's shop to elements not requiring on-Site welding and on the Site, after erection, to members welded on-Site.

After erection of new structural steelwork, two coats of alkyd base resin paint for structural steelwork, complying with the requirements of SANS 684 Type B, shall be applied in accordance with the manufacturer's recommendations. Each coat shall have a minimum dry film thickness of 30 micron. The paint colour shall match that of the existing structural steelwork.

All existing structural steelwork to which new profiles have been attached by welding shall be cleaned by hand brushing to a sound base, primed as above and coated with one coat of alkyd base resin paint for structural steelwork, complying with the requirements of SANS 684 Type B. This coat shall have a dry film thickness of 30 micron.

PS2.7.1.4 Application of Paint Coatings (Clause HC5.8)

Stripe coating shall be applied to all metal edges, upstands, welds, bolts and nuts after initial priming.

Steelwork embedded in concrete shall be coated with the full specified coating systems for the full depth finishing coat for the total depth of the embedment plus 150 mm above the finished surface bed level.

All fasteners embedded in concrete shall be coated with the full specified coating systems.

Friction-grip areas shall remain untreated after the initial cleaning of the steel surfaces. After installation of the bolts, the exposed areas shall be re-cleaned by hand or power tools and coated with the full specified coating system.

PS2.7.1.5 Paint Coating to Re-used Profiles

All existing structural steel profiles which are re-used, and which can be moved to the fabricator's shop, shall be cleaned in accordance with Clause PS2.6.1.2 and shall receive the full coating system specified in Clause PS2.6.1.3.

PS2.7.2 TESTING

PS2.7.2.1 Testing by the Contractor (Clause HC7.1)

The tests, as specified in Clause HC7.3, shall be carried out after the application of each intermediate coat.

PS2.7.3 MEASUREMENT AND PAYMENT

PS2.7.3.1 Remove Existing Corrosion Protection at Fiction Grip Areas

The removal of the existing corrosion protection system on the existing structural profiles that will be re-used shall be allowed for in the rate for re-use of existing steel profiles. The rate shall include all scaffolding, plant, labour and material.

PS2.8 MEDIUM-PRESSURE PIPELINE (SANS 1200 L)

PS2.8.1 SCOPE

This specification covers galvanised steel pipes and accessories suitable for a working pressure as specified or shown on Drawings, required for the water pumping mains

PS2.8.2 INTERPRETATIONS

PS2.8.2.1 Abbreviations (Clause L2.4)

GS : Galvanised Steel

PS2.8.3 MATERIALS

PS2.8.3.1 General (Clause L3.1)

The Contractor shall be fully responsible for transporting pipes, valves, specials and fittings to the point of installation, in good condition. Approved end-caps shall be provided for pipes. All materials such as rubber rings and the like must be protected against direct sunlight. Any material which, in the opinion of the Engineer, is damaged in any way shall be removed from Site without delay.

uPVC pipes shall be stored under cover and shall be suitably stacked and supported to prevent deflection or deformation.

PS2.8.3.2 Steel Pipes Fittings and specials(Clause L3.4)

All steel pipes of diameter smaller than 150 mm diameter shall be of medium class galvanised steel, in accordance with SANS 62, with flanged ends and couplings, unless otherwise indicated.

All steel pipes 150 mm diameter and larger shall comply with the requirements of Grade X42 pipes in accordance with API 5L, with flexible couplings, flanged or continuous welded steel. Wall thickness shall be suitable for the specified working pressures with a minimum wall thickness of 4.5 mm.

All pipes and fittings, which are cast into water retaining structures, shall be provided with puddle flanges with a minimum thickness of 15mm for pipes greater than 150 mm diameter and 6 mm for pipes of 150 mm diameter and smaller. The puddle flanges shall also act as an anchor flange. These flanges to pipe connections shall be continuously welded to transmit the full load and for water tightness. These flanges shall be at least 75 mm wider.

Adapter couplings shall be used where required.

Unless otherwise indicated on the Drawings, all galvanised steel pipes smaller than 150mm diameter shall be connected by flanges as indicated on the Drawings. Pipes greater than 150 mm diameter to be connected with flanges or flexible couplings. The sockets, flanges and fittings shall be of approved make and shall be suitable to sustain the specified working pressure.

PS2.8.3.3 Loose Flanges (Clause L3.8.4)

Bolts and nuts shall be in accordance with SANS 136, unless otherwise approved by the Engineer. The bolt ends shall project a maximum of 2 threads beyond the run-out of the nuts.

PS2.8.3.4 Corrosion Protection (Clause L3.9)

Galvanized steel pipes and fittings shall be galvanised by the hot-dip process, unless otherwise indicated or directed by the Engineer.

All galvanized steel pipes and fittings shall be treated against corrosion with an epoxy coating on the inside as specified in SANS 1200L to a minimum thickness of 250 micrometer. On the outside the pipe, where not encased in concrete, must be wrapped with a double layer of bitumen-impregnated glass fibre complying with the requirements for Type 1 of SANS 1130 to form a coating of average thickness 5 mm and of minimum 4,5 mm, on completion of the coating. At pipe ends and flexible couplings an anti-corrosion tape such as “Denso” tape or similar approved must be applied in accordance with the supplier’s specifications. Steel pipes encased in concrete must be treated on the outside with one coat of zinc phosphate primer. The primer shall comply with the requirements of SANS1319 with a minimum dry film thickness of 30 micron.

PS2.8.3.5 Protection of Bolts, Nuts and Washers (Clause L3.9.5)

Bolts, nuts and washers shall be zinc coated by the hot-dipped process and wrapped with an anti-corrosion tape such as “Denso” tape or similar approved and must be applied to manufacturer’s specification.

PS2.8.3.6 Valves

Resilient Seal Gate Valves (New Clause)

All gate valves of 50 mm diameter and larger shall be flanged resilient seal valves of cast steel construction with suitable guides and stainless steel spindles. The valves shall be supplied with standard cast iron end caps and shall close clockwise with the direction of closing permanently indicated on the caps. Extension spindles shall be provided for valves situated below ground level outside valve chambers. For tender purposes a length of 1 m shall be assumed, with the spindle placed in a 200 mm uPVC pipe where the valve is below ground level.

The gate valves shall comply with the applicable requirements of SANS 664 for Class 16 valves and shall be of approved make and design.

Couplings of all gate valves of 50 mm diameter and larger with steel pipes shall be flanged.

Couplings of all gate valves of 50 mm diameter and larger with uPVC pipes shall be approved adaptor couplings.

Valves of diameter less than 50 mm diameter shall be approved, screwed, brass, fullway gate valves suitable for a working pressure of 240 m head of water.

All valves shall be thoroughly cleaned after testing at the factory and shall be treated with two coats of "Copon" or other approved paint. After installation of the valves on Site, all exposed valves shall be treated externally with a further coat of "Copon".

All valves shall be “VAG” or “AVK” or similar approved.

Non-Return Valves (New Clause)

Non-return valves shall be flanged cast iron single door swing check valves to SANS 144, gunmetal fitted and of approved make and design. The valves shall be suitable for a working pressure of 160m to 240m water head. All metal components shall be protected against corrosion as specified for gate valves.

All non-return valves shall be treated with two coats of “Copon” or other approved paint. After installation of the valves on site, all exposed surfaces shall be treated externally with a further coat of “Copon”.

PS2.8.3.7 Flanges and Accessories (Clause C3.8.3)

All flanged couplings shall be drilled to Table 16 or 25 of BS 4504 as required.

PS2.8.3.8 Corrosive Soil (Clause L3.9.6)

No special corrosion protection shall be required for this purpose.

PS2.8.4 PLANT

PS2.8.4.1 Transportation and Storing (Clause L4.1)

The Contractor shall be fully responsible for transporting pipes, valves, specials and fitting to the point of installation, in good condition. Approved end-caps shall be provided for pipes. All materials such as rubber rings and the like must be protected against direct sunlight. Any material which, in the opinion of the Engineer, is damaged in any way shall be removed from site without delay.

PS2.8.5 TOLERANCES

PS2.8.5.1 Alignment (Plan and Level) (Clauses L6.2 and L6.3)

The levels of all pipes, valves and fittings shall be within ± 15 mm from the theoretical positions shown on the Drawings.

PS2.8.6 TESTING

PS2.8.6.1 Radiographic Examination (Clause L7.2.2)

No radiographic examination is required.

PS2.8.6.2 Test Pressures (Clause L7.3.1)

The test section shall be subject to a pressures test, at pressures not less than the maximum working pressure and not exceeding 1.5 times the maximum working pressure for the class of pipes, for the highest and lowest point respectively of the section being tested. This pressure shall be obtained by continuous pumping so as to ensure a gradual increase of pressure until the specified value is obtained.
A calibration certificate for the pressure test apparatus must be presented to the Engineer prior to testing.

PS2.8.6.3 Final Inspection of Pipelines and other Items of Equipment (New Clause)

After the entire piping system has been laid and all parts thereof have been tested to the satisfaction of the Engineer and backfilled, the system will be put into operation and the Contractor shall inspect the same in the presence of the Engineer, to ensure that all valves and other equipment are operating satisfactorily and to check that all pipe supports, brackets and the like are capable of withstanding the loads imposed on them.

Any faults or defects which are detected during this inspection shall be repaired by the Contractor, or where necessary, the defective parts or materials shall be replaced by the Contractor, to the satisfaction of the Engineer, all at the Contractor's expense.

All items of equipment not specifically mentioned in the Specifications, shall be inspected during the commissioning period for proper operation and to verify that these items comply with the requirements of the Specification.

PS2.8.7 MEASUREMENT AND PAYMENT

PS2.8.7.1 Supply and Installation of Pipes and Couplings (Clause L8.2.1)

Pipes shall be measured per linear meter for each type, pressure rating and diameter. The rates shall include for the supply, lay and bedding of pipes complete with couplings and or butt-welding, fittings, corrosion protection, pressure testing, handling cost, inspection, transport and all other requirements in connection herewith.

Flanged pipes shorter than 6 m shall be measured as pipe fittings as specified in Clause L8.2.5. All flanges and couplings shall be provided with packings, bolts and nuts and no extra payments will be made for these items.

PS2.8.7.2 Valves and Specials (Clause L8.2.5)

Isolating valves, air valves with isolating valves, non-return valves, extension pipes and couplings shall be measured and paid per unit complete.

PS2.8.7.3 Temporary Valves, Blank Flanges, etc (Clause L8.2.10)

No separate payments will be made for the supply or loan of temporary valves, end-caps, blank flanges, or other isolating devices required for the testing of pipe systems and all costs in connection therewith shall be included in the rates for the supply, laying and bedding of the permanent pipes, specials and valves.

PART B2 PARTICULAR SPECIFICATIONS

PS3.1 OHSA 1993 HEALTH AND SAFETY SPECIFICATION

PS3.1.1 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 82 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2014, 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 2014.

This safety specification and the Contractor's own Safety Plan as well as the Construction Regulations 2014, 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:

- Working high above the ground on top and below the bridge, most of the time in a restricted environment with limited landings (working platforms);
- Working above a continuously flowing river and in a flood plain environment subject to Flooding;
- Lifting and lowering of materials and equipment from ground to the bridge and vice versa, exposed to cross winds;
- Steep and restricted access to the lower flood plain below the bridge;
- Potentially dangerous existing services, i.e. gas lines, water and sewerage mains, electrical high voltage cables, on the bridge, buried and overhead;
- Deep excavations in soils requiring shoring or reducing of slopes;
- Blasting of hard rock or demolition of concrete;
- High pressure during testing of the new rising main, which could result in potentially dangerous situations in the event of the pipeline of fittings failing;
- Potentially harmful gasses when tying into the existing sewer mains;
- Movement of construction vehicles on site, taking into consideration steep slopes, other traffic and existing services;
- Exposure to possible injuries due to mishandling or failure of power and hand tools;
- Falling debris, tools and materials from the bridge;
- Non-conformance to specifications with regards to fasteners and materials;
- Risks related to general safety and security on site.

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessary covered in the above.

PS3.1.2 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 2014. **"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).

PS3.1.3 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 2014 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 2014;

(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 wor4k under the contract safely in accordance with the Construction Regulations.

PS3.1.4 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;

(c) Construction work that will exceed 30 days or 300 person-days;

(d) Excavation work deeper than 1,0m; or

(e) Working at a height greater than3,0m above ground or landings

The notification must be done in the form of the pro forma included under Section C1.1) (Contract Data) of the tender document.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

PS3.1.5 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 2014).

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.

PS3.1.6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

3.1.6.1 **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.

3.1.6.2 **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 a 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.

PS3.1.7 APPOINTMENT OF SAFETY PERSONNEL

3.1.7.1 **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.

3.1.7.2 **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.

3.1.7.3 **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.

3.1.7.4 **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.

In 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 to keep record of recommendations and reports made by the committee.

3.1.7.5 **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 descr9ibed 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

(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 person to supervise parts of the construction work does not relieve the Contractor form any of his responsibilities to comply with **all** requirements of the Construction Regulations.

PS3.1.8 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.

(a) A copy of the OHSA 1993 Construction Regulations 2014;

(b) A copy of this Health and Safety Specification;

(c) A copy of the Contractor's Health and Safety Plan (Regulation 4);

(d) A copy of the notification of construction work (Regulation 3)

(e) A health and safety file in terms of Regulation 5 (7) with inputs by the Construction Safety Officer (Regulation 6 (7);

(f) A copy of the risk assessment described in Regulation 7;

(g) A full protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 8;

(h) Drawings pertaining to the design of structures (Regulation 9(3)) and formwork and support work structures (Regulation 10(d)) must be kept on site;

(i) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 11 (3) (h));

(j) 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)).

PS3.1.9 CONTRACTORS 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 us mandatory (employer) for the contract under consideration.

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) **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 2014.

(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 hose 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.

(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 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 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 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 (Regulations 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 Regulations 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 Regulation18. The Contractor shall ensure that the General Safety Regulations (Government Notice R 1031 of 30 May 1986), the Driven Machinery Regulations (Government Notice R 2271 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 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 2014**

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.

PART C4: SITE INFORMATION

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SITE INFORMATION

1. SITE AND ACCESS

The project site is situated within the King Cetshwayo District Municipality, KZN and located within Mthonjaneni Local Municipality. The co-ordinates of the pump stations are as follows:

Zimele pump station no.1 - S 28°46'17.0" Latitude and E 31°28'29.88" Longitude.

Zimele pump station no.2 - S 28°45'10.05" Latitude and E 31°27'34.83" Longitude.

Zimele pump station no.3 - S 28°43'50.53" Latitude and E 31°26'58.64" Longitude.

Access to the site of the works can be obtained from the R66 provincial road.

The contractor must evaluate the availability of access to the area, evaluate construction space and locate together with any other aspect that may influence his construction activities and or method and allow for it in his tendered rates.

2. NATURE OF SITE, GROUND AND SUB-SOIL CONDITIONS

The prevailing soil conditions for the pumpstations sites were found to be dominated by a predominated upper residual horizon comprising of clayey silt. The lower ground horizon comprises of fine-grained clayey sand. Weathered rock of granite gneiss is found at depths more than 3.8m from the present ground level. No groundwater was encountered with the excavation of the trial holes. The main concerns for the reservoir site are that the site is prone to long term consolidation settlement as well as the erosive properties of the soil.

3. SITE FACILITIES AVAILABLE

3.1 Water

There is no water available on site for construction purposes and the Contractor must make his own arrangement with the Mthonjaneni Local Municipality / King Cetshwayo District Municipality for a supply from their network if so required.

3.2 Power

There is no electricity available on site for construction purposes and the Contractor must make his own arrangement with the Mthonjaneni Local Municipality for a supply point from their network if so required.

4. SITE FACILITIES REQUIRED

4.1 Offices

A site office for the exclusive use of the Engineer is not required. An equipped office with a table, eight chairs, filing cabinet and plan table must however be made available for the Engineer and his representative, in the event that this is required, normally for site meetings. One set of drawings must be kept on site at all times.

4.2 Temporary Latrines

The Contractor shall provide adequate chemical toilet facilities for the use of the various workmen in accordance with the Regulations of the Department of Public Health and/or other authority and pay all charges in connection therewith; maintain same in a thoroughly clean and orderly condition; allow for moving the chemical toilets to new locations as necessary during the course of the Contract and finally remove such chemical toilets at completion and make good.

4.3 Personnel

One assistant must be made available to the Engineer, his Representative or the Clerk of Works, if so required.

4.4 **Survey Instruments**

Survey instruments including a Dumpy level, staff and 100 m steel tape must be available to the Clerk of Works at all times.

4.5 **Telephone / Telefax**

The Contractor shall provide his own telephone and/or fax facilities.

4.6 **Laboratory Facilities**

Facilities for the testing of concrete test cubes and backfilling layers must be provided on site or alternatively through an approved commercial laboratory.

5. FEATURES REQUIRING SPECIAL ATTENTION

5.1 **Existing Services**

The Contractor must take all precautions against damaging existing structures or services or affecting the operation of the existing works. The municipality and other service owners must be approached to indicate these existing underground services before any works in any area shall commence. The contractor should request 7 days in advance for the indication of existing services.

The Contractor will be held responsible for any damage to these services during the execution of the Works. Damaged services must immediately be reported to the proper authority and repaired to the satisfaction of the Engineer.

5.2 **Surveying**

The Contractor must use the services of, or employ a competent engineering surveyor to set out the Works and to ensure that the specified tolerances are adhered to.

Payment for the setting out will be deemed inclusive in the rates and no additional payment will be made in that regard.

No beacons, reference pegs, corner pegs, etc. may be disturbed or removed without the prior consent of the Engineer.

5.3 **Source of Materials**

The Contractor will be responsible for locating of all materials complying with the relevant minimum requirements to be used in this contract. No separate payments shall be made for this as all costs related thereto shall be deemed to be covered by the bid rates.

5.4 **Environmental Management**

A requirement for the approval of the project by the Department of Environmental Affairs is that the contractor must maintain the Environmental Management Plan attached as Annexure C during the construction period to ensure that the environmental impact of the activity is minimized and that all mitigating requirements are met.

No claims to maintain the Environmental Management Plan will be considered. Work required maintaining the Environmental Management Plan is considered to be included in the bid rates bid by the contractor.

5.5 **Occupational Health and Safety Act**

Separate allowance to be made in the Tender document for the Principal Contractor to comply with the Occupational Health and Safety Act (Construction Regulations).

The project Health and Safety Specifications is attached as Annexure D.

Provision therefore is to be made as specified. These items are to be included in the Tender to be submitted.

5.6 Use of local labour

The funds for this project have been made available by The Municipal Infrastructure Grant Programme (MIG) through the **King Cetshwayo District Municipality**, the condition being that as much local labour is used where possible. For this project only the contract manager and key personnel shall be imported. All the other labour shall be from the local community. Special Conditions of Contract which indicate the minimum requirements in terms of employment targets and reporting, must be fully complied with. The rates tendered by the contractor will be assumed to have specifically included for these terms.

The contractor will during the period allowed for site establishment directly after the introductory meeting with the community, set up a meeting with the Labour Desk, which meeting must be scheduled prior to the date of physical commencement of the works. The purpose of this meeting is to maximize the use of local labour force for any task on the project for which local expertise might be available.

To achieve this, the contractor shall at the introductory meeting, having completed his preliminary planning for the project, submit to the Chairman of the Labour Desk a list of possible people that could be utilized on the project.

At the first meeting following the introductory meeting referred to in the first paragraph, the Labour Desk will submit the names and details of labourers from the local community complying to the contractor's requirements. The contractor will during the period of site establishment and before the commencement of any physical work allow for three consecutive meetings with the Labour Desk and local people in order to interview candidates and to negotiate suitable rates. Each meeting must be minuted and an attendance register kept. The contractor must through this exercise prove that he has exhausted all means to maximize the use of local labour.

A specific item for this exercise is allowed for in the fixed cost section of the Preliminary and General section. The contractor must further allow in his construction programme a specific item for this exercise since no construction work will commence prior to completing these. This task may however run concurrent with the time allowed for general site establishment. In programming this task, the contractor must take cognizance of local customs and the speed at which communication in these rural communities takes place. A minimum period of three weeks is recommended for this task, but the contractor must make his own estimate in this regard.

The engineer will certify no payment under the above item unless the minutes of each meeting mentioned above, together with attendance registers, are submitted to the engineer.

The engineer or facilitator or duly authorized representative from either the engineer or the facilitator might attend these meetings as an observer, but will not be involved in any recruitment, negotiations or sub-contract price negotiations whatsoever.

5.7 Community Liaison Officer (CLO)

It may be required of the Contractor to appoint a Community Liaison Officer for the duration of the contract. This person will be a resident of the area and will be sourced in conjunction with and appointed with the approval of the local community structures, the Engineer and the Employer.

The function of the Community Liaison Officer will in brief be to keep residents and consumers fully informed of the extent, programme and duration of the contract at all times, as well as all planned interruptions to supply, whilst all complaints and enquiries by residents, consumers or the public at large are to be directly communicated to him for attendance by the Contractor. Payment will be effected as measured on a monthly basis.

The Ward Councillor shall generally be responsible for the selection of the CLO. The Ward Councillor in whose ward work is to be done will identify a community liaison officer for the project and make that person known to the contractor within two days of being requested to do so. The selected CLO will be accountable to the Contractor.

The CLO shall be employed on a full day basis, for the duration of the contract. When not undertaking specific CLO duties, the CLO will be expected to undertake any other work allocated by the Contractor.

The minimum skills for a CLO shall include:

a) An ability to work with others
b) An ability to communicate in English and Zulu
c) An ability to communicate in writing
d) Sound interpersonal skills

Previous experience in community facilitation, knowledge of construction work and relevant labour legislation would be an advantage.

The contractor will be required to enter a written contract with the CLO that specifies:

a) The hours of work and the wage rate of the CLO (200% of the Civil Engineering Industry minimum wage rate)

b) The duration of the appointment

c) The duties to be undertaken by the CLO which could include

    1) Assisting in all respects relating to the recruitment of local labour and advising them of their rights.
    2) Acting as a source of information for the community and councilors on issues related to the contract.
    3) Keeping the contractor advised on community issues and issues pertaining to local security.
    4) Assisting in setting up any meeting or negotiations with affected parties.
    5) Keeping a site diary of any labour or community issue that may arise.
    6) Any other duties that may be allocated by the contractor.
    7) Monitoring and reporting on general Health and Safety issues on site.
    8) Assisting in AIDS/HIV awareness programmes.

d) It must be noted that the CLO has no authority to issue any instructions to the Contractor.

Responsibility for the identification of a pool of suitable labour shall rest with the CLO, although the contractor shall have the right to choose from that pool. The contractor shall have the right to determine the total number labourers required at any one time and this may vary during the contract.

The Contractor shall have the right to replace labour that is not performing adequately. Should such occasion arise, it must be done in conjunction with the CLO.

The CLO needs to be seen as neutral by all parties and therefore should endeavour not to take sides should a conflict arise.

5.8 **Tender Drawings**

The drawings that form part of the Tender documents shall be used for Tender purposes only. The depths, pipe sizes and lengths of pipes as shown on drawings are subject to confirmation on site, and the Contractor shall submit all such information to the Engineer for confirmation before he commences any construction work.

5.9 **"As-builts" Drawings**

The Contractor shall provide the Engineer with "as-built" drawings at the end of the contract indicating all levels, positions, coordinates, sizes, etc.

For this purpose an additional set of drawings will be kept in the site office, for the exclusive use of keeping as-built information.

The completion certificate shall only be issued after the Engineer has received a properly completed set of “As-Built” drawings from the Contractor. No separate payment shall be made for this service, as all costs related thereto shall be deemed to be included in the related items.

5.10 **Housing for contractor's employees**

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangement for housing his employees and transporting them to and from the site. The Contractor is in all respects responsible for the housing and transporting of his employees and for the arrangement thereof, and no claim for extension of time due to any delays resulting from this, will be considered.

5.11 **Rain Gauge**

An approved rain gauge properly fenced off shall be provided by the Contractor free of charge in order to enable him to claim for extensions of time.

PART C5: ANNEXURES

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ANNEXURE A: DRAWINGS

DRAWING NO.	DESCRIPTION
R10-007-06-Z2C-300-000	GENERAL NOTES
R10-007-06-Z2C-300-001	ZIMELE BOOSTER NO.1 – SITE LAYOUT
R10-007-06-Z2C-300-002	ZIMELE BOOSTER NO.2 – SITE LAYOUT
R10-007-06-Z2C-300-003	ZIMELE BOOSTER NO.3 – SITE LAYOUT
R10-007-06-Z2C-300-151	PIMP STATION PLAN AND SECTIONS
R10-007-06-Z2C-300-202	CRAWL BEAM LAYOUT, SECTIONS AND DETAILS
R10-007-06-Z2C-300-262	TYPICAL DETAIL: SIGN SUPPORT STRUCTURE
R10-007-06-Z2C-300-263	TYPICAL DETAIL: EPWP SIGN BOARD

GENERAL SPECIFICATIONS:

GENERAL STRUCTURAL

1. SANS 1200 SPECIFICATIONS WILL APPLY.
2. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings, schedules and details. The Contractor shall check all drawings and schedules to ensure that he has sufficient information prior to commencing with the works involved.
3. The Contractor must verify all dimensions on site before commencement of any work. Any discrepancies are to be referred to the architect and Engineer immediately.
4. Structural levels are in metres and related to the bench mark.

100.000 On plans T.O.C 0000.000

100.000 On elevations T.O.C. 0000.000

5. All dimensions are in millimetres or meters, as indicated.
6. For setting out details refer to the relevant Architect's and Engineer's drawings where applicable.
7. The Contractor is responsible for the design, detailing, erection, certification, maintaining and removal of all propping, strutting or other temporary works required by the construction and for the safe execution of all works during building construction. The Contractor shall provide all temporary supports and bracing necessary to maintain structural stability under any conditions that can be expected during construction. The Contractor shall, when requested, submit calculations and details of his proposed temporary works, for review, before the work begins.No concrete may be cast until the full compliance of the above.
8. The Contractor shall provide and maintain any necessary protection of the works.
9. Where retaining walls are connected to other elements of structure, backfill must not be placed behind the wall unless the wall is suitably propped by permanent structure.
10. Any item specified on the structural drawings is indicative of the required standard and qualities. Alternatives may be used provided that full technical details demonstrating equivalent properties of the item are submitted by the Contractor and approval is obtained from the Engineer, prior to execution.
11. No remedial work shall be undertaken without prior approval of the Engineer.
12. Where structural elements are designed by a specialist, the Contractor shall submit the choice of specialist to the Engineer for approval.
13. All proposed materials shall be proven to meet the specification prior to use. No inspection or approval of works shall be given where the materials incorporated therein have not previously been shown to meet the Specification. Refer to specific testing/approval requirements in other sections.
14. The contractor must confirm that the existing services and their location agree with the drawings, prior to construction. Any discrepancies must be indicated to the Engineer.
15. The contractor is responsible to ensure that all work is done accordingly to the latest OHS Act, and Construction Regulations.
16. Contractor to ensure that all shopfronts/curtain walls and all other fixings have sufficient clearance against the supporting structure/s to allow for movement/deflections of the supporting structure without damaging the glass/framework.

DESIGN INFORMATION

1. The following design standards have been used:

SANS 82: Bending dimensions of bars for concrete reinforcement.

SANS 1024: Welded steel fabric for reinforcement of concrete.

SANS 0100: "The Structural use of Concrete."

SANS 0162: "The Structural Use of Steelwork in Building"

SANS 0164: "The Structural use of Masonry"

PREPARATION OF SURFACE BEDS/EARTHWORKS

1. Any existing structure or paving is to be removed, as is any existing organic topsoil including roots.
2. Where rock is encountered during any of the operations the Engineer will instruct whether removal is necessary.
3. Earth works to be done according to Earth Works layout plan.
4. Backfilling to foundation excavations is to be done in 150mm thick layers as specified on the drawings.
5. Testing procedures for compaction and frequency of tests shall be approved by the Engineer. Frequency of tests shall not be less than the following:
The last two layers shall each be tested for mod AASHTO density. Below these layers, every second layer shall be tested where applicable.
The number of tests within a layer shall be agreed with the Engineer. It is the Contractors responsibility to ensure that all agreed tests are performed and results agreed at a layer before the next layer is placed.
6. For each proposed source of material for the building platforms, the Contractor shall submit test results for Atterburg Limits, sieve analysis, determination of mod AASHTO density and California Bearing Ratio for approval by Engineer prior to use.
7. Measurement of tolerances shall be in accordance with clause 9304 of the "Standard Specification for Road and Bridge Works", with the following parameters:

		Fill	Set Fill	Sub-base
Level	H90	±20mm	±15mm	±10mm
	Hmax	±25mm	±20mm	±15mm
Thickness	D90	-	21mm	15mm
	Dmax	-	27mm	20mm
	Dave	-	10mm	5mm

8. Provide termite proof to all ground bearing slabs.

FOUNDATIONS

1. Foundation excavations to be termite proofed as a good building practice even if there is no evidence of termite activities.

CONCRETE

1. All concrete work has been designed based on the requirements of SANS 0100.
2. All structural concrete to be the following strengths:
a) 35MPa for all slabs & 25 MPa for bases & beams.
b) 40MPa for all columns, concrete walls & exposed stairs unless otherwise indicated on the drawings.
c) 10MPa concrete for blinding.
d) 15MPa for mass concrete.
e) All concrete must be properly vibrated to specification using approved poker vibrators.
3. All materials used in the production of concrete shall comply with the relevant standards. Water shall be clean and free from harmful matter. All sources of materials shall be agreed with the Engineer prior to start on site. Prior to use initially and prior to any change in source of supply the Contractor is to submit test results to the Engineer for the following:

Cement - Certificate of compliance with SANS ENV 197-1:1992
Sand - Grading, dust content, fineness modulus, chloride content, and sand equivalent value to show compliance with SANS 1083, equivalent value to show compliance with SANS 1083.
Stone - Grading, dust content, 10% FACT Value or Aggregate Crushing Value, Flakiness Index and alkali reactivity. To show compliance to SANS 1083

The Contractor shall sample aggregate sources every month and forward test results to the Engineer for the following:
Sand - Grading, dust content, fineness modulus and chloride content.
Stone - Grading and dust content.

The above is also required if ready mixed concrete will be used.

4. All proposed mix design proportions are to be submitted to the Engineer for approval prior to the work commencing. The contractor must include a statement of the proposed batching method, quality control procedures and details of the staff responsible for batching the concrete.The contractor is to include in his mix design submission details of the proposed concrete slump. If ready mixed concrete is to be used, no water may be added to the mix after the truck has left the ready mix suppliers premises. No pumping of concrete is permitted without the prior approval of the Engineer. Evidence of compliance for strength for the structural concrete will be shown by the following (According to SANS 1200 G) :

a) Test results are to be submitted for three separate trial batches of concrete. Each is to be made using the proposed mix and constituent materials and under full scale production conditions. Three cubes shall be made from each batch or ready mix truck and shall be tested at 28 days. The average strength of the nine 28 day cubes shall exceed the specified characteristic strength by at least 2MPa. Alternatively, earlier tests on nine cubes shall demonstrate that the specified characteristic strength will be exceeded by 2MPa. No individual cube shall give a strength less than the design strength. Evidence of compliance for durability index testing for the structural concrete will be shown by the following :
a) Preperation of test specimen to SANS 516-1
b) Oxygen permeability test to SANS 516-2
c) Water sorptivity test to SANS 516-3
d) Chloride conductivity & porosity test to SANS 516-4
e) Contractor to confirm the amount of tests required and the relevance there of with the Engineer prior to execution of the project.
5. The use of admixtures in the concrete is not permitted without the prior approval of the Engineer.
6. Testing procedures for the workability and quality control including the preparation and testing of cubes shall comply with the Specification and be agreed with the Engineer prior to commencing the work. The frequency of sampling is to be in accordance with the specification and agreed with the Engineer.
7. Method of striking of formwork to be agreed with the Engineer prior to concrete work commencing.
8. The positions of proposed construction joints, where not indicated on the drawings, are to be submitted to the Engineer for approval prior to construction.
9. Unless indicated otherwise on the drawings, formed concrete finishes shall be obtained by the use of properly designed formwork or moulds of timber, plywood, plastics, concrete or steel. The finished concrete surface should be free from voids, honeycombing or other blemishes. Exposed concrete beams and columns are to be formed using high quality concrete and steel shutters. Surfaces should be true with clean arrises. Only minor surface blemishes should occur. These will be filled or rubbed down. A sample section must be cast and approved prior to commencing these elements.
10. Unless indicated otherwise on the drawings, unformed finishes are to be uniformly levelled, tamped and subsequently power floated to produce a uniform surface. Surfaces which are to receive waterproofing are to be given a steel float finish. Power floating should start as late as possible, this is indicated by minimum indentation or when a footprint is barely perceptible. The maximum practical indention is ≈5mm.
11. For structural slabs, only the principal openings (greater than 200mm) are shown on the Engineer's drawings. All Builders Work requirements shall be checked by the Contractor with relevant services and domestic/specialist subcontractor drawings prior to construction. Any proposed penetrations to columns, beams, ribs, or holes greater than 200mm in slabs which are not shown on the structural drawings must be brought to the attention of the Engineer. All openings in structural members must have the Engineers approval.
12. All concrete elements shall be inspected and approved by the Engineer prior to casting. The Contractor shall have reviewed and approved all relevant details of the pour including setting-out, levels, reinforcement placement, formwork, built-in elements, reinforcement cover, joint preparation and cleanliness prior to calling for the Engineer's inspection. Contractor's approval shall be noted on a Concrete Pour Approval Sheet. The Engineer shall be given 48 hours notice of when an inspection is required.
13. Tolerances for the concrete works are given in permitted deviations. These tolerances are not additive and relate to the structural grid.
14. Tolerances for formed surfaces are to be within the following:

	Permitted Deciation
a) General for concrete (unless modified by the following sections)	± 15mm
b) Cross-sectional dimensions of columns, walls, beams, openings etc,	<1m : ± 5mm >1m : + 15mm
c) Centroid in each storey height for vertical or raking elements	+ 10mm
d) Rotation of elements in plan	+ 2°
e) For exposed surfaces under a straight edge in contact with surface	up to 0,3m + 3mm 0,3m to 3m + 5mm 3m to 5m +10mm
f) Foundations	± 25mm
g) Cast-in bolts	± 3mm

15. All exposed external concrete corners to be chamfered 25x25mm where not in contact with brick work, or as directed by Architect or Engineer.
16. Concrete mix for all exposed concrete must be from the same bathcing plant and must be the same colour & design mix.
17. Tolerances for unformed surfaces to be within the following permitted deviations, which should be checked prior to deprogging:

Permitted Deviation for specified finish	Wood Floated	Steel Floated
a) At any point on the surface	- 20mm + 10mm	± 10mm
b) Between any two points 6m apart	±15mm	±10mm
c) Under a 3m straight edge	± 10mm	± 5mm
d) Abrupt change in level	± 5mm	± 1mm
e) Slab thickness	± 10mm	± 10mm

18. DURACURE WSC from ABE, curing compound must be used on all concrete slabs, walls and stairs strictly to manufacturers specifications and must comply to ASTM C 309, all columns must be wrapped with plastic "Cling Wrap" for a min. of 21 days after casting.
19. All expansion joints must be as detailed on drawings.
20. Min. time for removal of formwork = 7 days.
21. Temporary props under slabs to be kept in position for a min. of 21 days.
22. Concrete slabs may not be used for storage of building material during construction.
23. All brickwork below slabs to be load bearing and must be done as detailed.
24. All concrete work including materials, concrete, formwork, reinforcement, tolerances and tests must comply with SANS 1200 G: Concrete (Structural)
25. All sand/cement screeds according to concrete institute specifications on screed paper.

REINFORCEMENT

1. Mild (Fy = 250 MPa) and high strength (Fy = 450 MPa) reinforcing bars shall be in accordance with SANS 920. All bars shall be new billet stock, clean and free from loose rust and loose mill scale. Contractor shall submit mill certificates to Engineer for approval prior to use.
2. Reinforcement shall not be cut or bent, except as shown in the bending schedules, without approval. Bending shall be in accordance with SANS 82.
3. Each bundle of bars shall be clearly tagged with their schedule and mark numbers.
4. Minimum cover to reinforcing generally to be as follows, unless noted otherwise:

		INLAND	COAST
Bottom of footing/ground beam, sides and top of footing/ground bean and columns below ground		= 50mm	= 50mm
Slabs:	on ground, bottom	= 50mm	= 50mm
	suspended	= 30mm	= 50mm
Beams:	to man bars	= 35mm	= 50mm
	to links	= 30mm	= 50mm
Columns:	to main bars	= 50mm	= 50mm
	to link	= 40mm	= 50mm
Walls:	to all bars	= 30mm	= 50mm
Basement walls:	earth face	= 50mm	= 50mm
	other face	= 30mm	= 50mm

Concrete spacers must be used for bottom and vertical reinforcement
5. The Engineer shall be given 48 hours notice prior to ordering any reinforcing.
6. For placement of reinforcing, B1, B2, T1 & T2 see Reinforcing layer detail.
7. Min. lap length for reinforcing is 40 dia.

STRUCTURAL STEEL

1. All structural steel members (Except purlins & Girts which will be galvanised) must be painted as follows:
a) Preparation: Abrasive blast cleaning to SA 2.5 complying with the relevant clauses of SANS

b) Clean, dry and apply one full coat approved Zinc Phosphate Primer to a dry film thickness of 35 microns within two hours after abrasive cleaning in accordance with SANS 0681. Applied in the Factory.

c) Wire brush all areas in which the primer has been damaged, touch up, apply one full coat multi-purpose undercoat to a dry film thickness of 35 microns and one full coat Alkyd Base Enamel to a dry film thickness of 35 microns (color to client specification)

d) Making good damaged areas in accordance with SANS 0120

e) Final Alkyd base Enamel paint coat as per client specification.

2. Unless noted otherwise, the steelwork indicated on the drawings has been designed in accordance with SANS 0162. Work to be carried out to SANS 1200 H unless noted otherwise.
3. All steel, except for cold formed sections, to be Grade EN 10025-2-S355JR to EN 10025 / SANS 1431 unless noted otherwise. The Contractor shall submit mill certificates to the Engineer for approval prior to fabrication.
4. All fabrication drawings to be submitted to the Engineer a minimum of three weeks before fabrication. Fabrication drawings must be thoroughly checked by the main contractor prior to submitting. Any comments made by the Engineer are to be incorporated prior to commencing fabrication. Engineer will provide approval of fabrication drawings in principa only, as the responsibility for accurate fabrication drawings remains with the contractor.
5. Unless otherwise noted. structural bolts to be grade 8.8 to SANS 0162. Minimum diameter to be 16mm unless noted otherwise. All bolts to be zinc plated to BS 1705, Class A, and be supplied with equivalent nuts and 2 washers.
6. All bolted connections to use a minimum two bolts, unless noted otherwise.
7. All plates to be minimum thickness of 10mm, unless noted otherwise.
8. All welds to be 6mm fillet welds, all round, unless noted otherwise, to SANS 044 and 455. All butt welds must be indicated on the fabrication drawings. The visual appearance of welds on exposed steelwork is to be agreed with the Engineer prior to fabrication. Samples are to be provided where requested or as indicated on the drawings. All welding to be undertaken at an approved fabrication workshop. Welding on site is not permitted without the consent of the Engineer. The Contractor shall submit, to the Engineer, the details of any operatives involved in welding to indicate that they are suitably qualified.
9. All welds are to be visually examined for correct size, shape, slag inclusions, cracks, undercutand porosity. Selected welds are to be tested using the dye penetration method. Critical butt welds are to be tested using ultrasonic equipment.
10. Holding down bolts to be set with suitable means of adjustment. Method to be approved by the Engineer. Holding down bolts to be galvanized if the site is within 50km from the coast.
11. No post-fixing shall be allowed unless specified by the Engineer or with the express approval of the Engineer.
12. Steel items embedded in brickwork are to be protected with 2 layers of Malthoid. Any additional paint requirements will be to the architects requirements. All steel support brackets to concrete to be galvanised.
13. All necessary temporary bracing and safety requirements for the steelwork are the responsibility of the Contractor during construction of the works.
14. Tolerances are to be in accordance with SANS 1200 H, degree of accuracy II
15. Prior to fabrication the fabricator and the main contractor are to survey the existing structure to check and confirm the line, level and element dimensions. The contractor is to inform the Engineer of any discrepancies and propose his remedial works. Prior to delivery to site, the Engineer must be notified for inspection of all steel elements in the steel workshop.
16. Grating to be hot dipped galvanised to SANS 763, serrated and banded.
17. All structural steelwork related to building projects to conform to SANS 2001-CS1. 2005 Edition 1.
18. Contractor to submit to the engineer an appropriate method statement of stacking construction material on roof structure for approval, prior to construction.

BUILDERS WORK

1. The Contractor shall coordinate and submit for approval to the Engineer/Client shop drawings showing all builders work requirements involving structural elements, prior to commencement of the works involved. These shop drawings shall be of sufficient detail as to layout, building-in requirements, connection to structural elements, etc. to progress the works in a coordinated, workmanlike manner. Refer to other specifications for other builders work shop drawing requirements.
2. The Contractor shall make allowance in his programme for all approvals before any builders work is incorporated into the works.
3. Except as detailed on the Structural Drawings, no structural element shall be sleeved or otherwise penetrated for any reason unless prior approval is obtained from the Engineer.
4. If conduit is to run in slabs, the conduit shall be placed at mid depth of slab, and maximum conduit dimension shall not exceed 33 percent of the slab depth. There shall be a minimum of 75mm clear space between conduits. Aluminium conduit is prohibited. Copies of proposed conduit layouts are to be submitted to the Structural Engineer for review prior to commencing the element of the works.
5. To ensure that expansion joints remain open, the contracter must place 10mm polystyrene inbetween the brickwork, in sections of not more than 300mm, during the building process.

MASONRY

1. These notes apply to all masonry walls, both load bearing and non-loading bearing. Only load bearing walls are shown on structural drawings, refer to the architect's drawings for other walls.
2. All masonry must be constructed in accordance with SANS 164 Part 1.
3. The required brick strength parameters for load bearing masonry are:

Strength	Water absorption
10MPa minimum, unless otherwise noted	12% maximum

4. Unless otherwise noted mortar shall be:
class iii Above ground slab level
class ii Below ground slab level
Cubes are to be taken for the mortar and the test results submitted to the Engineer for approval.
5. The maximum lift of brickwork or block-work allowed in a 24 hour period is 1.3m.
6. Mortar additives are not be used unless approved by the Client.
7. No horizontal chases shall be cut into the masonry.
8. No vertical chases shall be cut into the masonry without prior approval from the Architect/Engineer.
9. The method of cutting chases, where approved, shall be agreed with the Client/Engineer.
10. Reinforcement fabric in accordance with SANS 1024 is to be included in all brickwork as follows:

Foundation walls and below ground level.	- every course
Above lintel	- for 5 courses
Other locations	- every 3rd course unless indicated otherwise

11. Flat ties, where specified, are to have a minimum section of 20 x 3mm unless otherwise noted.
12. Tolerances to be in accordance with the specification.
13. Brickwork is not to be constructed onto concrete supports until propping to formwork has been removed
14. For setting out of masonry walls and locations of movement joints refer to Architect's drawings and details.
15. Refer to Architects detail for head restraints to non load bearing partition walls.
16. For collar leaf (double leaf) walls, all bed joints, perpends and vertical joints are to be fully filled with mortar. The two leaves are to be tied together with galvanised mild steel flat ties every 425 centres both vertically and horizontally. Ties are to be 20 x 3mm thick and have a minimum embankment of 50mm into each course of brickwork.
17. Cavity walls are to include vertical twist wall ties at a spacing of 425mm vertically and 750mm horizontally staggered. Ends of wall panels are to be tied to the structure at 425mm centres.
18. Masonry walls to be fixed to concrete elements by means of 1.2x30x800mm hoop iron straps. Straps to be shot fixed to or cast into concrete at a minimum spacing of 425mm unless indicated otherwise.
19. All openings in masonry walls to be covered by lintels according to NHBRC Part 2, Section 3, unless otherwise specified.

HOT-DIP GALVANIZING

1. All steel components, fabricated iron and steel articles as well as fasteners nuts, washers and bolts shall be hot dip galvanized in accordance with the requirements of SANS 121 (ISO 1461)

REPAIR TO DAMAGED COATING

1. Repairs to hot dip galvanized steel in conformance with SANS 121 (ISO 1461)

SITE REPAIRS

ZINK RICH PAINTS:
1. The recommended product is Zink Rich Epoxy. This productrovides superior corrosion protection.
2. A product called Zincfix is to be used and is available in "Squish Pack" form. Zincfix is a solvent free product containing a minimum of 82% zinc in the dry film and 2% leafing aluminium for added corrosion resistance. The quantity contained in each 25ml sachet is capable of coating approximately 250cm². Larger packs are also available.
3. The surface to be repaired must be thoroughly cleaned by stainless wire brushing or with the aid of an abrasive such as emery cloth (roughness 80 grit). Once applied the thickness of the dry film should be checked to ensure that it is at least 30 micron greater than the minimum thickness specified for the surrounding galvanized coating.
4. Zincfix is available from the Hot Dip Galvanizers Association of South Africa and all of its members.
5. All bolts to be galvanized.

WATERPROOFING

1. All waterproofing on exposed concrete slabs and beams on screeds to Architects specifications.

CONCRETE SURFACE BED SLABS

1. REINFORCING
1.1 Mesh reinforcing will be welded steel fabric, refer to surface bed drawings for Mesh Ref.
1.2 Dowel bars across construction joints will be Octo Dowel at 250mm spacing (where indicated) or simmilar approved. Ends of dowels must be grinded smooth and round.
1.3 The layout and position of the reinforcing must be inspected by the Engineer or his representative prior to casting of any concrete. Special care must be taken to ensure that the reinforcement remain on the correct position and level during the casting process.

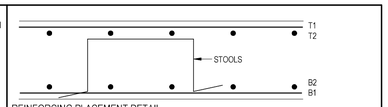
2. CASTING OF CONCRETE SLABS.
2.1 The Contractor must issue to the Engineer a complete work method statement for approval prior to construction.
2.2 Sub base will be adequately wet before casting can commence, no mud or puddles to form.
2.3 Due care shall be taken by the Contractor to ensure that the correct depth of the reinforcing is maintained during the casting process.
2.4 Concrete shall be 35MPa readymix from approved supplier, such as Metier (Glen Talmage: (031) 714 2130) o.s.a.
The typical mix design to be submitted for approval to consist of:
Cement type: CEM I 52.5
Water:Cement Ratio: ± 0.64 - 0.55
Coarse dolomitic aggregate: 26.5mm + 19mm
Concrete strength required at: 28 days: 35MPa
No pump mix allowed.
2.5 Flat ended shovels will be used to move concrete. (Rakes and Poker vibrators are unsuitable for moving concrete and can cause segregation).
2.6 Floor hardener: Moisture Barrier Floor Topping (MBFT) from Samson Technologies, or similar approved must be applied strictly in accordance with Samson's specifications.

3.CURING
3.1 The new concrete will be kept wet continuously for 7 days. This can be achieved by using a wet sand layer on plastic sheeting to trap the moisture in..

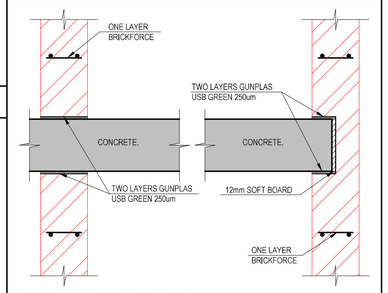
4. JOINTS AND SEALING
4.1 All joint cutting and sealing shall be done by an approved sub-contractor.
4.2 Saw cut joints will be cut by a specialist between 4 to 24 hours of casting.
4.3 Joints must not be reamed before concrete is at least 7 days old.
4.4 Joints should be cleaned with a strong water jet to remove all clippings and debris from the cut.
4.5 When the saw cut is dry, the joint will be cleaned with oil free compressed air to ensure a dust free environment.
4.6 Joint Filler to be used is Masterflex 320 in the aisles and SikaPro 3 WF below racking, strictly to their specifications, at the end of the contract.

5. EARTHWORKS
5.1 The layerworks as indicated on the relevant drawings will be imported and the minimum compaction specifications adhered to at all times.
5.2 The number of compaction tests per layer must be prescribed in the SANS codes. The results should be approved by the Engineer prior to construction of the subsequent layer.

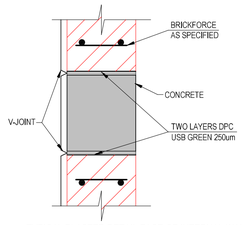
6. SURFACE REGULARITY SPECIFICATION OF NEW CONCRETE FLOOR
Floor regularity specification FM3 or better as per TR34 (3rd edition) is applicable to this contract. The floor's levels & flatness must be measured after casting as indicated in the above publication, by using an approved Profilograph. It is strictly recommended that the floor be cast after the roof cladding and side cladding has been erected to minimize the effect of sun, rain, wind, temperatures on concrete. The first portion to be cast to be selected as such to be used as a test slab. Laser screed Technology will be required to obtain the specified level of surface regularity.



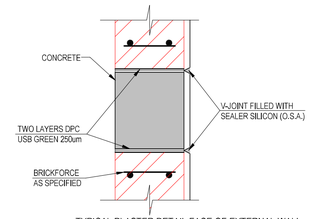
REINFORCING PLACEMENT DETAIL
NTS



SUPPORTING CONCRETE ON BRICKWORK
NTS



TYPICAL PLASTER DETAIL FACE OF INTERNAL WALL
NTS



TYPICAL PLASTER DETAIL FACE OF EXTERNAL WALL
NTS

No.	Date	By	Description
A	02/03/2022	N.B	FOR TENDER

REVISIONS
AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR
DATE:.....

ENGINEER
DATE:.....

CLIENT

KING CETSHWAYO
DISTRICT MUNICIPALITY

CLIENT APPROVAL

Project leader:	----	Signature :
Date:		

CLIENT DRAWING NUMBER:

ilifa 40 YEARS
AFRICA ENGINEERS

PRETORIA	012- 362 1473
KRUGERSDORP	011- 955 5334
SECUNDA	017- 634 8895
NEWCASTLE	034- 312 6464
HARRISMITH	058- 622 1297
RICHARDS BAY	035- 753 1083

RICHARDS BAY OFFICE,
21 Kingfish Creek,
MEERENSEE,
PO Box 10812,
Meerensee, 3901.

email: rbay@ilifa.biz
Web: www.ilifa.biz

SHEQ National cert
Certified: ISO 9001:2015

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Drawn :	N. Barnard	Date:	Signature :
Checked :	C. van Niekerk	Date:	Signature :
Approved: J. Scalliet Pr. Reg No.: 2020300770		Date:	Signature :

PROJECT TITLE
GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION
ZIMELA PUMPSTATIONS UPGRADING

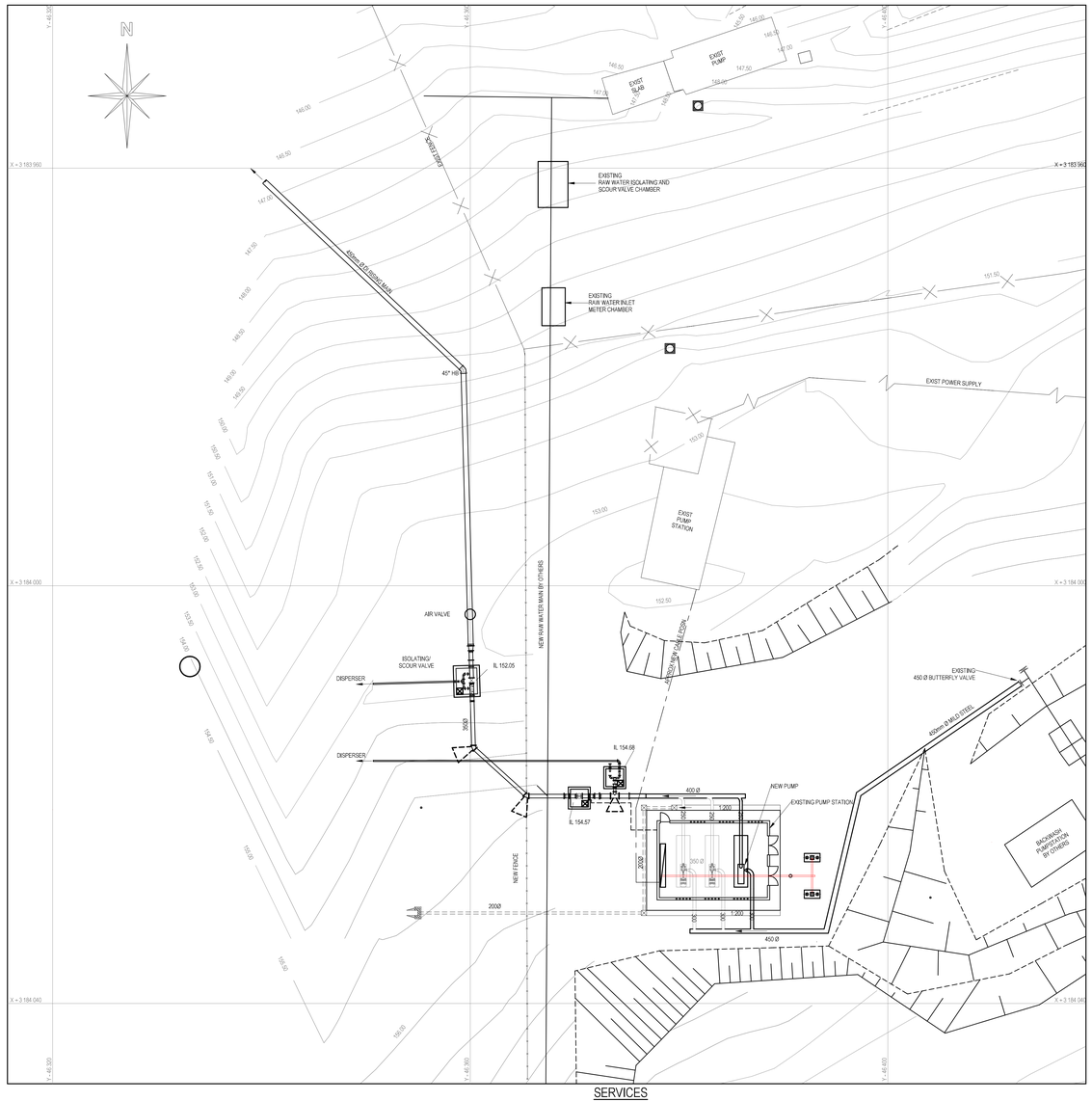
DRAWING TITLE
GENERAL NOTES

DATE:	SCALE:		SHEET NO:
MARCH 2022	AS SHOWN	A1	1 OF 1

PLAN No.

CONSULTING ENG. DRAWING NO: R10-007-06-Z2C-300-000 Rev: A

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SERVICES
SCALE 1 : 200

LEGEND

- MANHOLE (TYPE 1B COVER)
- MANHOLE WITH RAISED TOP
- CHANNEL AND SUMP
- DOWNPIPE GULLY
- SUBSOIL DRAIN
- SSIL SUBSOIL INVERT LEVEL
- CIL CHANNEL INVERT LEVEL

No.	Date	By	Description
A	29/04/2022	N B	FOR TENDER

REVISIONS

AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR
DATE:.....

ENGINEER
DATE:.....

CLIENT

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DISTRICT MUNICIPALITY

CLIENT APPROVAL

Project leader:	----	Signature :
Date:		

CLIENT DRAWING NUMBER:

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SECUNDA 017- 634 8895
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Drawn :	N. Barnard	Date:	Signature :
Checked :	C. van Niekerk	Date:	Signature :
Approved: J. Scallet Pr. Reg No.: 2020300770		Date:	Signature :

PROJECT TITLE

GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION

ZIMELA PUMPSTATIONS UPGRADING

DRAWING TITLE

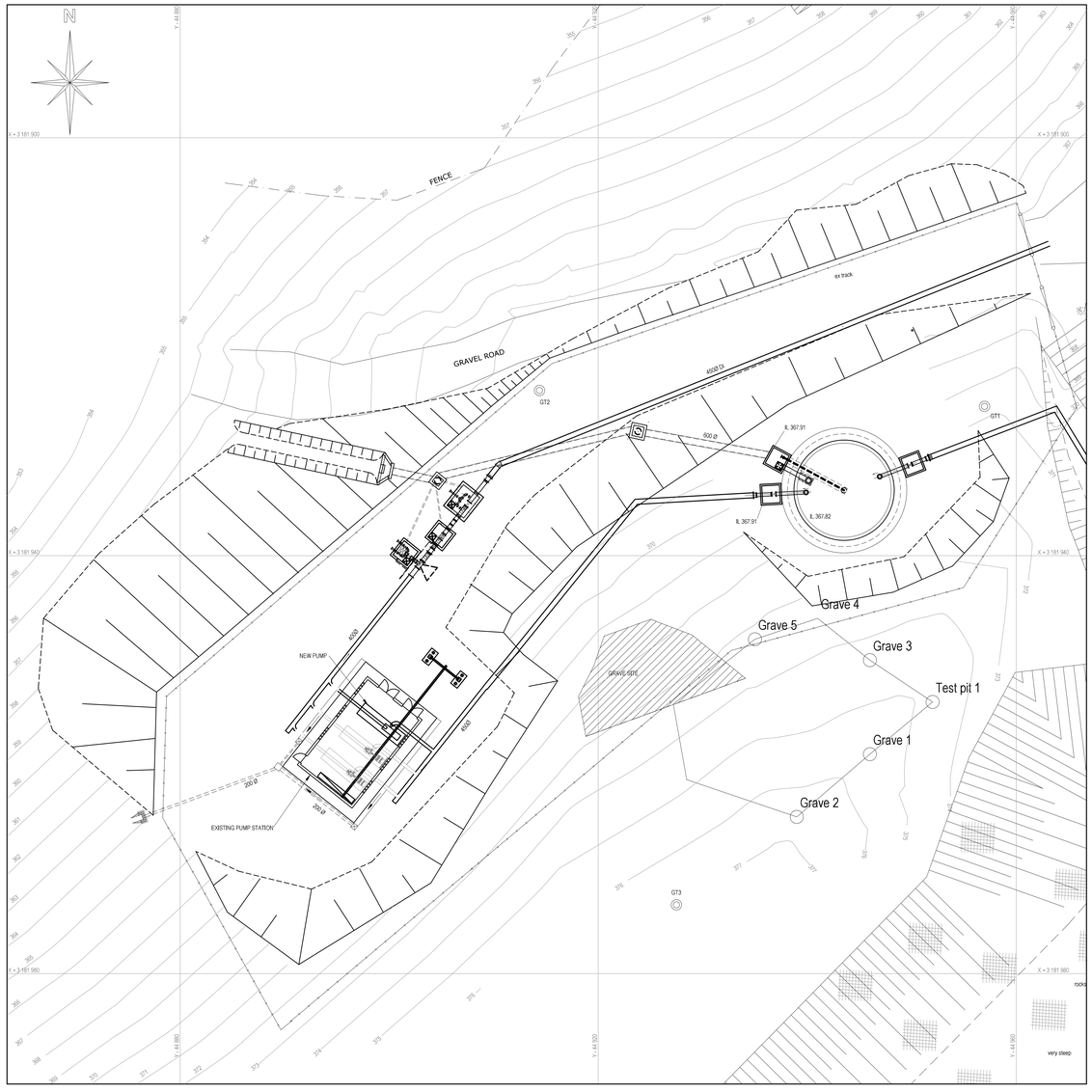
ZIMELA BOOSTER NO.1 SITE LAYOUT

DATE:	SCALE:		SHEET NO:
MARCH 2022	AS SHOWN	A0	1 OF 1

PLAN No.

CONSULTING ENG. DRAWING NO: R10-007-06-Z2C-300-001 | Rev: A

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SERVICES

SCALE 1 : 200

LEGEND

- MANHOLE (TYPE 1B COVER)
- MANHOLE WITH RAISED TOP
- CHANNEL AND SUMP
- DOWNPIPE GULLY
- SUBSOIL DRAIN
- SSIL SUBSOIL INVERT LEVEL
- CIL CHANNEL INVERT LEVEL
- DRYSTACK RETAINING WALL

No.	Date	By	Description
A	29/04/2022	N.B	FOR TENDER

REVISIONS

AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR DATE:.....

ENGINEER DATE:.....

CLIENT

KING CETSHWAYO

CLIENT APPROVAL

Project leader: ---- Signature :

Date: Signature :

CLIENT DRAWING NUMBER:

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SECUNDA 017- 634 8895
NEWCASTLE 034- 312 0464
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Drawn :	N. Barnard	Date:	Signature :
Checked :	C. van Niekerk	Date:	Signature :
Approved: J. Scallet Pr. Reg No.: 20203001770		Date:	Signature :

PROJECT TITLE

GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION

ZIMELA PUMPSTATIONS UPGRADING

DRAWING TITLE

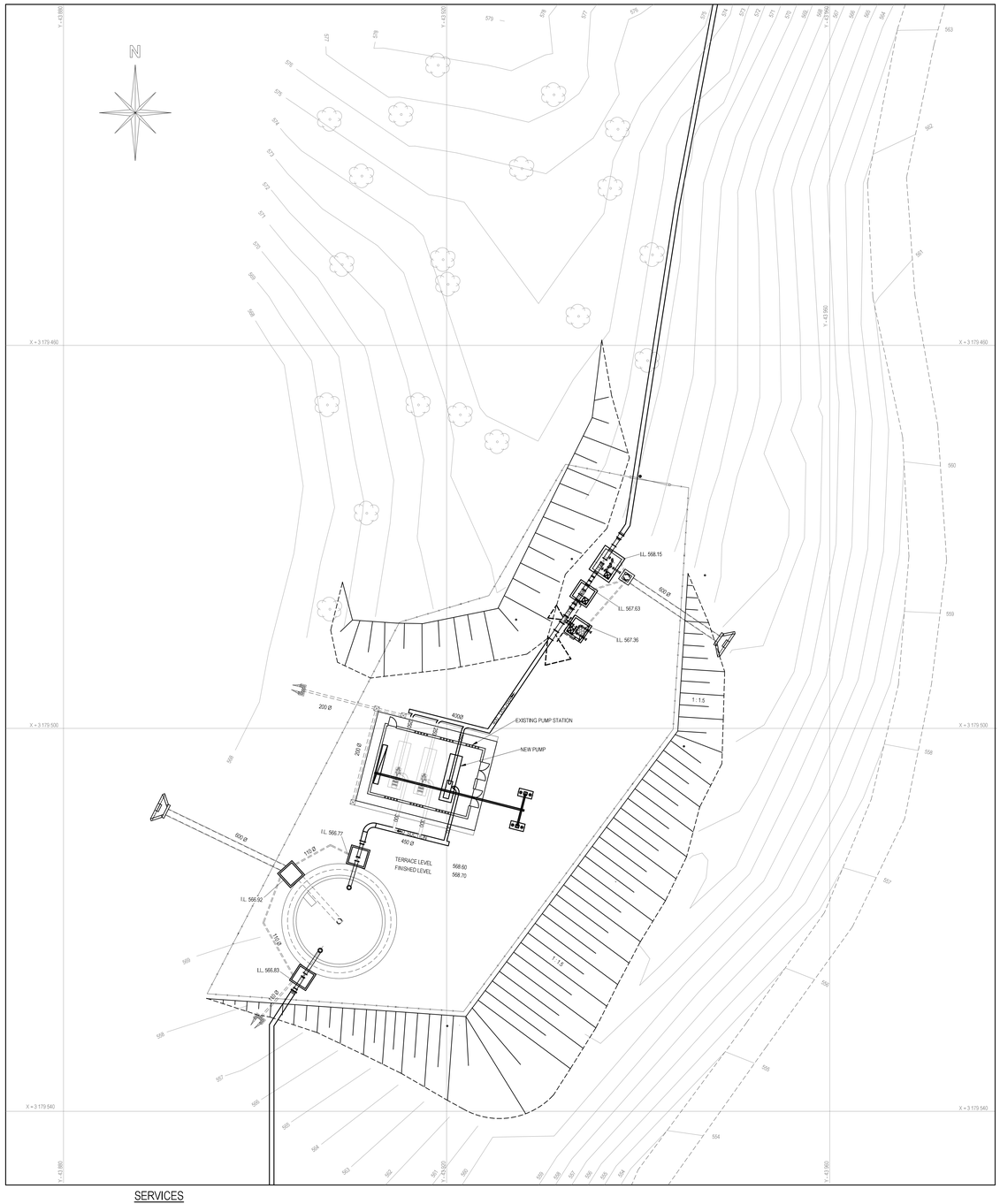
ZIMELA BOOSTER NO. 2 SITE LAYOUT

DATE:	SCALE:		SHEET NO:
MARCH 2022	AS SHOWN	A0	1 OF 1

PLAN No.

CONSULTING ENGINEERS NO: **R10-007-06-Z2C-300-002** Rev: **A**

DRGFI: \\SERVER-DATA\JOBS\Rbay Mis A1 & A2\REV 2\TITLE BLOCK A1.Rev2.dwg



SERVICES

SCALE 1 : 200

LEGEND

- MANHOLE (TYPE 1B COVER)
- MANHOLE WITH RAISED TOP
- CHANNEL AND SUMP
- DOWNPIPE GULLY
- SUBSOIL DRAIN
- SSIL SUBSOIL INVERT LEVEL
- CIL CHANNEL INVERT LEVEL

No.	Date	By	Description
A	29/04/2022	N.B	FOR TENDER

REVISIONS

AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR DATE:.....

ENGINEER DATE:.....

CLIENT

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DISTRICT MUNICIPALITY

CLIENT APPROVAL

Project leader:	----	Signature :
Date:		

CLIENT DRAWING NUMBER:

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AFRICA ENGINEERS

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Drawn :	N. Barnard	Date:	Signature :
Checked :	C. van Niekerk	Date:	Signature :
Approved: J. Scallist Pr. Reg No.: 2020/300770		Date:	Signature :

PROJECT TITLE

GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION

ZIMELA PUMPSTATIONS UPGRADING

DRAWING TITLE

ZIMELA BOOSTER NO.3 SITE LAYOUT

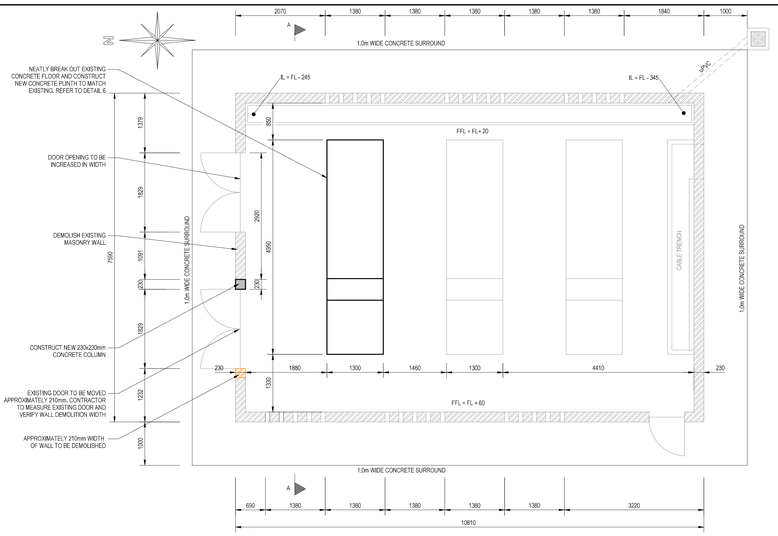
DATE:	SCALE:		SHEET NO:
MARCH 2022	AS SHOWN	A0	1 OF 1

PLAN No.

CONSULTING ENG. DRAWING

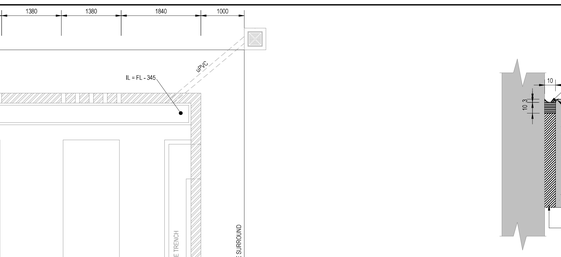
R10-007-06-Z2C-300-003 Rev **A**

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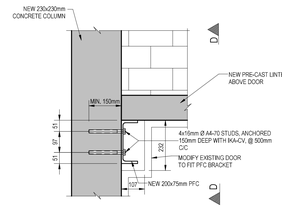
FLOOR PLAN

SCALE 1 : 50



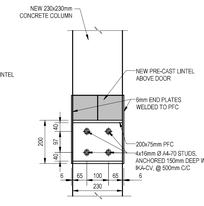
TYPICAL ISOLATION JOINT AGAINST CONCRETE COLUMN

SCALE 1 : 2



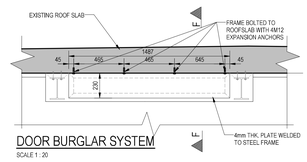
DETAIL 9

SCALE 1 : 10



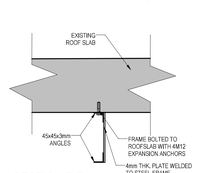
SECTION D-D

SCALE 1 : 10



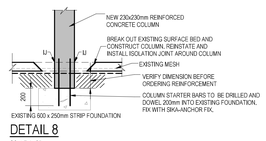
DOOR BURGLAR SYSTEM

SCALE 1 : 20



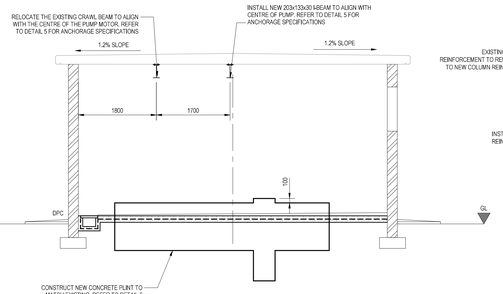
SECTION F-F

SCALE 1 : 10



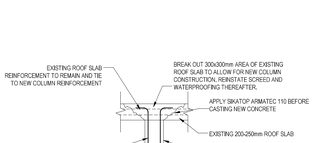
DETAIL 8

SCALE 1 : 25



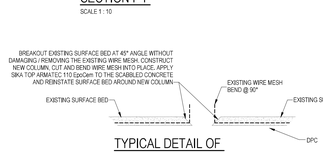
SECTION A-A

SCALE 1 : 50



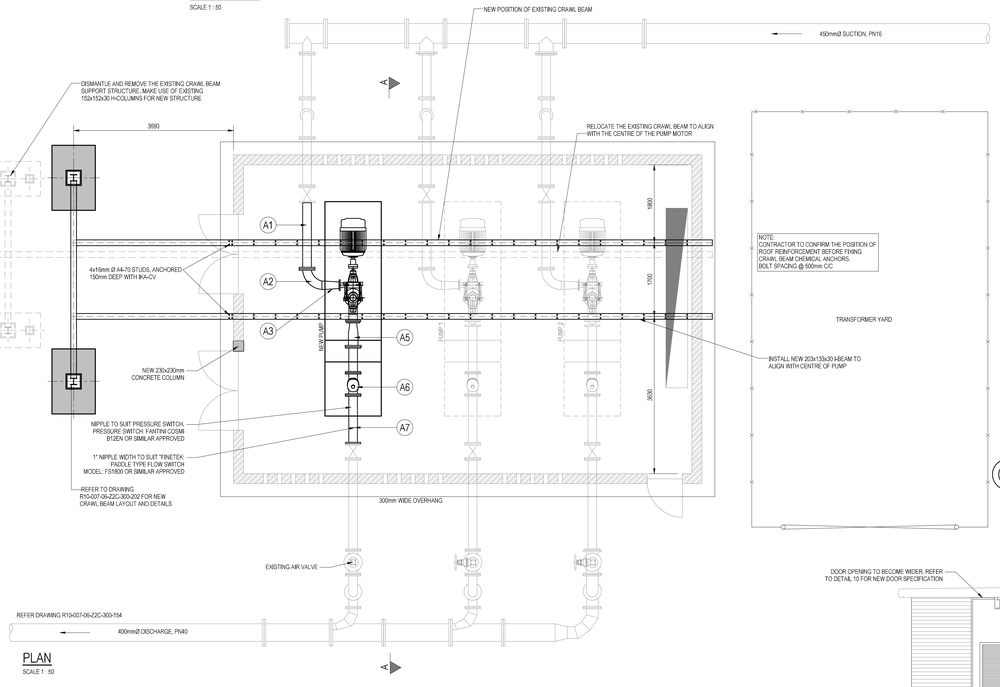
DETAIL 7

SCALE 1 : 25



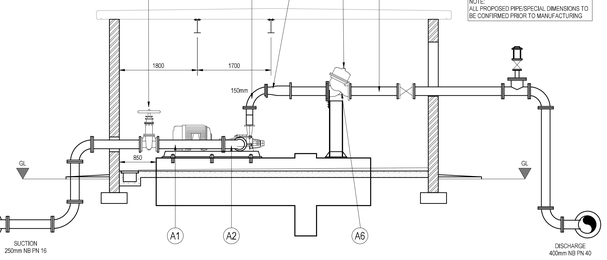
TYPICAL DETAIL OF SURFACE BED REPAIR

SCALE 1 : 25



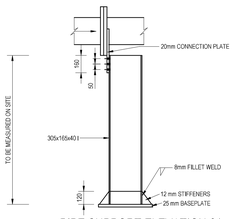
PLAN

SCALE 1 : 50



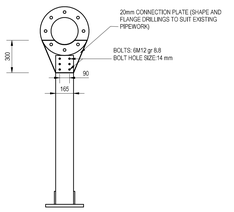
SECTION A-A

SCALE 1 : 50



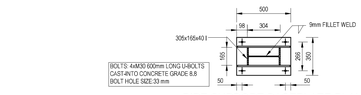
PIPE SUPPORT ELEVATION 01

NTS



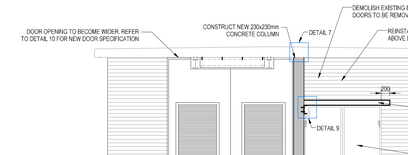
PIPE SUPPORT ELEVATION 02

NTS



PIPE SUPPORT BASEPLATE PLAN

NTS

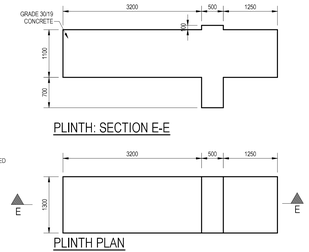


NORTH ELEVATION

SCALE 1 : 50

DETAIL 5

SCALE 1:10



PLINTH: SECTION E-E

PLINTH PLAN

BOOSTER NO. 1 SUCTION PIPEWORK SPECIALS

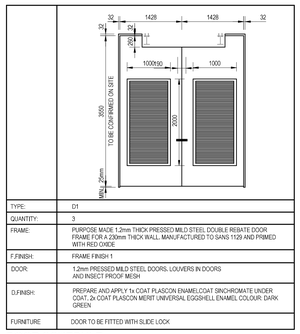
(ALL SPECIALS TO BE SUITABLE FOR 1.6 MPa WORKING PRESSURE)

ITEM	NO.	DIAMETER	DETAILS	DESCRIPTION
A1	2	250	FL, LF, 1530	250 Ø STEEL PIPE, ±1530mm LONG, FLANGED ONE END AND PLAIN ENDED FOR CUTTING WITH LOOSE FLANGE ON OTHER END. (LENGTH TO BE CONFIRMED ON SITE)
A2	5	250	380, 100, 380, 150, FL	250 Ø STEEL SEGMENTED BEND WITH 100mm EXTENSIONS ON BOTH ENDS. FLANGED BOTH ENDS.
A3	2	250/200	478, 100, 100, 200Ø, FL, LF, 250Ø, 378	250/200 Ø STEEL REDUCER, ±378mm LONG INCLUDING 100mm FLANGED EXTENSION OF 200Ø PIPE AND 100mm EXTENSION OF 250Ø PIPE PLAIN ENDED FOR CUTTING WITH LOOSE FLANGE. (LENGTH TO BE CONFIRMED ON SITE)

BOOSTER NO. 1 DELIVERY PIPEWORK SPECIALS

(ALL SPECIALS TO BE SUITABLE FOR 4 MPa WORKING PRESSURE)

ITEM	NO.	DIAMETER	DETAILS	DESCRIPTION
A4	2	150	300, 225, FL	150 Ø STEEL SEGMENTED BEND WITH 100mm EXTENSION ON ONE END. FLANGED BOTH ENDS
A5	2	150/200	153, 100, 330, 150Ø, 200Ø, FL, LF, 583	150/200 Ø STEEL REDUCER x583mm LONG INCLUDING 100mm FLANGED EXTENSION OF 150Ø PIPE AND 330mm EXTENSION OF 200Ø PIPE PLAIN ENDED FOR CUTTING WITH LOOSE FLANGE. (LENGTH TO BE CONFIRMED ON SITE)
A6	2	200	STANDARD ITEM	200 Ø BERMAD CONTROL VALVE. FLANGED BOTH ENDS.
A7	2	200	FL, LF, 1120	200 Ø STEEL PIPE, ±1120mm LONG, FLANGED ONE END AND PLAIN ENDED FOR CUTTING WITH LOOSE FLANGE ON OTHER END. (LENGTH TO BE CONFIRMED ON SITE)



TYPE:	D1
QUANTITY:	3
FRAME:	PURPOSE MADE 1.2mm THICK PRESSED MILD STEEL DOUBLE REBATE DOOR FRAME FOR A 230mm THICK WALL, MANUFACTURED TO SANS 1129 AND PRIMED WITH RED OXIDE.
F.FINISH:	FRAME FINISH 1
DOOR:	1.2mm PRESSED MILD STEEL DOORS. LOUVERS IN DOORS AND INSECT PROOF MESH
D.FINISH:	PREPARE AND APPLY 1x COAT PLASCON ENAMELCOAT SINCHROMATE UNDER COAT, 2x COAT PLASCON MERIT UNIVERSAL EGGSHELL ENAMEL COLOUR: DARK GREEN
FURNITURE	DOOR TO BE FITTED WITH SLIDE LOCK

NOTE:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO MANUFACTURING.
2. ALL DIMENSIONS TO BE CONFIRMED ON SITE

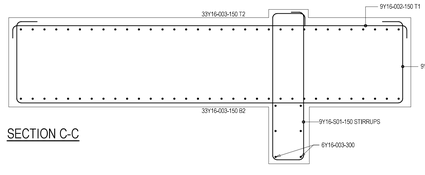
DOOR SCHEDULE

SCALE 1 : 50

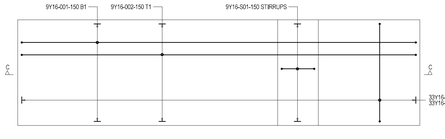
MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUM BER	MARK	S C	BENDING A	B	C	D	E#
Plinth	1	9	Y16	7300	9	001	55	300	1000	4850	1000	300
		9	Y16	5100	9	002	35	4850				
		72	Y16	1450	72	003	35	1200				
		9	Y16	4050	9	501	60	1800	400			
Column		4	Y16	1100	4	004	20	1100				
		4	Y16	4200	4	005	34	4050				
		21	Y10	750	21	502	60	150	150			
		5	Y10	600	5	503	60	120	120			

	8	10	12	16	20	25	32	40	TOT
R									
Y			12		439				451
TOT			12		439				451

Date
Del. by
Ref Dwg
Job No



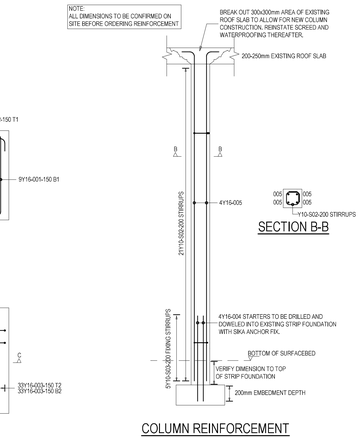
SECTION C-C



PLINTH REINFORCEMENT

DETAIL 6

SCALE 1 : 50



SECTION B-B

COLUMN REINFORCEMENT

NOTES:

STEEL:-

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF ANY STEEL WORK.
2. GRADE OF STEEL: S355J0 GALVANISED.
3. GRADE OF CONCRETE: 30MPa.
4. ALL BOLTS TO BE GRADE 8.8 GALVANISED.

HOLD POINTS:-

1. DCP TEST TO BE CONDUCTED BY ENGINEER ON BASE LAYERWORKS TO ENSURE THE REQUIRED BEARING CAPACITY HAS BEEN ACHIEVED.
2. ENGINEER TO INSPECT AND APPROVE ALL REINFORCEMENT PRIOR TO CASTING OF THE PLINTH AND COLUMN
3. CONTRACTOR TO PROVIDE MATERIAL CERTIFICATES FOR STRUCTURAL STEEL AND BOLTS.

No.	Date	By	Description
A	29/04/2022	N.B	FOR TENDER

REVISIONS

AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR DATE:.....

ENGINEER DATE:.....

CLIENT

KING CETSHWAYO DISTRICT MUNICIPALITY

CLIENT APPROVAL

Project leader: ---- Signature:

Date:

CLIENT DRAWING NUMBER:

ilifa 10 YEARS AFRICA ENGINEERS

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SECUNDA 017- 634 8856
NEWCASTLE 034- 312 6454
HARRISMITH 058- 622 1251
RICHARDS BAY 035- 753 1083

RICHARDS BAY OFFICE, 21 Kingfish Creek, MEERENSEE, PO Box 10812, Meerensee, 3901.

email: rbay@ilifa.biz
Web: www.ilifa.biz

SHEQ National cert Certified: ISO 9001:2015

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Designed:	C. van Niekerk	Date:	Signature:
Drawn:	N. Barnard	Date:	Signature:
Checked:	C. van Niekerk	Date:	Signature:
Approved: J. Scallet Pr. Reg No.: 20210307770		Date:	Signature:

PROJECT TITLE

GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION

ZIMELA PUMP STATION UPGRADING

DRAWING TITLE

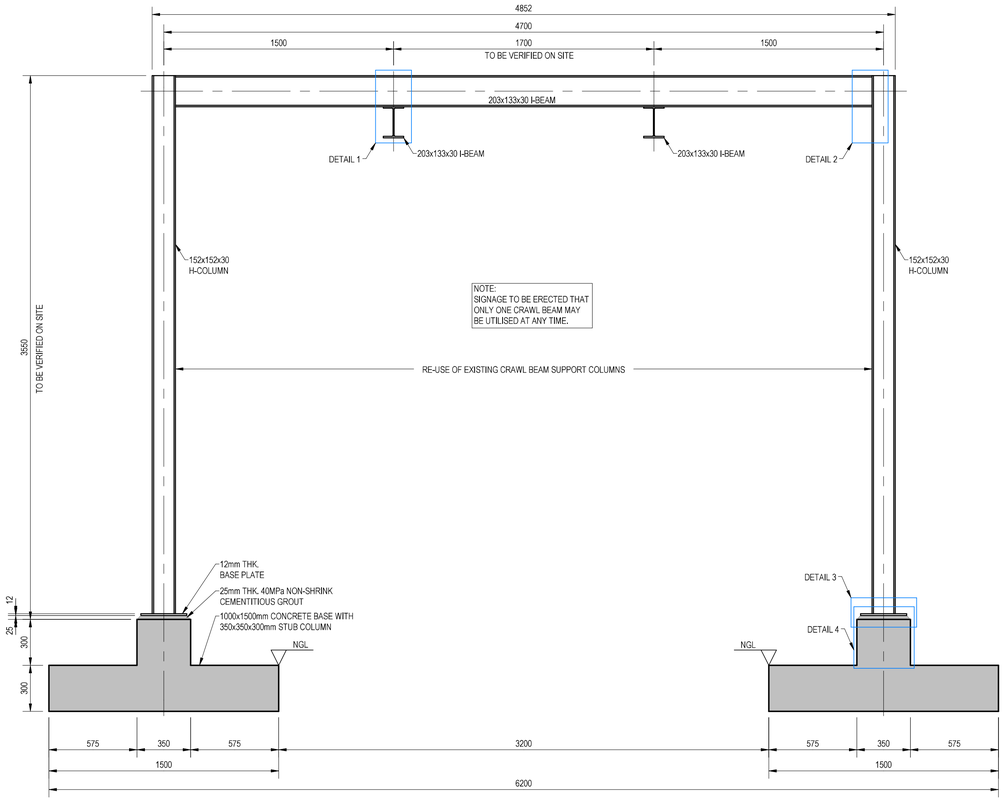
PUMP STATION PLAN AND SECTIONS

DATE:	SCALE:	SHEET NO
MARCH 2022	AS SHOWN	A0 — 1 OF 1

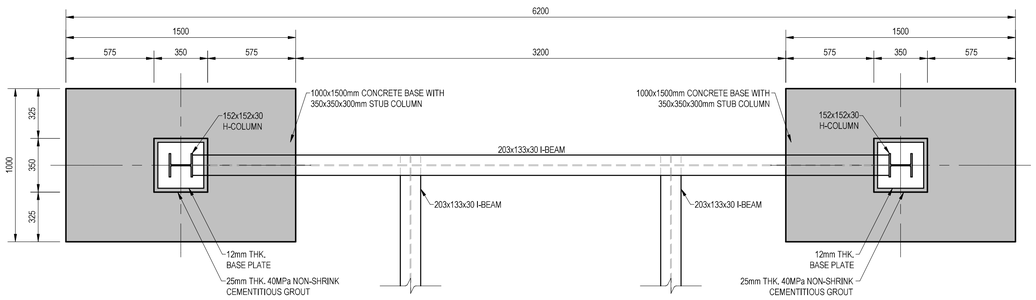
PLAN No.

CONSULTING ENGINEERS: R10-007-06-Z2C-300-151 — Rev: A

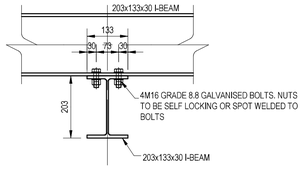
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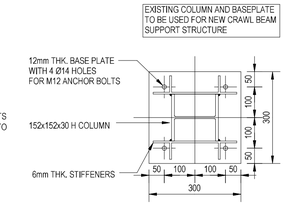
SECTION
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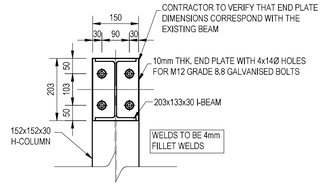
LAYOUT
SCALE 1:20



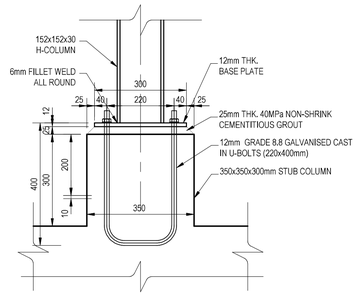
DETAIL 1 BEAM TO BEAM CONNECTION
SCALE 1:10



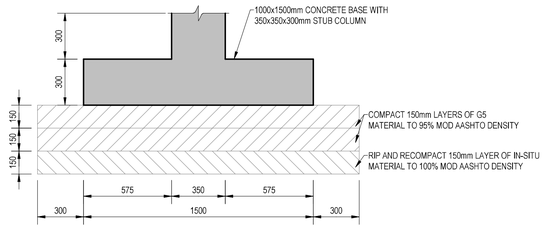
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SCALE 1:10



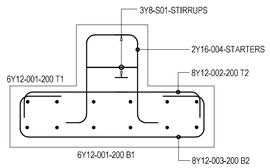
DETAIL 2
SCALE 1:10



DETAIL 4



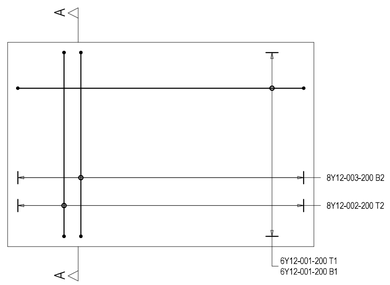
FOUNDATION LAYERWORKS
SCALE 1:20



SECTION A-A

MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUM-BER	MARK	S C	BENDING A	B	C	D	E/r
BASE	2	12	Y12	1600	24	001	35	1400				
		8	Y12	1100	16	002	35	900				
		8	Y12	1600	16	003	55	200	200	900	200	200
		2	Y16	1450	4	004	53	200	480	250	480	200
		3	Y8	1150	6	S01	60	250	250			

	8	10	12	16	20	25	32	40	TOT
R									
Y	3		72	9					84
TOT	3		72	9					84



BASE REINFORCEMENT

NOTES:

STEEL:-

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF ANY STEEL WORK.
2. GRADE OF STEEL: S355JR GALVANISED.
3. GRADE OF CONCRETE: 30MPa.
4. ALL BOLTS TO BE GRADE 8.8 GALVANISED.

HOLD POINTS:-

1. DCP TEST TO BE CONDUCTED BY ENGINEER ON BASE LAYERWORKS TO ENSURE THE REQUIRED BEARING CAPACITY HAS BEEN ACHIEVED.
2. ENGINEER TO INSPECT AND APPROVE ALL REINFORCEMENT PRIOR TO CASTING OF THE BASES.
3. CONTRACOR TO PROVIDE MATERIAL CERTIFICATES FOR STRUCTURAL STEEL AND BOLTS.

No.	Date	By	Description
A	29/04/2022	N.B	FOR TENDER

REVISIONS

AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR
DATE:.....

ENGINEER
DATE:.....

CLIENT

KING CETSHWAYO
DISTRICT MUNICIPALITY

CLIENT APPROVAL

Project leader: ----- Signature :

Date:

CLIENT DRAWING NUMBER:

ilifa 40 YEARS
AFRICA ENGINEERS

PRETORIA 012- 362 1473
KRUGERSDORP 011- 955 5334
SECUNDA 017- 634 8895
NEWCASTLE 034- 312 0464
HARRISMITH 058- 622 1297
RICHARDS BAY 035- 753 1083

RICHARDS BAY OFFICE,
21 Kingfish Creek,
MEERENSEE,
PO Box 10812,
Meerensee, 3901.

email: rbay@ilifa.biz
Web: www.ilifa.biz

SHEQ National cert
Certified: ISO 9001:2015

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OTHER THAN THAT FOR WHICH IT IS SPECIALLY FURNISHED, AND/OR,
THE INSTALLATION AND/OR MAINTENANCE OF EQUIPMENT TO WHICH ITS
REFERS

Designed :	S. Dhanri	Date:	Signature :
Drawn :	N. Barnard	Date:	Signature :
Checked :	B. Badenhorst	Date:	Signature :
Approved: M. Enslin Pr. Reg No.: 2019300363		Date:	Signature :

PROJECT TITLE

GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION

ZIMELA PUMP STATION UPGRADING

DRAWING TITLE

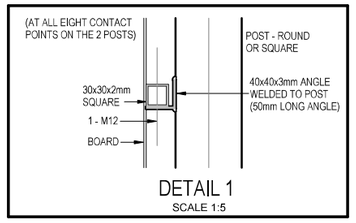
CRAWL BEAM LAYOUT, SECTIONS AND DETAILS

DATE:	SCALE:		SHEET NO:
MARCH 2022	AS SHOWN	A1	1 OF 1

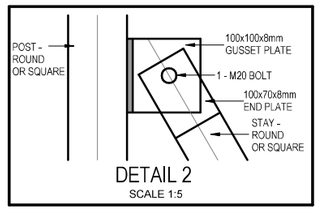
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CONSULTING ENG. DRAWING NO: R10-007-06-Z2C-300-202 Rev A

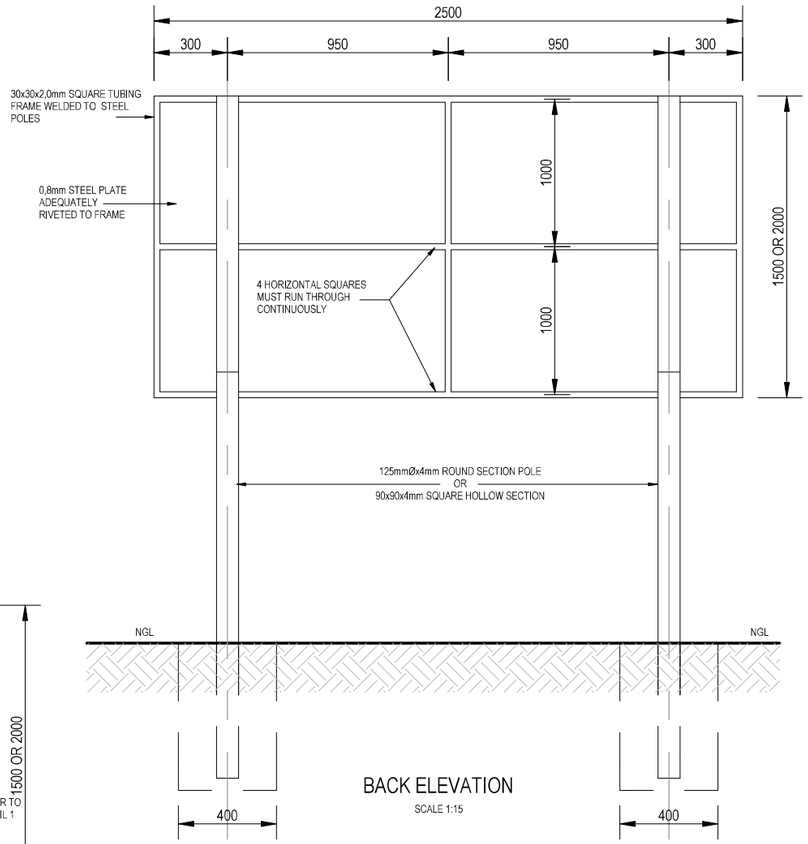
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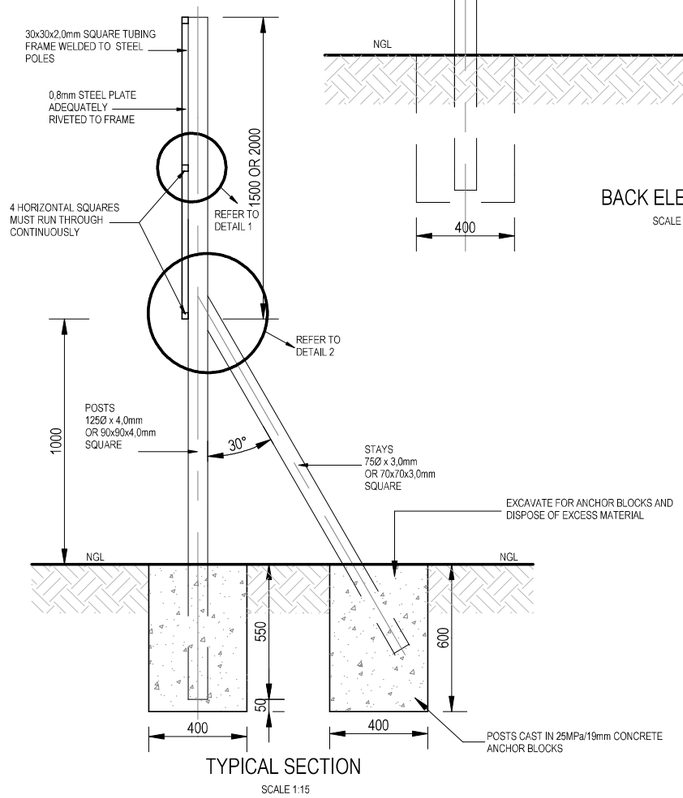
DETAIL 1
SCALE 1:5



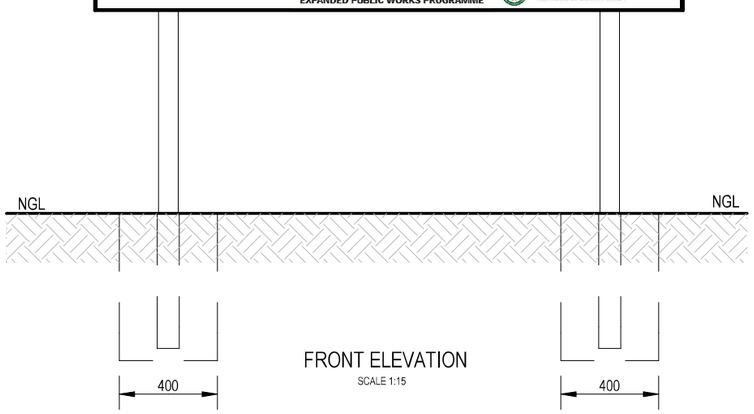
DETAIL 2
SCALE 1:5



BACK ELEVATION
SCALE 1:15



TYPICAL SECTION
SCALE 1:15



FRONT ELEVATION
SCALE 1:15

KING CETSHWAYO	**KING CETSHWAYO DISTRICT MUNICIPALITY**
PROJECT DESCRIPTION	**GREATER MTHONJANENI SUB-SUPPLY AREA 4: BULK WATER SUPPLY IMPROVEMENTS: PUMP STATIONS**
ILIFA AFRICA ENGINEERS	**CONSULTING ENGINEERS:** **ILIFA AFRICA ENGINEERS (Pty) Ltd**
	CONTRACTOR :
PROJECT TYPE :	**INFRASTRUCTURE**
EXPANDED PUBLIC WORKS PROGRAMME	water & sanitation, Department: Water and Sanitation, REPUBLIC OF SOUTH AFRICA

No.	Date	By	Description
A	06/06/2022	N.B	FOR TENDER

REVISIONS

AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR
DATE:.....

ENGINEER
DATE:.....

CLIENT

KING CETSHWAYO DISTRICT MUNICIPALITY

CLIENT APPROVAL

Project leader:	----	Signature :	
Date:			

CLIENT DRAWING NUMBER:

ilifa 10 YEARS
AFRICA ENGINEERS

PRETORIA	012- 362 1473	RICHARDS BAY OFFICE,
KRUGERSDORP	011- 955 5334	21 Kingfish Creek,
SECUNDA	017- 634 8895	MEERENSEE,
NEWCASTLE	034- 312 6464	PO Box 10812,
HARRISMITH	058- 622 1297	Meerensee, 3901.
RICHARDS BAY	035- 753 1083	

email: rbay@ilifa.biz
Web: www.ilifa.biz

SHEQ National cert
Certificate: ISO 9001:2015

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Designed :	N. Phakathi	Date:	Signature :
Drawn :	N. Barnard	Date:	Signature :
Checked :	C. van Niekerk	Date:	Signature :
Approved: C. Van Niekerk Pr. Reg No.: 2018300244		Date:	Signature :

PROJECT TITLE

GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION

ZIMELA PUMPSTATIONS UPGRADING

DRAWING TITLE

TYPICAL DETAIL: SIGN SUPPORT STRUCTURE

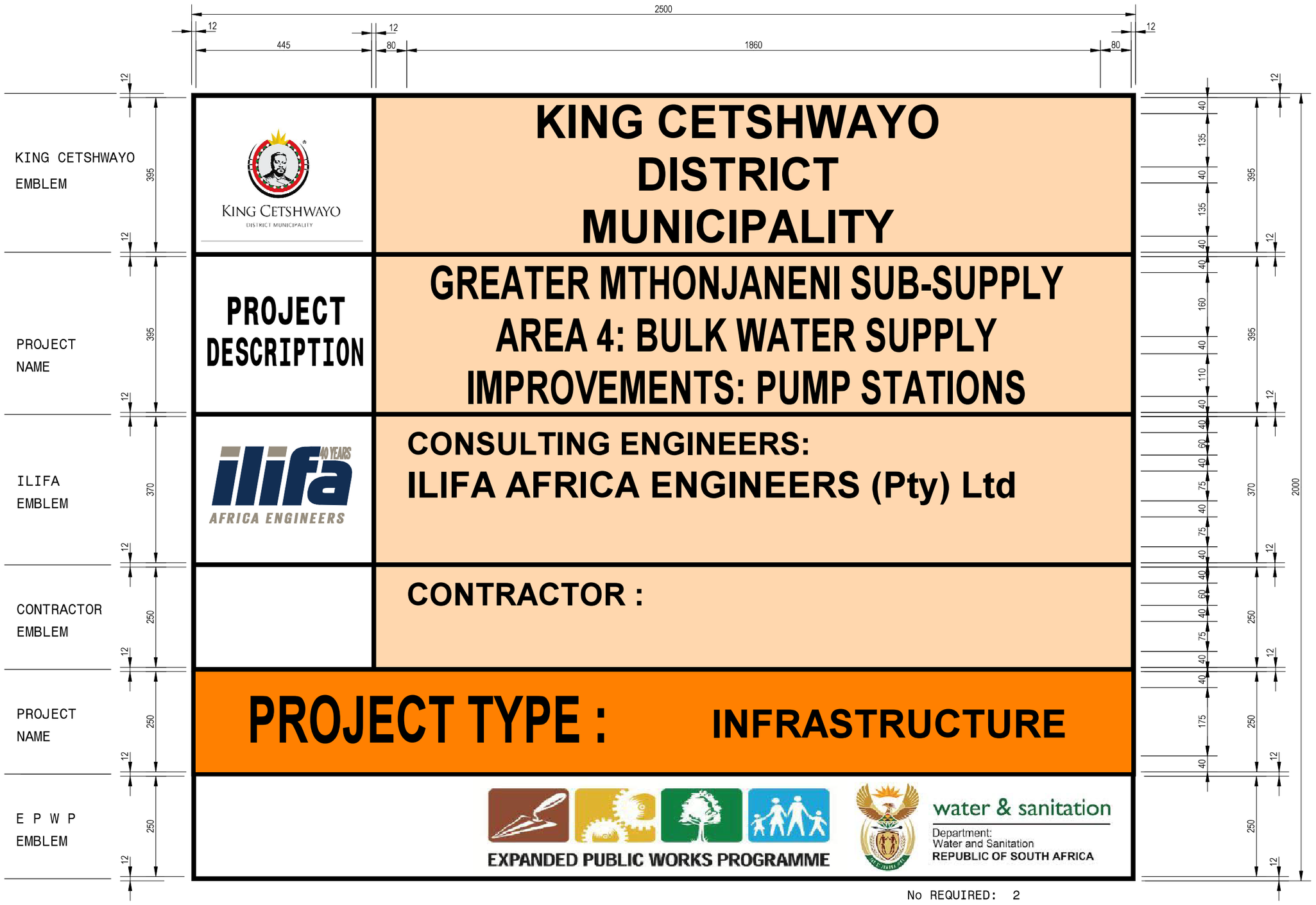
DATE:	SCALE:		SHEET NO:
JUNE 2022	1 : 10	A1	1 OF 1

PLAN No.

CONSULTING ENG. DRAWING NO: R10-007-06-Z2C-300-262

Rev: A

PRINT: I:\USER DATA\ 0000\New file A1 & A3\REV A\TITLE BLOCK A1.Dwg Area



CONSTRUCTION NAME BOARD

SCALE 1:10

No REQUIRED: 2

BACKGROUND: AS PER EPWP COLOUR PALETTE.

BORDER: 12 mm BLACK.

LETTERS: CAPITAL LETTERS, SERIES "C", MATT-BLACK. EXCEPT FOR EMBLEMS (COINCIDES WITH THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL.)

EMBLEMS: MAY ONLY BE USED BY MEMBERS AND MUST BE DISPLAYED IN FULL COLOUR.

NOTES: SITTING AND ERECTION METHODS, AS DIRECTED BY THE PROJECT MANAGER

No.	Date	By	Description
A	06/09/2022	NB	FOR TENDER PURPOSES

REVISIONS
AS BUILT DRAWINGS

TECHNICAL CO-ORDINATOR DATE:.....

ENGINEER DATE:.....

CLIENT

KING CETSHWAYO
DISTRICT MUNICIPALITY

CLIENT APPROVAL

Project leader:	----	Signature :
Date:		

CLIENT DRAWING NUMBER:

ilifa 40 YEARS
AFRICA ENGINEERS

PRETORIA 012- 362 1473
KRUGERSDORP 011- 955 5334
SECUNDA 017- 634 8895
NEWCASTLE 034- 312 6464
HARRISMITH 058- 622 1297
RICHARDS BAY 035- 753 1083

RICHARDS BAY OFFICE,
21 Kingfish Creek,
MEERENSEE,
PO Box 10812,
Meerensee, 3901.

email: rbay@ilifa.biz
Web: www.ilifa.biz

SHEQ National cert
Certified: ISO 9001:2015

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Designed :	N. Phakathi	Date:	Signature :
Drawn :	N. Barnard	Date:	Signature :
Checked :	C. van Niekerk	Date:	Signature :
Approved: C. Van Niekerk Pr. Reg No.: 2018300244		Date:	Signature :

PROJECT TITLE

GREATER MTHONJANENI SUB SUPPLY AREA 4 PHASE 2

PROJECT DESCRIPTION

ZIMELA PUMPSTATIONS UPGRADING

DRAWING TITLE

TYPICAL DETAIL: EPWP SIGN BOARD

DATE:	SCALE:		SHEET NO:
JUNE 2022	1 : 10	A1	1 OF 1

PLAN No.

CONSULTING ENG. DRAWING NO: **R10-007-06-Z2C-300-263** Rev: **A**

DRIVE: L:\USER DATA\LOGOS\New Ilifa A1 & A3\REV 2\TITLE BLOCK-A1 Rev2.dwg

ANNEXURE B: PCI POLICY

MUNICIPAL SCHEME

Active

INSURANCE POLICY SCHEDULE

THE INSURED DETAILS

The Insured:	King Cetshwayo District Municipality Including all subsidiary and associated companies for their respective rights and interests.
Insured Company Reg. No:	4370253637
VAT Number:	4370253637
The business of the Insured:	Local Authority and any other activity undertaken by the Insured.
Situation of premises:	All premises as stated in each section owned, occupied or used by the insured for the purpose of the business, all situated within the territorial limits.
Territorial Limits:	South Africa, Namibia, Lesotho, Swaziland, Botswana, Zimbabwe, Malawi and Mozambique but worldwide in respect of property and money in the possession of directors and employees, their own or the Insureds whilst travelling on the business of the Insured
Contact details:	Tel: +27-35-799-2660 Fax: E-mail: nolo@gmail.com
Postal address:	Private Bag X1025, ,Richards Bay, 3900
Contact Person:	None

POLICY DETAILS

Guardrisk Policy Number:	GRMUM2471199
Master Policy Number:	
Broker Policy Number:	
Inception date:	01 July 2019
Payment terms:	Annual
Period of Insurance:	A) From 01 July 2020 to 30 June 2021 both dates inclusive B) any subsequent period for which the Company may accept or agree to accept payment for the renewal of the policy or any section thereof
Renewal or anniversary date:	01 July 2021
Due date of premium:	1st Day Of Month
Claims:	In the event of a claim you can contact your broker or 011 025 6566
Endorsement effective date:	18 September 2020
Endorsement reason:	W.E.F 18/09/2020 - 2x 2020 Power Star 18000L Water Tankers added to HVV

BROKER DETAILS

Broker:	Sankofa Insurance Brokers (Pty) Ltd|Mike Gumenge
Agency Number:	60392
Broker Company Registration No:	
VAT Number:	4370253637
FSP licence Number:	23671
Contact details:	Tel: 011 025 6566 Fax: E-mail: mgumenge@sankofaib.co.za
Contact Person:	
Address:	1st Floor AHS ,House 325 ,Rivonia Boulevard

INSURER (THE COMPANY) DETAILS

The Insurer / The Company:	GUARDRISK INSURANCE COMPANY LIMITED
Contact details:	Tel: +27 11 669-1000 Fax: +27 12 684-5866 E-mail: guardrisk@guardrisk.co.za Contact Person:
Address:	PO Box 786015,Sandton,2146
FSP license number:	75
Insurer Company Registration No:	1992/001639/06
VAT Number:	4250138072

Signed on behalf of the Insurer on this Monday, 01 February 2021

GUARDRISK TAILORED RISK SOLUTIONS
A member of Momentum Metropolitan

MUNICIPAL SCHEME

Active

INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

PREMIUM SCHEDULE AND INDEX OF COVER

Policy Sections Available	Section taken	Additional / Refund Premium (R's)	Annual Premium (R's) Without LTA	Annual Premium (R's) After applying LTA
Combined	Yes	0,00	1 027 002,57	924 302,31
Business Interruption	Yes	0,00	1 650,00	1 485,00
Office Contents	Yes	0,00	4 853,70	4 368,33
Accounts Receivable	No	0,00	0,00	0,00
Business All Risks	Yes	0,00	377 990,92	340 191,83
Theft	Yes	0,00	5 000,00	4 500,00
Glass	Yes	0,00	67 500,00	60 750,00
Money	Yes	0,00	4 000,00	3 600,00
Fidelity	No	0,00	0,00	0,00
Specified Motor	No	0,00	0,00	0,00
Motor Fleet	Yes	0,00	1 125 500,00	1 012 950,00
Motor Fleet Liability	Yes	423,12	57 600,00	51 840,00
Motor vehicles exceeding R 500 000	Yes	48 324,66	1 677 206,41	1 677 206,41
Accidental Damage	Yes	0,00	131 203,93	118 083,54
Goods in Transit	Yes	0,00	400,00	360,00
Group Personal Accident	Yes	0,00	22 050,00	19 845,00
Stated Benefits	Yes	0,00	121 328,31	109 195,48
Miscellaneous	No	0,00	0,00	0,00
Electronic Equipment	Yes	0,00	11 325,72	10 193,15
Machinery Breakdown	Yes	0,00	19 440,00	17 496,00
Machinery Breakdown Business Interruption	No	0,00	0,00	0,00
Roadside Assistance	No	0,00	0,00	0,00
Public Liability	Yes	0,00	75 000,00	67 500,00
Employers Liability	Yes	0,00	500,00	450,00
Municipal Police Liability	Yes	0,00	0,00	0,00
Excess Layer Liability	Yes	0,00	75 000,00	67 500,00
Policy Premium:		**48 747,78**	**4 804 551,56**	**4 491 817,05**
SASRIA Premium:		**394,78**	**258 418,85**	**258 418,85**
Total Payment		**49 142,56**	**5 062 970,41**	**4 750 235,90**

Policy premium includes commission to the broker to the amount of R 734 837,76 including 15% VAT.

The Physical Address of King Cetshwayo District Municipality is:
King Cetshwayo House, Kruger Rand,
Veld And Vlei, Richards Bay, 3900

In terms of Binding General Ruling No. 14 this document constitutes a tax invoice as contemplated in section 20(7) or 21(5) (as the case may be) of the VAT Act No. 89 of 1991. Proof of payment of the premium (for example a bank statement) and the possession of this policy document will suffice as a valid tax invoice for the purpose of claiming an input tax deduction.

Excesses are not subject to VAT.

GUARDRISK TAILORED RISK SOLUTIONS
A member of Momentum Metropolitan

MUNICIPAL SCHEME

Active

INSURANCE POLICY SCHEDULE

Policy Number:	GRMUM2471199	**Insured:**	King Cetshwayo District Municipality
Effective Date:	18 September 2020	**Print Date:**	01 February 2021

Notes:

1. All sums insured are inclusive of VAT at 15% with the exception of cover arranged in terms of the following policy section(s): Stated Benefits and Group Personal Accident.
2. All premiums are inclusive of VAT at 15% and this Schedule serves as a tax invoice in terms of section 20 of the VAT Act in respect of each premium paid.
3. At no time shall the broker earnings exceed the maximum permitted in terms of legislation.
4. Complaints procedure:
   Complaints relating to our services may be addressed to our Compliance Officer, whose contact details are as follows:
   Guardrisk Insurance Company Limited
   PO Box 786015
   Sandton
   2146
   Email: compliance@guardrisk.co.za
   Telephone Number: 011 669 1104

GUARDRISK
TAILORED RISK SOLUTIONS
A member of Momentum Metropolitan

INSURANCE POLICY SCHEDULE

Policy Number:	GRMUM2471199	**Insured:**	King Cetshwayo District Municipality
Effective Date:	18 September 2020	**Print Date:**	01 February 2021

General Conditions

Long Term Agreement (LTA)

Where any section of this policy is stated in the Specification to be subject to a long term agreement, it is understood that the LTA agreement will be subject to the insured undertaking to have the policy remain in force for a period of 3 years, and should the insured withdraw prior to the 3 year period the Insured shall refund the total discounts allowed during the period for which the undertaking was in force to the Insurers.

CLAIMS NOTIFICATION PROCESS & CONDITION:

CONTACT NUMBER 0860 222 555

Claims Contract Centre – 7am-5pm, for all general inquiries

GENERAL CLAIMS NOTIFICATION - notifyclaims@guardrisk.co.za

MOTOR VEHICLE TOWING ASSISTANCE - available 24/7, 365 days a year
Select option 1

MOTOR GLASS CLAIMS - available 24/7, 365 days a year
Select option 2

OPTIONAL ROADSIDE ASSISTANCE (mechanical breakdowns, flat battery, run out of fuel etc.)
CONTACT NUMBER 0861 266 662

Please note Guardrisk General Insurance has contracted with preferred suppliers in order to procure preferential agreed pricing and service standards. Should the above process not be followed, claims may be limited to the preferential agreed pricing and the insured may be held liable for any shortfalls to suppliers who fall outside the ambit of our agreed contracts

Road Cover Road Accident Fund (RAF) Benefit:

It is hereby declared that the Road Cover service is now included at no additional cost.
This benefit provides a dedicated legal practitioner to formulate the insured persons potential Road Accident Fund claim, manage the entire claim process from start to finish and
effectively reduce the turnaround time. The insured receives 100% of the Road Accident Fund pay out, as there are no charges or additional fees.

Insured persons definition: any occupant of a vehicle insured under this policy

Procedure to access services:

Phone Road Cover (0860 726 837) during office hours 8:30 to 4:30 weekdays or claims@roadcover.co.za and give the particulars of your case. Your
membership will be verified. You will be given a case number and referred to an assessing Road Cover legal practitioner for an assessment.

GUARDRISK TAILORED RISK SOLUTIONS
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INSURANCE POLICY SCHEDULE

Policy Number:	GRMUM2471199	**Insured:**	King Cetshwayo District Municipality
Effective Date:	18 September 2020	**Print Date:**	01 February 2021

Limits of Insurers' liability

The Insurers shall be liable for all loss up to the limit of liability / compensation or sum insured stated in the Specification.

(a) separately in connection with each and every occurrence
(b) in excess of the first amounts payable

If, in the Specification of this policy, the sum insured/limit of indemnity is left blank or has no monetary amount stipulated against it, no indemnity is provided in respect of such event or circumstance.

Notwithstanding anything contained to the contrary in this policy it is declared and agreed that the maximum limit of indemnity in respect of Any One Loss in respect of Damage arising from the same event at any one location shall not exceed R200 million unless specifically agreed by the Insurer. For the purposes of this provision Any One Loss shall mean Damage to Insured Property including the any consequential loss arising from such DAMAGE.

Sums Insured,

It is the condition under this section that all sum insured declared are based on a replacement value and not depreciation value, it is therefore the duty of the municipality to ensure that the sums insured as declared for insurance purposes is correct and adequate. The insurer may at any time (particularly at a claims stage) request the municipality to provide the company with a breakdown of the assets insured, failure to declare such information may lead to the insurer, at its own discretions, imposing penalties up to 30% of the claim or declining liability in its totality.

Minimum Security

(Applicable to Combined, Contents, Theft, Business All Risk and Electronic Equipment section)

It is the responsibility of the municipality to ensure that they meet the minimum security requirements of their policy where recommended, they should refer to their policy documentation for specific security requirements. If there is an alarm warranty on your policy, they must ensure they comply with the Insurers requirements with regards to the signaling, maintenance contract and Police response

DUTY TO DISCLOSE MATERIAL INFORMATION

It is hereby declared and agreed that in the event that a claim is submitted under this section, a list of all items insured under the sum insured reflected in the schedule of insurance in each category is provided to the insurer as proof of ownership and also evidence to the item(s) the municipality is claiming for. Failure to supply the insurer with such information may lead to the insurer rejecting such claim based on non-disclosure.

GUARDRISK
TAILORED RISK SOLUTIONS
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MUNICIPAL SCHEME

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INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199
Effective Date: 18 September 2020
Insured: King Cetshwayo District Municipality
Print Date: 01 February 2021

SASRIA LIMITED				
Policy Sections Available	**Coupon Number**	**Additional / Refund Premium (R's)**	**Annual Premium (R's)**	**Indicate "Yes" if incl.**
Combined		0,00	236 795,90	Yes
Business Interruption		0,00	0,00	No
Office Contents		0,00	0,00	No
Accounts Receivable		0,00	0,00	No
Business All Risks		0,00	0,00	No
Theft		0,00	0,00	No
Glass		0,00	0,00	No
Money		0,00	50,00	Yes
Fidelity		0,00	0,00	No
Motor Own Damage		394,78	21 072,95	Yes
Accidental Damage		0,00	0,00	No
Goods in Transit		0,00	500,00	Yes
Group Personal Accident		0,00	0,00	No
Stated Benefits		0,00	0,00	No
Miscellaneous		0,00	0,00	No
Electronic Equipment		0,00	0,00	No
Machinery Breakdown		0,00	0,00	No
Machinery Breakdown Business Interruption		0,00	0,00	No
Councillors's Motor SASRIA		0,00	0,00	No
Councillors Building SASRIA		0,00	0,00	No
Roadside Assistance		0,00	0,00	No
Total SASRIA		**394,78**	**258 418,85**	

Notes:
All sums insured and premiums are inclusive of 15% VAT.

SASRIA cover has been arranged in terms of a Master policy which has been issued and held by Guardrisk Insurance Company Limited (MUM Ass Mot), on behalf of SASRIA Limited.

SASRIA Policy Wordings

Follow the link below for the relevant SASRIA policy wordings. Cover is subject to policy sections selected and premium paid for the selected sections;

Material Damage

Standing Charges

Business Interruption

Working Expense

Contract Works

Motor

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Policy Number: GRMUM2471199
Effective Date: 18 September 2020
Insured: King Cetshwayo District Municipality
Print Date: 01 February 2021

DETAILS OF ALL INSURED PREMISES

Details of Physical Address of all Insured Premises

King Cetshwayo House, Kruger Rand,, VELD AND VLEI, RICHARDS BAY, 3900

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INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

COMBINED SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Unoccupied: No			
Description of Property Insured			
1. Buildings (excluding Thatch buildings or structures and property stated under item6)		73 763 065	33 193,38
2. Plant and machinery			
3. Contents			
4. Thatch buildings / structures and their contents			
5. Stock and Materials in Trade		5 730 925	2 578,91
6. Private Dwellings, Residential Units, Hotels and Flats		216 454	97,40
7. Contents of Item 6 (above)			
8. Sub-stations, mini sub-stations, transformers, etc			
9. Other (Multiple layers possible as below)			
Library and related contents			
Cemetries			
Sports and recreation facilities			
Stadiums			
Reservoirs			
All sewerage works, pump stations, etc		124 310 169	55 939,58
Property in the open			
Non- Standard structures – Mobile offices (fixed)			
All water and purification works and pump stations		1 806 081 886	812 736,85
Thatch		100 000	900,00
Other Assets/ movable		41 202 645	18 541,19
Heritage Assets		700 000	315,00
Additional perils	**Included**		
Subsidence and landslip	No		
Motor vehicles whilst parked	No		
Riot and strike (other than RSA and Namibia)	No		
Leakage of Oils, Chemicals or Other Fluids	Yes		
Wash basins and Sanitaryware	Yes		
Thatch structure unless specifically insured under item 4 of the description of insured property	No		

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Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

COMBINED SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Extensions			
Reasonable precautions	Yes	10 000	
Day One Average Basis		Non Adjustable (Default)	
(a) Escalation	No		
Specific percentage	0 %		
(b) Capital Additions (as per policy wording)	No		
Theft of immovable Property	Yes	100 000	
Malicious Damage caused by thieves	Yes	100 000	
Temporary Repair Cost	Yes		
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Unoccupied: No			
Description of Property Insured			
1. Buildings (excluding Thatch buildings or structures and property stated under item6)			
2. Plant and machinery			
3. Contents			
4. Thatch buildings / structures and their contents			
5. Stock and Materials in Trade			
6. Private Dwellings, Residential Units, Hotels and Flats			
7. Contents of Item 6 (above)			
8. Sub-stations, mini sub-stations, transformers, etc			
9. Other (Multiple layers possible as below)			
Library and related contents			
Cemetries			
Sports and recreation facilities			
Stadiums			
Reservoirs			
All sewerage works, pump stations, etc			
Property in the open			
Non- Standard structures – Mobile offices (fixed)			
All water and purification works and pump stations			

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INSURANCE POLICY SCHEDULE

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Effective Date: 18 September 2020 **Print Date:** 01 February 2021

COMBINED SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Additional perils	**Included**		
Subsidence and landslip	No		
Motor vehicles whilst parked	No		
Riot and strike (other than RSA and Namibia)	No		
Leakage of Oils, Chemicals or Other Fluids	No		
Wash basins and Sanitaryware	No		
Thatch structure unless specifically insured under item 4 of the description of insured property	No		
Extensions			
Reasonable precautions	No		
Day One Average Basis		Non Adjustable (Default)	
(a) Escalation	No		
Specific percentage	0 %		
(b) Capital Additions (as per policy wording)	No		
Theft of immovable Property	Yes		
Malicious Damage caused by thieves	Yes		
Temporary Repair Cost	Yes		
Claims preparation costs	Yes	100 000	
Interest Noted	No		
		Total Premium	**924 302,31**

General Memo and Endorsements

For the purpose of this section in respect of item 8 under the heading "*Description of property insured*", this item includes reticulation equipment which means all conductors, other infrastructure and metering equipments necessary to allow the delivery of electricity from point of connection of a distribution network service provider's assets to source of electricity supply, to the point of connection of the provider's assets to the assess of an electricity consumer of an electricity supply authority.

Thatch Risk Requirements for Municipalities

Thatch Buildings / Structures with a value in excess of R200 000

1. Lightning Protection
SABS Lightning conductor required

2. Bush Clearance
25 metres from all sides of the insured building

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3. Application of a fire retardant substance / material
Retards the spread of fire

First Amount Payable

Subject to the above (1,2,3) in place	10% of gross claim min R5 000 each and every loss
Subject to the above (1,2,3) in place	Buildings / Structures with value of R200 000 or more and where the thatch warranty is not observed the excess will be 50% of claim
Thatch Buildings / Structures with a value less than R200 000	Excess 20% of gross claim, minimum R5 000 each and every loss
All Other Claims	(Unlesss specifically defined)10% minimum R10 000 of each and every gross claim
Parked vehicles	R100 000 of each and every gross claim
Traffic signs, lights, parking meters and lampposts	10% minimum R25 000 of each and every gross claim
Unoccupied buildings (First 4 weeks of unoccupancy) after 4 weeks cover is cancelled	25% minimum R10 000 of each and every gross claim
Other	Malicious Damage: 25% of claim minimum R250 000
Other	All Transformers / Electrical / Reticulation claims:10% minimum R150 000 each and every claim
Other	HOUSEOWNERS : 5% of Gross claim min R5 000 of each and every dwelling unit

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Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

BUSINESS INTERRUPTION SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Basis of Cover			
Indemnity Period (a maximum of)			
Item 1 – Income (as defined in the policy wording)	No		
Standing Charges	No		
Uninsured Working Expenses: Purchases (less discounts received), Discounts Allowed and bad debts	Yes	5 500 000	1 485,00
Item 2 – Gross rentals	No		
Item 3 - Revenue	No		
Item 4 - Increase cost of working	No		
Item 5 - Additional increase in cost of working	No		
Item 6 - Wages	No		
Item 7 - Fines and penalties for breach of contract	No		
Extensions and Clauses			
Suppliers / Sub-contractors (specified)	No		
Suppliers / Manufacturers (unspecified)	No		
Prevention of access 15km – extended cover	No		
Customers (specified)	No		
Public utilities – insured perils	No		
Public utilities – extended cover	No		
Public telecommunications – insured perils	No		
Public telecommunications – extended cover	No		
Non-damage (Shark scare/contagious illness)	No		
Accidental damage limit	No		
Theft limit	No		
Riot and strike (other than RSA and Namibia)	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**1 485,00**

First amount payable

Other As per combined section

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Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

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OFFICE CONTENTS SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Property Insured			
Contents not otherwise insured		13 867 711	4 368,33
1. Theft or any attempt thereat			
2. All other perils			
Loss of Rent - 25 %		3 466 927,75	
Loss of Documents			
Legal Liability Documents			
Increase in Cost of Working			
Extensions	**Included**		
Subsidence and Landslip	No		
Leakage of Oils, Chemicals or other fluids	No		
Riot and strike (other than RSA and Namibia)	No		
Locks and keys	Yes	5 000	
Reasonable Precautions	Yes	10 000	
Malicious damage caused by thieves	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**4 368,33**

First amount payable

Contents	5% minimum R5000 of each and every gross claim
Personal Property of the Councillors / Employees	R1500 of each and every gross claim
Locks and keys	R500 of each and every gross claim

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BUSINESS ALL RISKS SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Item **Description of Insured Property**			
1. Property of the Insured or for which they are responsible whilst anywhere in the world (as per the schedule), excluding laptops and cellphones		3 216 466	18 816,33
2. Laptops and portable computer equipment		3 555 679	256 008,89
3. Cellphones		387 617	34 885,53
4. Other:			
Tablets/Ipads		1 128 929	30 481,08
Extensions	**Included**		
Replacement value condition	Yes		
Increase in cost of working	Yes		
Locks and keys	Yes	10 000	
Riot and strike (other than RSA and Namibia)	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**340 191,83**

First amount payable

All items as per schedule	10% minimum R2500 of each and every gross claim
Cellphones	10% minimum R1000 of each and every gross claim
Laptops	10% of each and every gross claim minimum R2,500
Locks and keys	R500 of each and every gross claim
Other	Tablets/Ipads; 15% of each and every gross claim minimum R2 500

DECLARATION WARRANTY

Insurance under this section is Subject to submission of the full listing of all insured items, failure to declare such information may lead to the insurer, at its own discretions, imposing penalties up to 30% of the claim or declining liability in its entirety.

IMEI/SERIAL NUMBER WARRANTY

The insured warrants that they shall retail the internal monitoring equipment identification number (IMEI) or Serial numbers in respect of all electronic devices (i.e. Cell phones, iPad's/tablets, computers etc.) insured by the section which shall be provided to the insurer on request thereof.

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Effective Date: 18 September 2020 **Print Date:** 01 February 2021

THEFT SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Contents of the property of the property of the Insured or for which they are responsible, whilst contained in any building used by the Insured.			
First Loss Limit		100 000	4 500,00
Goods in the Open	No		
Extensions			
Property in the open	Yes	100 000	
Full Theft Cover	No		
Malicious Damage	Yes	100 000	
Reasonable Precautions	Yes	20 000	
Locks and keys	Yes	10 000	
Personal All Risks	Yes	20 000	
EXTENSIONS: - Property in the open (within securely fenced off area and subject to forcible and violent entry or exit from such area)			
Claims preparation costs	Yes	100 000	
		Total Premium	**4 500,00**

First amount payable

All other claims	10% minimum R5 000 of each and every gross claim
Other	Theft of cables and electrical conductors : 10% minimum R350 000 of each and every gross claim
Locks and keys	R500 of each and every gross claim
Other	Malicious Damage / Vandalism : 25% of claim minimum R250 000

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Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

GLASS SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Internal and external glass including mirrors, sign writing and treatment thereon, being the property of the Insured or for which they are responsible		2 250 000	60 750,00
Extensions			
Riot and strike (other than RSA and Namibia)	No		
External advertising signs, blinds, canopies and any treatment thereon or thereof, being the property of the Insured or for which they are responsible	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**60 750,00**

First amount payable

Glass	R2,500 of each and every gross claim

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MONEY SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Specific Limitations			
1. Money not contained in a locked safe or strongroom: (i) In the custody of an authorised employee, Council Member or Principal of the Insured while away from the insured premises on a business trip anywhere in the world		5 000	
(ii) While on the insured premises outside the hours during which the commercial operations of the insured are conducted		5 000	
2. In respect of loss of crossed cheques or crossed money orders or crossed postal orders		100 000	
3. In respect of any other loss of or damage to money:			
3.1 Specific periods as follows:			
3.2 At any other time			
4. Major Limit		50 000	3 600,00
5. In respect of any loss of or damage to receptacles and clothing (as defined) including firearms as a result of theft of money or any attempt thereat.			
Extensions	**Included**		
Locks and keys	Yes	10 000	
Credit Cards	No		
Vending machines	No		
Personal Accident (assault)			
Capital sum	Yes	20 000	
Weekly sum	Yes	100	
Medical expenses	Yes	500	
Riot and strike (other than RSA and Namibia)	No		
Reasonable precautions	Yes	10 000	
Claims preparation costs	Yes	100 000	
		Total Premium	**3 600,00**

First amount payable

Loss or damage to money as a result of dishonest employee/conuncillor	Fidelity Guarantee excess applies
All other claims	10% minimum R2500 of each and every gross claim

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MOTOR FLEET SECTION

Motor Fleet vehicle basis

Detail of Premises

King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay

No.	Description	Cover	Limit	Estimated Number	Annual Premium (R's)
1	(a) Private Motor Cars up to 9 Seats	C	500 000	10	45 000,00
2	(b) Commercial vehicles up to 3.5 Tons	C	500 000	98	705 600,00
4	(b) Commercial vehicles up to 7 - 10 Tons	C	500 000	1	10 800,00
5	Other	C	500 000	1	13 500,00
	Emergency Vehicles/Buses				
6	(e) Trailers	C	500 000	4	28 800,00
7	(b) Special Type Vehicles	C	500 000	23	207 000,00
8	(c) Motorcycles	C	500 000	1	2 250,00

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MOTOR SECTION

Details	Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Motor Vehicles exceeding R 500 000 in value		
Detail of Premises King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay		
No. **Registration No** **Make and Model** **Year** **Cover**		
89 Isuzu FTR 850 Honeysucker 2017 C	1 023 248	23 534,70
Risk Inception date: 01 July 2019 Engine No: Chassis No: Value Type: Override Additional Car Hire No Interest Noted		
90 MERCEDES BENZ AXOR 2628B WATER TANKER CW26 370 FC WATER TANKER 1900 C	902 254,2	20 751,85
Risk Inception date: 01 July 2019 Engine No: Chassis No: Value Type: Override Additional Car Hire No Interest Noted		
91 MERCEDES BENZ AXOR 2628B WATER TANKER CWE 370 - WATER TANKER 18000L 1900 C	902 254,2	20 751,85
Risk Inception date: 01 July 2019 Engine No: Chassis No: Value Type: Override Additional Car Hire No Interest Noted		
92 MERCEDES BENZ AXOR 2628B WATER TANKER CWE 370 - WATER TANKER 18000L 1900 C	902 254,2	20 751,85
Risk Inception date: 01 July 2019 Engine No: Chassis No: Value Type: Override Additional Car Hire No Interest Noted		

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MOTOR SECTION

Details				Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
93	MERCEDES BENZ AXOR 2628B WATER TANKER CWE 370 - WATER TANKER 18000L	1900	C	902 254,2	20 751,85
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
94	MERCEDES BENZ AXOR 2628B WATER TANKER CWE64R11MS - WATER TANKER	1900	C	863 025,75	19 849,59
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
95	MERCEDES BENZ AXOR 2628B WATER TANKER CWE64R11MS - WATER TANKER	1900	C	863 025,75	19 849,59
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
96	Mercedes Benz GLE 350d 250D	1900	C	921 917,81	21 204,11
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
97	MERCEDES BENZ TRUCK	1900	C	853 320	19 626,36
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				

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MOTOR SECTION

Details				Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
98	MERCEDES BENZ AXOR 2628B WATER TANKER	1900	C	1 221 863,55	28 102,86
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
99	MERCEDES BENZ AXOR 2628B WATER TANKER	1900	C	1 221 863,55	28 102,86
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
100	MERCEDES BENZ AXOR 2628B WATER TANKER	1900	C	1 221 863,55	28 102,86
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
101	Mercedes Benz GLE 350d	1900	C	1 148 000	26 404,00
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
102	NISSAN UD330 WF	1900	C	1 264 100	29 074,30
	Risk Inception date: 01 July 2019				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
103	ISUZU NPR 400T AMT CREW CAB 15m CHERRY PICKER	1900	C	1 338 579,88	30 787,34
	Risk Inception date: 01 July 2019				

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MOTOR SECTION

	Details				Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
	Engine No:					
	Chassis No:					
	Value Type: Override					
	Additional Car Hire			No		
	Interest Noted					
104	Ford Ranger 2.0 TUR 4X4 D/CAB XLT 10AT	2019	C		635 260	14 610,98
	Risk Inception date: 08 July 2019					
	Engine No:					
	Chassis No:					
	Value Type: Override					
	Additional Car Hire			No		
	Interest Noted					
105	TLB MODEL ELB MST542	2018	C		989 787	22 765,10
	Risk Inception date: 12 March 2020					
	Engine No:					
	Chassis No:					
	Value Type: Override					
	Additional Car Hire			No		
	Interest Noted					
106	ROLLER PAD FOOT	2020	C		1 375 308	31 632,08
	Risk Inception date: 12 March 2020					
	Engine No:					
	Chassis No:					
	Value Type:					
	Additional Car Hire			No		
	Interest Noted					
107	GRADER unknown	2018	C		3 328 939	76 565,60
	Risk Inception date: 12 March 2020					
	Engine No:					
	Chassis No:					
	Value Type:					
	Additional Car Hire			No		
	Interest Noted					
108	HONEY SUCKER unknown	2018	C		733 573,34	16 872,19
	Risk Inception date: 12 March 2020					
	Engine No:					
	Chassis No:					
	Value Type: Override					

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MOTOR SECTION

Details				Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
	Additional Car Hire		No		
	Interest Noted				
109	TATA WATER TANKER	2018	C	1 278 558,22	29 406,84
	Risk Inception date: 12 March 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
110	REFUSE TRUCK	2018	C	939 171,71	21 600,95
	Risk Inception date: 12 March 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
111	MERCEDES BENZ ACTROSS 3345-48 18000L WATER TANKER	1999	C	2 205 481,5	50 726,07
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
112	MERCEDES BENZ ACTROSS 3345-48 18000L WATER TANKER	1999	C	2 205 481,5	50 726,07
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
113	MERCEDES BENZ ACTROSS 3345-48 18000L WATER TANKER	1999	C	2 205 481,5	50 726,07
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				

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MOTOR SECTION

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114	MERCEDES BENZ ACTROSS 3345-48 18000L WATER TANKER	1999	C	2 205 481,5	50 726,07
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
115	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
116	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
117	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
118	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				

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MOTOR SECTION

Details				Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
119	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
120	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
121	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
122	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No: TBA				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
123	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				

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124	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
125	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
126	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 03 September 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
127	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 09 September 2020				
	Engine No: 1619L135654				
	Chassis No: LBZF46GBXLA003166				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
128	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 09 September 2020				
	Engine No: 1619L135658				
	Chassis No: LBZF46GB2LA003176				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				

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MOTOR SECTION

Details				Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
129	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 09 September 2020				
	Engine No: 1619L135648				
	Chassis No: LBZF46FAXLA003158				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
130	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 09 September 2020				
	Engine No: 1620C020401				
	Chassis No: LBZF46FA2LA003154				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
131	POWERSTAR VX2628 6x4 SWB CHASSIS	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 09 September 2020				
	Engine No: 1620C019813				
	Chassis No: LBZF46FA8LA0003157				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
132	POWERSTAR VX2628 water tankers	2020	C	1 340 719,4	30 836,55
	Risk Inception date: 10 December 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
133	POWERSTAR VX2628 water tankers	2020	C	1 340 719,4	30 836,55
	Risk Inception date: 10 December 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
134	POWERSTAR VX2628 water tanker	2020	C	1 340 719,4	30 836,55
	Risk Inception date: 10 December 2020				

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MOTOR SECTION

	Details			Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
135	POWERSTAR VX2628 water tanker	2020	C	1 340 719,4	30 836,55
	Risk Inception date: 10 December 2020				
	Engine No:				
	Chassis No:				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
136	MB Arocs 3345/48 CKD5 ZA-Water Tanker MB Arocs 3345/48 CKD5 ZA-Water Tanker	2020	C	2 205 481,5	50 726,07
	Risk Inception date: 15 December 2020				
	Engine No: 460972U1059105				
	Chassis No: ABJ96401660449225				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
137	MB Arocs 3345/48 CKD5 ZA- Water Tanker MB Arocs 3345/48 CKD5 ZA-Water Tanker	2020	C	2 205 481,5	50 726,07
	Risk Inception date: 15 December 2020				
	Engine No: 460972U1061458				
	Chassis No: ABJ96401660452082				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
138	Unknown POWERSTAR VX2628 Water Tankers	2020	C	1 340 719,4	30 836,55
	Risk Inception date: 21 December 2020				
	Engine No:				
	Chassis No:				
	Value Type:				
	Additional Car Hire		No		
	Interest Noted				
139	POWERSTAR VX2628 Water Tankers unknowb	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 21 December 2020				

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MOTOR SECTION

Details				Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
	Engine No:				
	Chassis No:				
	Value Type:				
	Additional Car Hire		No		
	Interest Noted				
140	POWERSTAR VX2628 Water Tankers Unknown	1999	C	1 340 719,4	30 836,55
	Risk Inception date: 21 December 2020				
	Engine No:				
	Chassis No:				
	Value Type:				
	Additional Car Hire		No		
	Interest Noted				
143	2020 Power Star 18000L Water Tanker 2020 Power Star 18000L Water Tanker	2020	C	1 340 719,24	30 836,54
	Risk Inception date: 18 September 2020				
	Engine No: 1619L135651				
	Chassis No: LBZF46GB1LA003170				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
144	2020 Power Star 18000L Water Tanker 2020 Power Star 18000L Water Tanker	2020	C	1 340 719,24	30 836,54
	Risk Inception date: 18 September 2020				
	Engine No: 1620C019794				
	Chassis No: LBZF46FA7LA003151				
	Value Type: Override				
	Additional Car Hire		No		
	Interest Noted				
				Total Premium	1 677 206,41

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MOTOR SECTION		
Details	**Sum Insured/Limit of Indemnity (R's)**	**Annual Premium (R's)**

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MOTOR FLEET SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Extensions applicable	**Included**		
Medical expenses	Yes	5 000	
Conveyance of explosives	No		
Loss of keys	Yes	5 000	
Theft or attempted theft of radios / sound equipment	No		
Theft or attempted theft of telephones (excluding cellphones)	No		
Car Hire Costs	No		
Wreckage removal	Yes	10 000	
Fire Extinguishing Expenses	Yes	10 000	
Riot and strike (other than RSA and Namibia)	No		
Claims preparation costs	No		
		Total Premium	**1 012 950,00**

First amount payable

Private type Vehicles, LDV`s (windscreens)	25% minimum R500 of each and every gross claim
Special Types, Fire Engines & Commercial Trucks (windscreens)	25% of each and every gross claim min R 3 500
Private type Vehicles, LDV`s	10% of each and every gross claim min R 5,000
Tractors, Trailers, Lawnmowers and Implements	10% of each and every gross claim min R2500
Loss of keys	R 750 each and every claim
Other	Commercial trucks : 10% of each and every gross claim min R7 500
Other	Special types & fire engines : 20% of claim minimum R15 000
Other	Potholes: R20 000 of each and every gross claim

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ACCIDENTAL DAMAGE SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Detail of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Description of Insured Property			
Property insured under the Combined and Office Contents Sections of this schedule			
Limit of Indemnity		1 640 049 137	118 083,54
Limit of Indemnity		350 000	
Extensions	**Included**		
First Loss Average	No		
Excluded property (in addition to the property excluded in the policy)	No		
Additional claims preparation costs	Yes	100 000	
		Total Premium	**118 083,54**

First amount payable

Accidental Damage Excess 10% minimum R2 500 of each and every gross claim

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GOODS IN TRANSIT SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Description of Insured Property			
All goods consigned by or to the Insured (including ropes, tarpaulins and packing materials in connection with the transit), pertaining to the business whether conveyed by means of air, rail or road.			
Maximum Limit any one loss		20 000	360,00
Extensions/Limitations	**Included**		
Removal of debris	Yes	20 000	
Fire, explosion, collision, derailment and overturning limitation	Yes		
Riot and strike (other than RSA and Namibia)	No		
Fire extinguishing charges	Yes	20 000	
Claims preparation costs	Yes	100 000	
		Total Premium	**360,00**

First amount payable

Goods In Transit Excess 10% minimum R2 500 of each and every gross claim

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GROUP PERSONAL ACCIDENT SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Names / occupations of Persons Insured			
Description of category	**Number of Persons**		
1	49		
Cover Type: 24 Hr Cover			
Circumstances			
Death benefit		500 000	450,00
Permanent disability – such percentage of the death benefit as is specified for the particular disability			
Temporary total disability – R 1000 per week for a period longer than 7 days but not longer than 104 Weeks			
Medical expenses		20 000	
Maximum Limit and one event (accumulation limit)		10 000 000	
Maximum Limit and one Insured Person		2 000 000	
Extensions / Limitations	**Included**		
Additional Death Benefit	Yes	20 000	
Repatriation Costs	Yes	10 000	
Mobility	Yes	10 000	
Relocation	Yes	10 000	
War Risks	Yes		
24 Hours	Yes		
Business Hours Limitation	No		
Business Hours plus Commuting Limitation	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**19 845,00**

Additional Notes:

MEMO:

INSURING CLAUSE

The Insurers will pay to the Insured, on behalf of the Insured Person or his estate, the compensation stated in the Schedule if, during the Period of Insurance, any Insured Person sustains accidental bodily injury, at an identifiable time and place, which injury shall directly and independently of all other

causes result, within twenty-four calendar months, in death or disability or in medical expenses being incurred as specified under this section.

First amount payable

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Medical Expense	R500 of each and every gross claim
TTD	7 Day time excess

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STATED BENEFITS SECTION

Details	Salary / Wage Roll (R's)	Annual Premium (R's)
Details of Premises		
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay		
Persons Insured		
Description of Persons Insured **Number Of Persons:**		
0		
Basis of Cover: Blanket		
Cover Type: 24 Hours		
Total Annual Earnings	192 428 118	100 447,48
Circumstances		
Death – 4 times annual earnings		
Permanent disability – such percentage of 4 times annual earnings as is specified for the particular disability		
Temporary total disability – 100 % of average weekly earnings for a period longer than 1 weeks but not longer than 104 Weeks		
Medical expenses	20 000	
Maximum Limit and one event (accumulation limit)	10 000 000	
Maximum Limit and one Insured Person	2 000 000	
Details of Premises		
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay		
Persons Insured		
Description of Persons Insured **Number Of Persons:**		
0		
Basis of Cover: Blanket		
Cover Type: 24 Hours		
Total Annual Earnings	12 000 000	8 748,00
Circumstances		
Death – 2 times annual earnings		
Permanent disability – such percentage of 2 times annual earnings as is specified for the particular disability		
Temporary total disability – 100 % of average weekly earnings for a period longer than 1 weeks but not longer than 104 Weeks		
Medical expenses		

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STATED BENEFITS SECTION

Details		Salary / Wage Roll (R's)	Annual Premium (R's)
Maximum Limit and one event (accumulation limit)		10 000 000	
Maximum Limit and one Insured Person		2 000 000	
Extensions / Limitations	**Included**		
Additional Death Benefit	Yes	20 000	
Repatriation Costs	Yes	10 000	
Mobility	Yes	10 000	
Relocation	Yes	10 000	
War Risks	No		
24 Hours	No		
Business Hours Limitation	Yes		
Business Hours plus Commuting Limitation	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**109 195,48**

Additional Notes:
MEMO:

INSURING CLAUSE
The Insurers will pay to the Insured, on behalf of the Insured Person or his estate, the compensation stated in the Schedule if, during the Period of Insurance, any Insured Person sustains accidental bodily injury, at an identifiable time and place, which injury shall directly and independently of all other
causes result, within twenty-four calendar months, in death or disability or in medical expenses being incurred as specified under this section.

First amount payable

Medical Expense	R500 of each and every gross claim
TTD	7 Day time excess

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ELECTRONIC EQUIPMENT SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Details of Premises:			
King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Sub-Section A: Material Damage			
Item No. **Qty** **Description of Insured Property**			
1 1 Hardware / Accessories / Software Spesified Equipment		10 385 587	5 608,22
Risk Inception date: 01 July 2019			
Interest noted: No			
Software		7 344 209	3 304,89
- Laptops		3 555 679	1 280,04
Capital additions	25 %		
Escalation	0 %		
Currency fluctuations	0 %		
Limitation of cover	No		
Sub-Section B: Business Interruption			
Prevention of access	No		
Increase in cost of working	No		
Indemnity period	0 months		
Reconstruction of data	No		
Clauses and Extensions	**Included**		
Incompatibility Cover	Yes		
Telecommunications access lines	Yes		
Riot and strike (other than RSA and Namibia)	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**10 193,15**

DECLARATION WARRANTY

Insurance under this section is Subject to submission of the full listing of all insured items, failure to declare such information may lead to the insurer, at its own discretions, imposing penalties up to 30% of the claim or declining liability in its entirety.

IMEI/SERIAL NUMBER WARRANTY

The insured warrants that they shall retail the internal monitoring equipment identification number (IMEI) or Serial numbers in respect of all electronic devices (i.e. Cell phones, iPad's/tablets, computers etc.) insured by the section which shall be provided to the insurer on request thereof.

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First amount payable	
Increase in Cost of Working	24 Hours time excess
First amount payable	
Recostruction of Data	R2,500 of each and every gross claim
First amount payable	
Other	Cellphones : 10% minimum R1 000 of each and every gross claim
First amount payable	
Other	Tablets / Ipads ; 15% of each and every gross claim minimum R2,500

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MACHINERY BREAKDOWN SECTION

Details		Sum Insured/Limit of Indemnity (R's)	Annual Premium (R's)
Risk Inception date: 01 July 2019			
Details of Premises: King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay			
Property Insured			
Specified Equipment-Limit		12 960 000	17 496,00
Interest Noted: No			
Clauses and extensions	**Included**		
Spoilage of stock	No		
Expediting costs	No		
Damage to surrounding property	No		
Automatic / Capital additions - 0 %	No		
Claims preparation costs	Yes	100 000	
		Total Premium	**17 496,00**

First amount payable

Increase in Cost of Working	24 Hours time excess
Any other loss	10% minimum R5,000 of each and every gross claim
Other	All Transformers; 10% minimum R300 000 each and every claim

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MUNICIPAL SCHEME

Active

INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

PUBLIC LIABILITY SECTION

Details		Limit of Indemnity (R's)		Annual Premium (R's)
		Any one event or series of events with one original cause or source	Any one period of insurance	
Risk Inception date: 01 July 2019 **Details of Premises** King Cetshwayo House, Kruger Rand,,Veld And Vlei, Richards Bay				
1. General and Tenants		2 000 000	Unlimited	67 500,00
2. Spread of Fire		1 000 000	1 000 000	
Basis of cover: Claims Made				
Retroactive date: 01 July 2019				
Previous Insurer :				
Previous Policy number:				
Additional Contingencies and Extensions	**Included**			
Wrongful arrest and defamation	Yes		250 000	
Errors and Ommissions	Yes	250 000	250 000	
Products Liability and Defective Workmanship	Yes	250 000	250 000	
Comprehensive insurance on pedal cycles	No	Market value	Market value	
Vibration, removal and weakening of support	No	NIL	NIL	
Legal Defence Costs	Yes	250 000	250 000	
Professional Liability in respect of Medical Practitioners or other Medical Officers	Yes	250 000	250 000	
Claims preparation costs	Yes	100 000	100 000	
			Total Premium	**67 500,00**

First amount payable

Other All Claims: R25 000 of gross claim each and every occurrence

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Active

INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

EMPLOYERS LIABILITY SECTION

Details		Limit of Indemnity (R's)		Annual Premium (R's)
		Any one event or series of events with one original cause or source	Any one period of insurance	
Risk Inception date: 01 July 2019 **Limit of Indemnity** Basis of cover: Claims Made Retroactive date: 01 July 2019		2 000 000	Unlimited	450,00
Additional Contingencies and Extensions	**Included**			
Extended Reporting – months	No			
Claims preparation costs	Yes	100 000		
			Total Premium	**450,00**

First amount payable

Employers Liability R 5 000 each and every claim

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INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199
Insured: King Cetshwayo District Municipality
Effective Date: 18 September 2020
Print Date: 01 February 2021

MOTOR FLEET LIABILITIES

Description of vehicles	Annual Premium (R's)	Estimated Number
Basis of Cover: Losses Occurring **Sub Section A: Loss or Damage:** **Description** **No. Description**		
1 Other **Risk Inception date:** 01 July 2019	51 840,00	192
Total Premium	**51 840,00**	

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INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199
Effective Date: 18 September 2020
Insured: King Cetshwayo District Municipality
Print Date: 01 February 2021

MOTOR FLEET LIABILITIES

Details		Sum Insured/Limit of Indemnity (R's)
Sub Section B: Liability to Third Parties		
(a) Passenger Liability: Fare Paying Passengers		2 000 000
(b) Passenger Liability - Other		2 000 000
Any other event and the aggregate of a and b		2 000 000
Extensions applicable	**Included**	
Contingent Liability	No	
Unauthorised Passenger Liability	No	
Conveyance of explosives	No	
Additional claims preparation costs	Yes	100 000

First Amount Payable

Motor Liability	R3 000 each and every gross claim
Other	Motor Third Party Liability - Any other : R25 000 of gross claim each and every occurrence
Other	Motor Third Party Liability - Private & Commercial upto 3500 Kg gvm: R5 000 of gross claim each and every occurrence

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MUNICIPAL SCHEME

Active

INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

MUNCIPAL POLICE LIABILITY SECTION

Details		Limit of Indemnity (R's)		Annual Premium (R's)
		Any one event or series of events with one original cause or source	Any one period of insurance	
Risk Inception date: 01 July 2019				
1. Limit of Indemnity		2 000 000	Unlimited	
Basis of cover: Claims Made				
Retroactive date: 01 July 2019				
Additional Contingencies and Extensions	**Included**			
Extended Reporting - months	No			
Wrongful arrest and defamation	Yes	250 000	250 000	
Liability arising out of use of firearms	Yes	250 000	250 000	
Claims preparation costs	Yes	100 000	100 000	
			Total Premium	**0,00**

First Amount Payable

Municipal Police Liability	R 5 000 each and every claim

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MUNICIPAL SCHEME

Active

INSURANCE POLICY SCHEDULE

Policy Number: GRMUM2471199 **Insured:** King Cetshwayo District Municipality

Effective Date: 18 September 2020 **Print Date:** 01 February 2021

EXCESS LAYER LIABILITY SECTION

Details		Limit of Indemnity (R's)		Annual Premium (R's)
		Any one event or series of events with one original cause or source	Any one period of insurance	
Risk Inception date: 01 July 2019 **Property Damage and Personal Injury** Retroactive date: 01 July 2019		98 000 000	Unlimited	67 500,00
Additional Contingencies and Extensions	**Included**			
Advertising Liability	No		Unlimited	
Use of firearms	No			
Municipal Police Liability	No			
Wrongful Arrest and Defamation	Yes	2 000 000	2 000 000	
Errors and Ommissions	Yes	2 000 000	2 000 000	
Products Liability and Defective Workmanship	Yes	2 000 000	2 000 000	
Medical Malpractice	No			
Spread of Fire	Yes	4 000 000	4 000 000	
Motor Liability	No			
Employers Liability	No			
Claims preparation costs	Yes	100 000	100 000	
			Total Premium	**67 500,00**

First Amount Payable

Retained Limit R 50 000

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DISCLOSURE NOTICE TO SHORT-TERM INSURANCE POLICYHOLDERS

IMPORTANT – PLEASE READ CAREFULLY

(This notice does not form part of the insurance contract or any other document)

The details of these companies and what they do is set out below.

PARTICULARS OF YOUR INSURANCE BROKER	
Business name	Sankofa Insurance Brokers (Pty) Ltd
Trade name	Sankofa Insurance Brokers (Pty) Ltd
Company registration number	
Physical address	1St Floor Ahs,House 325,Rivonia Boulevard,2128
Postal address	
Telephone number	011 025 6566
Fax number	
Email address	mgumenge@sankofaib.co.za
Website	
Compliance officer	
Name of company	Bryan Thomas
Telephone number	0845842921
YOUR INSURANCE BROKER IS AUTHORISED TO PROVIDE FINANCIAL SERVICES IN RESPECT OF SHORT-TERM PERSONAL LINES, PERSONAL LINES A1 AND COMMERCIAL LINES PRODUCTS	
License number	23671
YOUR INSURANCE BROKER HAS THE FOLLOWING INSURANCE IN PLACE THAT PROVIDES PROTECTION TO CLIENTS	
Professional indemnity	
Policy renewal date	
Fidelity guarantee limit	
Policy renewal date	

SHOULD YOU HAVE A CLAIM AGAINST YOUR POLICY, PLEASE NOTE THE FOLLOWING:
(a) Procedures for the submission of claims are detailed in the policy wording, schedule and claims processes (b) You may contact your insurance broker's claims department for assistance at the above address or your insurer telephone on 0860 222 555

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COMPLAINTS

If you would like to lodge a complaint with your insurance broker, please write to or call:

Insurance Broker Name: Sankofa Insurance Brokers (Pty) Ltd
Complaints Officer/Responsible Manager
Bryan Thomas

Tel: 0845842921

Email: bryan@pretium.co.za

Website

Should you have any complaints with respect to the product and service and you would like to escalate the complaint, please write to us to. A copy of the Guardrisk Complaints Management Framework can be obtained from the Guardrisk website;
Guardrisk Insurance Company
Guardrisk complaints
Email: complaints@guardrisk.co.za
Website: www.guardrisk.co.za

If you are dissatisfied with the outcome of your complaint, depending on the nature of your complaint, you may approach the FAIS ombud for matters relating to how the policy was sold to you or the conduct of your insurance broker; or the short-term Ombudsman for matters relating to your policy itself, like claims, details of which appear below

THE OMBUDSMAN FOR SHORT-TERM INSURANCE		THE FAIS OMBUD	
Physical address	1 Sturdee Avenue Cnr Bolton and Baker Roads First Floor, Block B Rosebank	**Physical address**	Kasteel Office Park Orange Building, 2nd Floor Cnr Nossob and Jochemus Street, Erasmuskloof Pretoria, 01881
Postal address	PO Box 32334 Braamfontein,2017	**Postal address**	PO Box 74574, Lynnwood Ridge,0040
Telephone number	(0860) 726-890 / (011) 72-8900	**Telephone number**	(012) 762-5000/ (0860) 663 247
Fax number	(011) 726-5501	**Fax number**	(012) 470 9097/ (012) 348 3447
Email address	info@osti.co.za	**Email address**	info@faisombud.co.za
Website	www.osti.co.za	**Website**	www.faisombud.co.za

FINANCIAL SECTOR CONDUCT AUTHORITY	
Physical address	41 Matroosberg Road Ashlea Gardens, Pretoria, 0002
Postal address	PO Box 35655, Menlo Park, 0102
Fax number	(012) 346-6941
Email address	info@fsca.co.za
Website	www.fsca.co.za

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YOUR INSURER	
Name	Guardrisk Insurance Company Limited
Company registration number	1992/001639/06
FSP number	75
Products approved	**Category I** • Short-term Insurance Personal Lines - Advice and Intermediary Services • Short-term Insurance Personal Lines A1 - Advice and Intermediary Services • Short-term Insurance Commercial Lines - Advice and Intermediary Services
Physical number	The Marc, Tower 2, 129 Rivonia Road, Sandton, 2196
Postal address	PO Box 786015, Sandton, 2146
Fax number	
Website	www.guardrisk.co.za
Compliance department	(011) 669 1104, and ask for the Group Compliance department or email; compliance@guardrisk.co.za Guardrisk Insurance Company has a conflict of interest management policy in place and is available to clients on the website; www.guardrisk.co.za

YOUR INSURER HAS THE FOLLOWING INSURANCE IN PLACE THAT PROVIDES PROTECTION TO CLIENTS	
Professional indemnity limit	
Policy renewal date	
Fidelity Guarantee limit	
Policy renewal date	

DISCLOSURE OF PREMIUMS AND FEES

All premium obligations, commissions and broker / policy fees are disclosed in your policy schedule. Your insurance broker receives commission from your insurer. The levels of commission vary depending on the product type. The exact amounts are disclosed in your policy schedule. In addition, your insurance broker may charge you a broker / policy fee which is also shown on your policy schedule. You must explicitly agree to this in writing.

YOUR SPECIAL RISKS INSURER POLICY COVERS EVENTS SUCH AS RIOT AND STRIKE AND IS UNDERWRITTEN BY SASRIA LIMITED

SASRIA SOC LIMITED

Postal address	PO Box 653367, Benmore, 2010	**FSP number**	39117
Physical address	36 Fricker Road, Illovo, Sandton, 2196	**Compliance officer**	Mr Mziwoxolo Mavusa mziwoxolom@sasria.co.za
Telephone number	(011) 214-0800 / (086) 172-7742	**Email address**	info@sasria.co.za or contactus@sasria.co.za
Fax number	(011) 447-8630	**Website**	www.sasria.co.za

If you have a complaint about the SASRIA policy please see contact details above

Claims notification procedures – in event of a claim, all relevant documentation must be submitted to your nominated insurer

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ABOUT YOUR SASRIA COUPON/ POLICY	
Name and address of SASRIA binder holder	Guardrisk Insurance Company acts as a binder holder and will issue your SASRIA coupon/ policy on behalf of SASRIA SOC Limited, but all claims are decided on by SASRIA as the insurer of these risks. Guardrisk earns a binder fee of 12.5% of the gross written premium on SASRIA and your insurance broker receives commission of 12.5% on motor risk business and 15% commission on non-motor risk business
Details of the policy	Cover is provided in respect of all classes of business as per the underlying policy, subject to those classes insurable by SASRIA
Premium amount, frequency, manner and due date for premium payments	These details are reflected in the quotation, in the policy schedule and policy wording for the underlying policy
Consequences for non-payment of premium	Cover will cease in the event of the policyholder failing to pay premium. Please refer also to the policy wording which provides further details as to premium and monetary obligations

MANNER OF PAYMENT OF PREMIUM, DUE DATE AND CONSEQUENCE OF NON-PAYMENT

Due date of payment: Monthly premiums are payable on the date of presentation of the debit order at the bank. Annual premium on or before the inception or renewal date. Payable premiums are provided in the policy schedule. Consequence of non-payment: Please refer to your policy wording and/or schedule Method of payment: Premiums may be paid by debit order or EFT before the due date

POLICY INFORMATION

Please refer to your record of advice, policy wording, policy schedule and any other disclosure document provided by your broker or the insurer for details regarding policy benefits, exclusions, special conditions, cooling off rights, excesses, claims process and cancellation requirements

OTHER MATTERS OF IMPORTANCE

- You must be informed of any material changes to the information about the Product Provider/Broker and Supplier/Insurer.
- Polygraph or similar tests are not obligatory and claims may not be rejected solely on the basis of a failure of such a test.
- If your premium is paid by debit order, the debit order must be in favour of either the Product Provider/Broker or the Supplier/Insurer and may not be transferred without your approval.
- The Product Provider/Broker must give you 31 days' notice in writing of its intent to cancel your debit order.
- You are entitled to a period of 15 days' grace in which to pay the premium, the grace period applies from the second month after the policy incepts or starts.
- The Insurer and not the Broker must give reasons in writing for the rejection of any claim submitted by you.
- The Insurer must give you written notice of its intention to cancel your policy.
- You are entitled to a copy of your policy free of charge.

WARNING

- Do not sign any blank or partially completed application form
- Complete all forms in ink
- Keep all documents handed to you
- Make notes as to what is said to you
- Ask for a letter of representation from your Broker and do not be pressurized into buying the product
- Failure to provide correct or full relevant information may influence a Broker on any claims arising from your contract of insurance

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ANNEXURE C: ENVIRONMENTAL MANAGEMENT PLAN

KING CETSHWAYO DISTRICT MUNICIPALITY

CONSTRUCTION AND OPERATION OF THE GREATER MTHONJANENI SSA-2 BULK WATER SUPPLY PROJECT, KING CETSHWAYO DISTRICT MUNICIPALITY, KWAZULU-NATAL

FINAL ENVIRONMENTAL MANAGEMENT PROGRAMME

Prepared for:

King Cetshwayo District Municipality
Private Bag X1025
Richards Bay
3900

Prepared by:

ACER (Africa) Environmental Consultants
PO Box 503
Mtunzini
3867

February 2015

NAME AND EXPERTISE OF PERSONS WHO COMPILED THE ENVIRONMENTAL MANAGEMENT PROGRAMME

Name	Education Qualifications	Professional Affiliations	Experience at Environmental Management
Dr Rolf-Dieter Heinsohn	PhD	South African Association of Botanists International Association of Impact Assessment (South African Chapter) South African Institute of Ecologists and Environmental Scientists Certified Environmental Practitioner with the Interim Certification Board of South Africa Certified with the South African Council for Natural Scientific Professions (400442/04)	23 years
Mr Giles Churchill	MSc	Environmental Consultant	8 Years

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ABBREVIATIONS AND ACRONYMS

ACER	ACER (Africa) Environmental Consultants
Amafa	Amafa aKwaZulu-Natali
DAEA	KwaZulu-Natal Department of Agriculture and Environmental Affairs
DAFF	Department of Agriculture, Forestry and Fisheries
DMR	Department of Mineral Resources
DWA	Department of Water Affairs
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EKZNW	Ezemvelo KwaZulu-Natal Wildlife
I&APs	Interested and Affected Parties
KZN	KwaZulu-Natal
RE	Resident Engineer
WTW	Water Treatment Works

1 INTRODUCTION

1.1 Background

The King Cetshwayo District Municipality is currently engaged in the design and implementation of the proposed Greater Mthonjaneni SSA-2 Bulk Water supply Project which is aimed at supplying water to rural areas to the southwest of the town of Melmoth.

1.2 Project Description

The proposed water scheme is aimed at providing potable water to communities within this region and will require the construction of bulk water supply pipelines (not exceeding 400 mmm in diameter), reservoirs (each not exceeding 2.5 Ml in volume) and a reticulation network (pipes not exceeding 200 mm in diameter). Water for the proposed project will be obtained from a licensed treatment works. The water license number for this treatment works is No. 43/168/93 dated 30/06/1993.

1.2.1 Bulk mains

The bulk mains will have a maximum diameter of 400 mm and will consist of a lined steel pipe which will be buried to a depth of approximately 1.5 m. Scour and pressure release valves will be installed along the length of the bulk mains where required. The construction servitude will be up to 20 m wide in unrestricted areas and down to 5 m in restricted/sensitive areas. The final operational servitude width will be 5 m.

1.2.2 Reservoirs

A total of six reservoirs within the scheme (all-smaller than 2.5 Ml in volume).

1.2.3 Reticulation network

From the reservoirs located near the target communities, water will be supplied through a reticulation network to service the surrounding communities. The reticulation network will consist of either HDPE or uPVC pipes depending on topography and range in diameter from 50 mm – 200 mm in size and will be buried to a depth of approximately 1 m.

1.3 The receiving environment

1.3.1 Overview

The project is located approximately 9.5 km to the southwest of the town of Melmoth in a severely impoverished rural area. The closest settlement to the Greater Mthonjaneni SSA-2 Bulk Water supply Project is the settlement of KwaMagwaza to the north of the scheme.

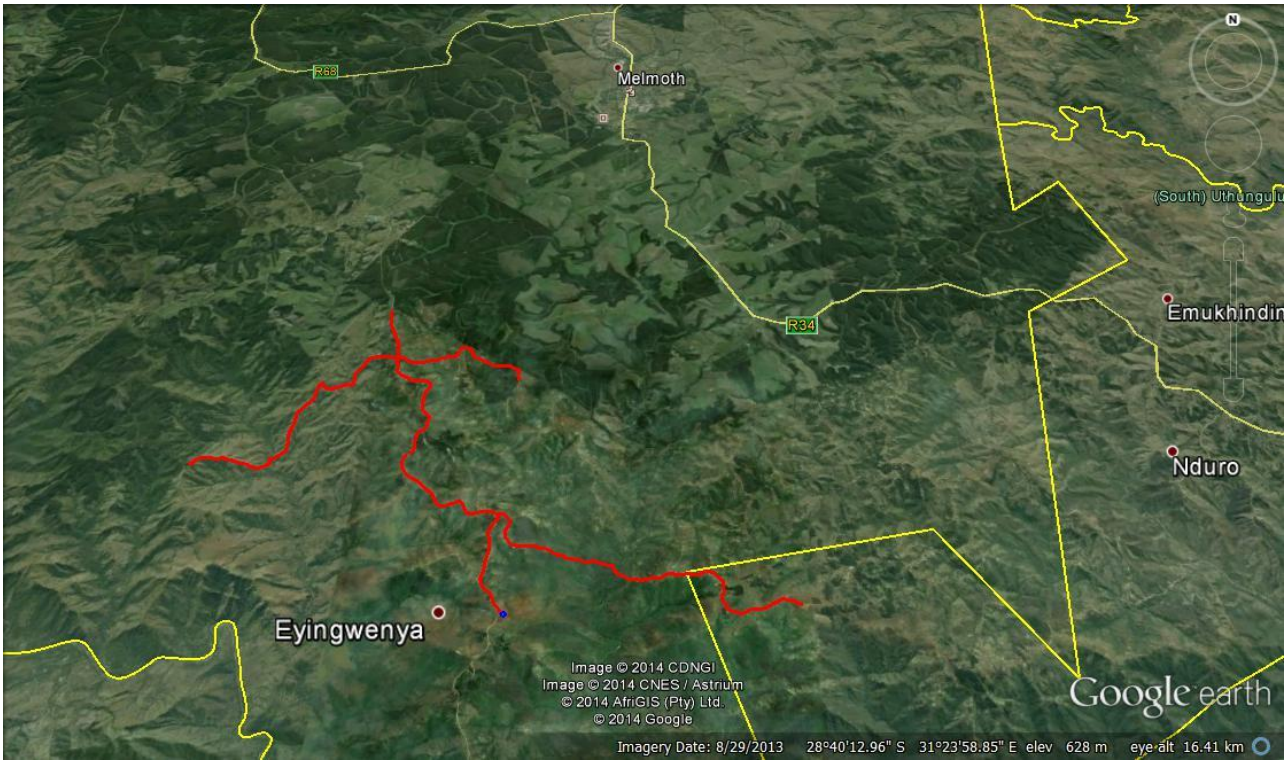


Figure 1: Proposed layout of the Greater Mthonjaneni SSA-2 Bulk Water Supply Project

1.3.2 Sensitive environments

Sensitive environments within the proximity of the pipeline alignments are restricted mainly to the stream/river crossings, drainage lines and wetlands which the water pipelines will traverse. For the remainder of the pipeline alignment, no sensitive environments are present as the pipeline follows a watershed which is dry and highly modified through grazing pressures and subsistence agriculture.

It must be noted that no construction through any sensitive environments may commence prior to the issuing of Environmental Authorisation for the project to commence from the Department of Agriculture and Environmental affairs (DAEA[1]).

1.4 Objective and Scope of the Environmental Management Programme

This EMPr covers the principles, responsibilities and requirements applicable in order to implement effective environmental management during the design, pre-construction, construction and rehabilitation phases of the Greater Mthonjaneni SSA-2 Bulk Water supply Project.

In addition, the EMPr does the following:

- Assigns roles and responsibilities to the parties charged with implementation.
- Sets out environmental specifications that are applicable to the project and its associated activities, and provides guidance in order to achieve these environmental specifications.
- Defines corrective actions, which must be taken in the event of non-compliance with the environmental specifications of this EMPr.
- Specifies requirements and procedures for monitoring, auditing and reporting.

[1] Please note that the DAEA is now referred to as the Department of Economic Development, Tourism & Environmental Affairs (EDTEA)

- Specifies requirements and procedures for record keeping.
- Makes provision for the fulfilment of other relevant legal requirements pertaining to the environment.

2 ENVIRONMENTAL PRINCIPLES AND LEGAL REQUIREMENTS

2.1 Environmental Principles

The following principles should be considered by all parties at all times during all phases of the project:

- The environment is considered to be composed of both biophysical and social components.
- Construction is a disruptive activity and all due consideration must be given to the environment, including the social environment, to minimise the impact during the execution of a project.
- Minimisation of areas disturbed by construction activities (i.e. the footprint of the construction area) should minimise many of the construction related environmental impacts of the project and reduce rehabilitation requirements and costs.
- As minimum requirements, all relevant standards relating to international, national, provincial and local legislation, as applicable, shall be adhered to. This includes requirements relating to waste emissions (e.g. hazardous, airborne, liquid and solid), waste disposal practices, noise regulations, road traffic ordinances, protected species, etc.
- Every effort should be made to minimise, reclaim and/or recycle “waste” material.
- Every effort should be made to apply the best practicable environmental option.

2.2 Environmental standards

All applicable environmental standards contained within the environmental legislation shall be adhered to. Without derogating from the generality of the above and without limitation, at the time of compiling this EMPr, the following environmental guidelines and standards are highlighted. The list is intended to serve as a guideline only and is not exhaustive.

2.2.1 Air quality guidelines

In terms of air quality, the Contractor will be required to describe how effective dust control measures will be achieved during the construction phase.

2.2.2 Noise control regulations

No provincial Noise Control Regulations have been promulgated in KwaZulu-Natal. Therefore, the national Noise Control Regulations of the Environment Conservation Act, 1989 (Act No. 73 of 1989), Government Notice Number GN 154 of Government Gazette 13717 of 10 January 1992, apply.

2.2.3 Storage of hazardous substance

Hazardous substances must be stored and handled in accordance with the appropriate legislation and standards which may include the Hazardous Substances Act, the Occupational Health and Safety Act, relevant associated Regulations, and applicable SABS and international standards.

2.2.4 Health and safety of work team

Construction Regulations (2003) published under the Occupational Health And Safety Act, 1993 (Act No. 85 of 1993) apply to construction activities including “the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work”. A “health and safety plan” which addresses hazards identified, and includes safe work procedures to mitigate, reduce or control the hazards identified, is required under this Act. A risk assessment must also be undertaken by an appropriately qualified person(s) and the Contractor shall ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

2.3 Environmental Legal Requirements (Norms and Standards, Licences, Approvals and Permits)

A number of laws and regulations apply to the protection and conservation of the environment. It is the responsibility of the employer to ensure that the necessary permits, approvals and licences are obtained prior to commencement of construction.

2.3.1 Environmental Authorisation and NEMA

In terms of NEMA, anyone who causes or may cause significant pollution or degradation of the environment must take reasonable measures to prevent this and to minimise and rectify such pollution or degradation of the environment (Section 28 - Duty of Care and Remediation of Environmental Damage).

The Environmental Impact Assessment Regulations under NEMA list activities for which environmental authorisation is required before construction can commence in sensitive areas as outlined below.

Listing Notice 1: No. R. 544 of June 2010	No. 9	The proposed bulk water infrastructure will include pipes with a diameter greater than 0.36 meters. As such the project triggers this listed activity.
Listing Notice 1: No. R. 544 of June 2010	No. 11	The proposed water supply project will include construction activities within or near to drainage lines and wetlands. As such, this project triggers this listed activity as construction will be taking place within 32 meters of a water course.
Listing Notice 1: No. R. 544 of June 2010	No. 18	The proposed water supply project will result in the infilling or removal of more than 5 cubic meters of material from a water course. As such this listed activity is triggered.
Listing Notice 1: No. R. 544 of June 2010	No. 37	The proposed bulk water infrastructure will include pipes with a diameter greater than 0.36 meters and will be linked to an existing water supply network within the region. As such, the project triggers this listed activity as it could be argued that the proposed project is an expansion to the existing water supply network in this region.
Listing Notice 3: No. R. 546 of June 2010	No. 14	The construction of the proposed water supply scheme will result in the clearance of over 5 Ha of vegetation where 75% of the vegetation constitutes indigenous vegetation. As such the proposed development triggers this listed activity.

2.3.2 Heritage Resource Permits

In terms of Section 27(1) of the KwaZulu-Natal Heritage Act, 2008 (Act No. 4 of 2008), any person who intends to undertake a development categorised as one or more of the listed activities, must, at the very earliest stages of initiating such a development, notify Amafa aKwaZulu-Natali (Amafa) and provide details regarding the location, nature and extent of the development.

This includes the construction of a road or linear development exceeding 300 m in length, the construction of a bridge or similar structure exceeding 50 m in length, and a development, or other activity which will change the character of an area of land, or water exceeding 10,000 m^2 in extent. Amafa must notify the developer whether a Heritage Impact Assessment and Report are required prior to construction commencing.

If, during construction, archaeological or paleontological objects or material or a meteorite is discovered, the find must immediately be reported to Amafa. No person may, without a permit, destroy damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite.

2.3.3 National Water Act, 1998 (Act No. 36 of 1998)

Alteration of a stream or river (i.e. alteration of the course or river bed) requires a permit from the Department of Water Affairs (DWA) in terms of Sections 21, 36, 40 and 41 of the National Water Act. In certain cases, a general authorisation is given to impede or divert the flow of a watercourse. Pollution of river water (silt-laden run-off, oil from machines, etc.) is a contravention of the Act and is not permitted. Wetlands are also protected under this Act. No land use shall utilise the vegetation in a vlei or flood area of a watercourse in a manner that may cause damage or the deterioration thereof.

If water is required during construction a licence is required from the Minister of Water Affairs for the abstraction of water where the abstraction exceeds the levels prescribed by a general authorisation. General authorisations have been published in terms of Section 39 of the Act, with regard to the taking of water from a water resource, storage of water and discharge of water containing waste (GN 399, GG 26187, 24 March 2004).

2.3.4 Protected Trees and Forests (National Protection)

In terms of the National Forests Act, 1998 (Act No. 84 of 1998), trees in natural forests or protected tree species (as listed in Government Gazette Notice 1012 of 27 August 2004) may not be cut, disturbed, damaged, destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold, except under licence granted by the Department of Agriculture, Forestry and Fisheries (DAFF). Thus, protected species and natural forests should be avoided where possible. Where this is not possible, other mitigation measures should be implemented such as relocation or off-site rehabilitation. Furthermore, accurate and detailed records of plant specimens should be assembled and forwarded to DAFF for record purposes.

2.3.5 Protected Plants (Provincial Protection)

Certain indigenous plant and animal species in KwaZulu-Natal are provided with special protection under KwaZulu-Natal nature conservation legislation and permits are required from Ezemvelo KZN Wildlife (EKZNW) for their removal, destruction or translocation. This is in accordance with the Natal Nature Conservation Ordinance, No 15 of 1974. Accordingly, accurate and detailed records of plant specimens should be assembled and forwarded to EKZNW for record purposes.

2.3.6 Control of Invasive Plants and Declared Weeds

Declared weeds or invader plants are defined by the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) as follows:

- **Category 1: Declared weeds.** These species must be eradicated from all areas, and are only permitted with written permission from the Executive Officer (as defined by the Act) or in the case of a formally approved biological control reserve.
- **Category 2: Invader plants.** These species are only permitted in specially demarcated areas and should be eradicated in all areas, except where permission has been granted. These species are not permitted to grow within 50 m of the 1:50 flood line.
- **Category 3:** These plants shall not occur on any land or inland water surface other than in biological control reserves. No land user shall allow Category 3 plants to occur within 30 metres of the 1:50 year flood line of a river, stream, spring, natural channel in which water flows regularly or intermittently, lake, dam or wetland.

In terms of Government Notice R 1048, the following regulations are applicable with regards to the control of invasive plants and declared weeds:

- It is illegal to have declared weed species or invasive alien vegetation on one's property.
- The landowner must immediately take steps to eradicate them by using the methods prescribed in the regulations, viz:
  - Uprooting and burning.
  - The application of a suitable chemical weed-killer (herbicide).
  - Any other method of permanent eradication.
- One may not uproot or remove such plants and dump or discard them elsewhere to re-grow or allow their seeds to be spread or to be blown onto other properties.
- If the landowner does not comply with requirements above, a person may be found guilty of a criminal offence.

Alien invasive plants are to be removed and controlled in the cleared construction areas and other areas disturbed by construction.

2.3.7 Waste Disposal

The National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) aims to minimise the consumption of natural resources, avoid and minimise the generation of waste, reduce, re-use, recycle and recover waste whenever possible, treat and safely dispose of waste as a last resort and prevent pollution and ecological degradation.

Waste produced by the activities will be disposed of at an authorised waste management facility, thus, no permitting or licensing will be required.

2.3.8 Public health

Soak-aways, French drains and other similar types of sewage effluent and human waste disposal facilities, if constructed, must be approved by the nearest local authority in terms of their by-laws and relevant provincial standard by-laws.

2.3.9 Other Applicable Legislation

This list is intended to serve as a guideline only and is not exhaustive:

- Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965).
- Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983).
- The Constitution of the Republic of South Africa Act, 1996 (Act No. 108 of 1996).
- Explosives Act, 1956 (Act No. 26 of 1956).
- Environment Conservation Act, 1989 (Act No. 73 of 1989).
- National Environmental Management Act, 1998 (Act No. 107 of 1998).
- National Environmental Management: Biodiversity Act, 2004 (Act No.10 of 2004).
- National Environment Management: Air Quality Act (Act No. 39 of 2004).
- National Environmental Management: Waste Act (Act No.59 of 2008).
- National Water Act, 1998 (Act No. 36 of 1998).
- National Heritage Resources Act, 1999 (Act No. 25 of 1999).
- National Roads Act, 1998 (Act No. 7 of 1998).
- National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998).
- Hazardous Substances Act, 1973 (Act No. 15 of 1973).
- Land Survey Act, 1921 (Act No. 9 of 1921).
- Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).
- Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).
- KwaZulu-Natal Heritage Act, 2008 (Act No. 4 of 2008).
- Local Government Ordinances and Bylaws.

3 ADMINISTRATION AND REGULATION OF ENVIRONMENTAL OBLIGATIONS

3.1 Organisational Structure

An organisational structure for the construction phase of the project is illustrated in Figure 5[2]. Communication and reporting lines related to the EMPr (including instructions, directives and information) shall be channelled according to the organisational structure implemented by the employer.

3.2 Roles and Responsibilities

The roles and responsibilities that are assigned to the various parties listed below are for all phases of the project.

3.2.1 Employer (King Cetshwayo District Municipality)

The King Cetshwayo District Municipality is responsible for ensuring that the conditions within the EMPr are met. The employer is responsible for the following:

- Implementation of the EMPr.
- Submission of any substantial changes, updates or amendments to the EMPr to DAEA for approval.
- Ensuring that the provisions of the EMPr are binding on all Contractors operating on the site during the life of the project, including a performance-based requirement in all Contract Documents.
- Ensuring that weekly environmental site inspections and monthly audit reports are compiled during construction to establish how well the Contractor is complying with the EMPr. The monthly environmental audit reports must be submitted to DAEA.
- Ensuring that compliance/non-compliance records are kept in good order and made available on request by the authorities.
- Complying with all applicable environmental legislation, regulations and guidelines, and ensuring that Contractors undertake responsibility to do the same.
- Being committed to the principles contained within NEMA, including the prevention of pollution and sustainable development.

[2] The organogram will need to be updated once all roles have been filled and companies appointed.

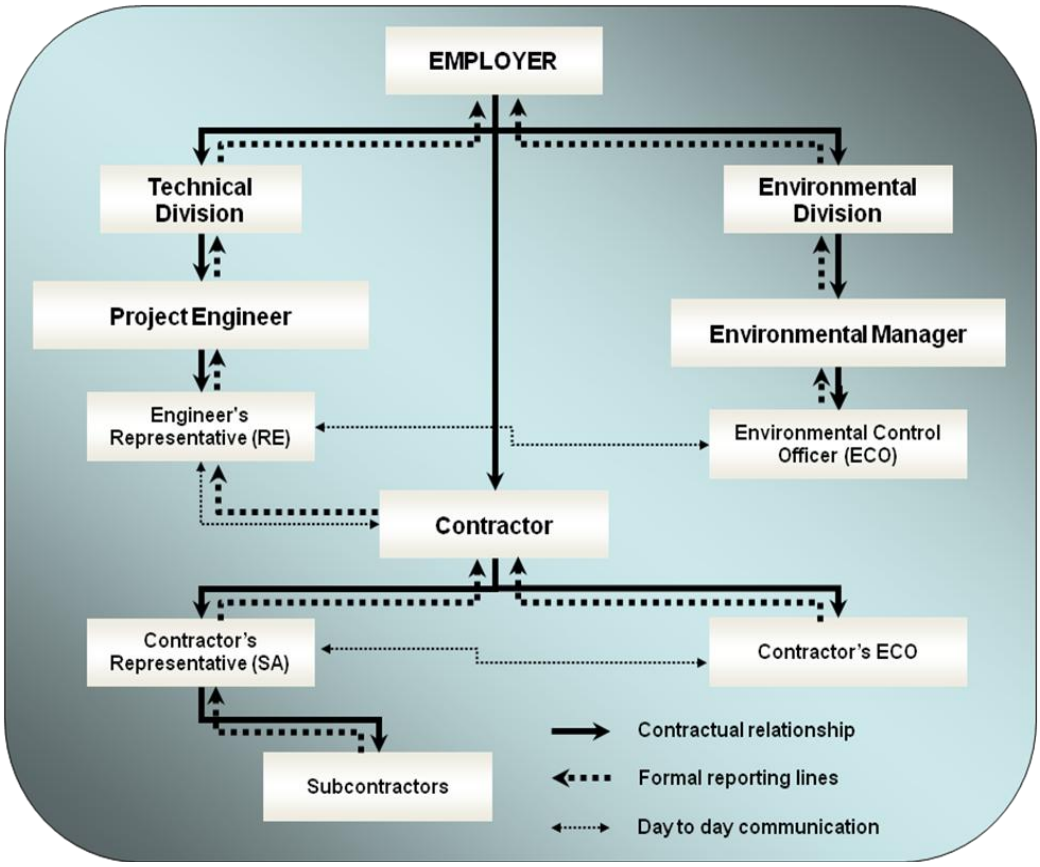


Figure 2: Organisational organogram for construction: communication/reporting relationship

3.2.2 Project Engineer and Resident Engineer

The Project Engineer represents the employer and co-ordinates all aspects of the project, including project co-ordination, design and construction. The Resident Engineer (RE) is the Project Engineer's representative on site. The Project Engineer is ultimately responsible for ensuring, on behalf of the employer that the provisions of the EMPr are complied with. The Project Engineer, assisted by the RE on site, is responsible for the following:

- Ensuring that the provisions of the EMPr are binding on all Contractors operating on the site during the construction of the project and that a performance-based requirement is included in all contracts.
- Including the approved EMPr as part of the contract documents.
- Ensuring that the Contractor(s) and Sub-contractor(s) are conversant with the requirements of the EMPr and that all members of staff on site have attended an environmental awareness-training course presented by the ECO.
- Compiling preliminary construction site layout plans prior to construction commencing.
- Approving final construction site layout plans in conjunction with the Environmental Manager.
- Ensuring that the Contractor(s) complies with the EMPr and, if not, ensure that the Contractor(s) bears the costs of damages/compensation resulting from non-compliance with the EMPr.

- If necessary, on the recommendation of the Environmental Manager or ECO, instruct the Contractor(s) to suspend any or all works on site, if the Contractor(s) or his/her Sub-contractors/suppliers fail to comply with the EMPr.
- Ensuring that the Contractor(s) conduct all activities in a manner that minimises disturbance to the project area, local communities and road users and forwards complaints and queries by members of the public at the site office, to the RE.
- Liaison with stakeholders including landowners and land users, utility providers[3], neighbours, and relevant authorities. This should be done in association with the Contractor (and the ECO where necessary).
- Ensuring that a register of complaints and queries by members of the public is maintained at the site office and the actions taken in response to these complaints.
- Liaising directly with the Environmental Manager in terms of environmental issues and maintaining close channels of communication with the Environmental Manager regarding foreseeable activities that may require environmental input.
- On behalf of the employer, reviewing any substantial changes, updates or amendments to the EMPr prior to its submission to the DAEA for approval.
- On behalf of the employer, ensuring that the Environmental Manager keeps the compliance/non-compliance records in good order and makes them available on request to the authorities.
- Ensuring that all EMPr-related instructions from the RE to the Contractor are recorded in the site diary.
- Having available on request a copy of the EMPr at the construction site at all times and ensuring that all staff, Contractors and Sub-contractors are familiar with or made aware of the contents of the EMPr.
- Complying with all applicable environmental legislation, regulations and guidelines, and ensuring that Contractors undertake responsibility to do the same.
- Ensuring that an environmental performance certificate is obtained from the Environmental Manager prior to awarding the Certificate of Completion to the Contractor(s).

3.2.3 Environmental Manager and Environmental Control Officer (ECO)

The Environmental Manager is responsible for managing and co-ordinating environmental obligations and shall advise the Project Engineer, the employer and Contractors on all environmental management matters relating to the project. This includes providing input during all phases of construction (including design), monitoring environmental performance of Contractors during construction and ensuring that all environmental specifications and EMPr requirements are met at all times.

The Environmental Manager is responsible for the following:

- Co-ordinating all matters relating to the environmental management of the project.
- Being fully conversant with the EMPr and all relevant environmental legislation, guidelines and standards.
- Assisting the employer, the Project Engineer, the RE and the Contractor(s) with EMPr compliance and all environmental legislation related to the project.
- Liaising with the relevant authorities with respect to licenses, approvals, authorisations, permits, agreements etc., in collaboration with the Project Engineer and Contractor(s) where required.
- Ensuring that all authorisations, licenses and permits required in terms of the applicable legislation have been obtained.
- Liaising closely with and reporting any breaches of EMPr implementation and the relevant legislation to the Project Engineer.

[3] The Project Engineer is to ensure liaison with utility operators regarding safety requirements for work within utility servitudes or crossing utilities.

- Attending project meetings, and reporting and advising as necessary on environmental matters.
- Reviewing and updating the EMPr in relation to specific requests, non-compliances or changes in the legislation and obtaining the necessary input from the Project Engineer.
- Providing input into construction site layout plans.
- Obtaining environmental specialist input as required.
- On behalf of the employer and upon direction of the Project Engineer, informing DAEA of non-compliance of any of the conditions of the EMPr within a reasonable period.
- Providing the Project Engineer with an environmental performance certificate at the end of a Contract confirming that all environmental specifications applicable to the Contractor have been met.
- With assistance of the ECO, reviewing training programmes, construction site layout plans, method statements and specifications and advising as necessary.

The Environmental Control Officer (ECO) is the Environmental Manager's representative on site and is responsible for the following:

- Assisting with enforcing environmental specifications on site via the RE.
- Conducting weekly site visits to monitor and verify compliance with the EMPr.
- Keep records of compliance/non-compliance.
- Producing a monthly environmental audit report. These monthly environmental audit reports must be submitted to DAEA.
- Identifying and assessing previously unforeseen, actual or potential impacts of the project on the environment.
- Bringing any environmental concerns to the attention of the Project Engineer.
- Recommending to the RE that the Contractor suspend any or all works on site if the third parties who carry out all or part of the Contractor's obligations fail to comply with the environmental specifications.
- Advising on the rectification of any pollution, contamination or damage to the project site, rights of way and adjacent land.
- Reviewing and approving construction method statements with input from the Environmental Manager, Project Engineer and RE, where necessary, in order to ensure that the environmental specifications contained within this EMPr are adhered to.
- Attending site meetings (scheduled and *ad hoc*).
- Keeping accurate and detailed records of all EMPr-related activities on site.
- Recording complaints or queries from I&APs and actions taken to address complaints. Copies of all interactions and correspondence shall be kept as part of record keeping.
- Maintaining a photographic record of construction activities and construction progress.
- Checking that a copy of the EMPr is available on site.
- Ensuring that the RE and Contractor(s) are made aware of all applicable changes to the EMPr.

3.2.4 Contractor

The Contractor is the successful tenderer, appointed by the employer to undertake the project. It is the responsibility of the Contractor to ensure that he or an appointed advisor is well versed in environmental matters to efficiently carry out the requirements of the EMPr. The Contractor is responsible for the following:

- The implementation of the applicable environmental specifications in accordance with the requirements of this EMPr.
- Obtain written permission from the landowner for use of a suitable site for erection of the construction camp, pipe storage yards, stores and stockpile areas.
- Appoint a Community Liaison Officer to assist with procurement of labour and for general communication with the community.

- Liaise with stakeholders, including affected landowners and tenants, utility providers, neighbours, and relevant authorities. This should be done in association with the Project Engineer and ECO.
- Ensure that a register of complaints and queries by members of the public is maintained at the site office and the actions taken in response to these complaints.
- Ensure that all third parties who carry out all or part of the Contractor's obligations comply with the requirements and provisions of this EMPr.
- Be responsible for the timeous procurement of all applicable approvals, authorisations, licenses and permits required for a particular activity that is part of the Contract.
- Report any non-compliance to the RE and ECO within 12 hours of the event occurring.
- Report any non-compliance event that constitutes an emergency immediately and in line with the protocol applicable to that particular emergency event.
- With the ECO, present an environmental awareness-training course to all sub-contractors and employees.
- Ensure that all sub-contractors and employees attend the environmental awareness-training course.
- Ensure that a copy of the EMPr is available at the construction site at all times.

3.3 Compliance Monitoring, Reporting and Record Keeping

3.3.1 Compliance Monitoring

During the various construction phases (design, pre-construction, construction and rehabilitation), the Environmental Manager, with assistance from the ECO, will monitor the overall compliance of the conditions of authorisation and mitigation measures outlined in the EMPr by all parties concerned.

3.3.2 Design Phase

During the design phase, the Environmental Manager will meet with the Project Engineer to highlight design needs as specified in the EMPr. On completion of the design, relevant information will be reviewed by the Environmental Manager to ensure that the design demonstrates compliance with environmental requirements. The Project Engineer will also provide preliminary construction site layout plans to the Environmental Manager for review.

3.3.3 Construction Phase

3.3.3.1 Construction Site Layout Plan

Prior to construction, the Project Engineer, with input from the Environmental Manager and ECO, must approve the construction site layout plan prepared by the Contractor showing the positions and extent of all permanent and temporary site structures and infrastructure. The Project Engineer is responsible for the co-ordination of construction site layout plans should there be overlap between multiple Contractors on site.

The earlier this information is provided to the Project Engineer and ECO, the less likelihood of delays to construction and the less likelihood of unforeseen environmental impacts occurring during construction.

3.3.3.2 Method Statements

Prior to construction, the RE and ECO will agree which activities require a written method statement. Where relevant, the Contractor must submit a written method statement, which should include the following:

- The type of construction activity.
- Locality where the activity will take place.
- Identification of impacts that might result from the activity.
- Identification of activities or aspects that may cause an impact.
- Methodology and/or specifications for impact prevention for each activity or aspect.
- Methodology and/or specifications for impact containment for each activity or aspect.
- Emergency/disaster incident and reaction procedures.
- Treatment and continued maintenance of impacted environment.

The ECO must review the construction method statements to ensure that the environmental specifications contained within this EMPr are adhered to.

3.3.3.3 Site Handover

The ECO will attend the site handover meeting, where the EMPr will form part of the agenda. The construction site layout plan is a key component of site handover and must be finalised before site handover can be completed. The approved plan must be attached to the site handover meeting minutes. Amendments to this plan must be discussed and approved at subsequent site meetings.

3.3.3.4 Site Inspections and Meetings

The ECO will conduct bi-monthly site inspections and meetings to establish how well the Contractor is complying with the EMPr. The ECO will compile a site inspection checklist, to be forwarded to the RE and Contractor for their attention and records. The checklists will also be included as an appendix to the monthly audit report to be submitted to DAEA.

Anything of an environmental nature that arises in between the site weekly audits must be recorded in the site diary and recorded in written correspondence to the ECO. If required, the ECO must conduct a site visit to address the matter and must report the matter in an addendum to the site inspection checklist.

3.3.3.5 Practical Completion

The ECO must attend the practical completion inspections. Outstanding environmental matters requiring attention must be provided to the RE for inclusion in the snag list, which is attached to the practical completion certificate.

3.3.3.6 Final Completion and Environmental Performance Certificate

Once the environmental items on the snag list have been addressed to the satisfaction of the ECO, the Environmental Manager will provide an environmental audit report confirming that the environmental specifications applicable to the Contractor(s) has been met. This report will be submitted to the Project Engineer prior to the final Certificate of Completion being issued.

3.3.3.7 Independent Environmental Auditing

Periodic auditing of environmental compliance by an independent auditor may be required and is also advisable as best environmental practise. As discussed with DAEA, they may undertake periodic site audits to confirm the findings of the monthly audit reports submitted to them by the ECO.

3.3.4 Non-Compliance and Remedial Action

Matters of non-compliance by any parties must be reported to DAEA within a reasonable period. This should be discussed with DAEA. Failure to comply with these conditions of authorisation will, under Section 22(4) of the Environment Conservation Act, 1989 (Act No. 73 of 1989), render it invalid and the applicant liable to legal action under Section 29 of the said Act.

The Contractor(s) and their Sub-contractors are deemed not to have complied with the EMPr if:

- There is evidence of contravention of the EMPr specifications within the boundaries of the construction site, site extensions and haul/access roads.
- There is contravention of the EMPr specifications that relate to activities outside the boundaries of the construction site.
- Construction activities take place outside demarcated areas.
- Environmental damage ensues due to negligence or intent.
- Failure to comply with corrective or other instructions issued by the Project Engineer within a specific time period.

Where the ECO identifies non-compliance by the Contractors and Sub-contractors, it will be discussed at the bi-monthly site visits (when identified) and remedial actions and timeframes specified. The ECO must record these incidents of non-compliance, the remedial actions and timeframes in the site inspection checklist. The RE must also record the relevant instructions for the Contractor(s) in the site diary.

If the specified remedial action has not been carried out by the Contractor(s) within the period stipulated, the non-compliance must be dealt with as follows:

- Where non-compliance has resulted in environmental damage to the site which cannot be rectified by the remedial action specified by the ECO, or the Contractor(s) has failed to carry out the remedial work within the prescribed time limit (or permitted extension thereof), the ECO shall convene a meeting between the RE and the Contractor to discuss the appropriate fine. Appropriate remedial work shall also be discussed and agreed.
- In determining appropriate remedial action, the Environmental Manager and Project Engineer shall consult with DAEA and, where necessary, obtain specialist input.
- The Project Engineer shall issue an instruction to the Contractor to procure execution of the remedial work as agreed between the parties, and the Contractor shall be obliged to procure such remedial work within the prescribed period to the satisfaction of the Project Engineer.
- Failure by the Contractor to comply with an instruction from the Engineer to procure the carrying out of the required remedial work shall constitute a material breach of the Contract.
- Where the employer has taken action to procure the remediation of such consequences it shall be entitled to recover from the Contractor the full cost of remediation.

Incidents of non-compliance, the remedial actions and timeframes must be recorded in the site inspection checklist and the site diary. Fines, applied at the discretion of the Engineer (with input from the Environmental Manager) must be applied in addition to any remedial costs incurred as a result of non-compliance. The Engineer will inform the Contractor of the contravention and the amount of the fine, and will deduct the amount from monies due under the Contract

3.3.5 Penalty Clause

Any avoidable non-compliance with the EMPr, Site-Specific Addendum, Environmental Authorisation or applicable regulations shall be considered sufficient grounds for imposing a penalty (fine). The penalty imposed shall be per incident. Upon receipt of a notice of non-compliance, the Contractor shall correct whatever is the cause of the issuing of the notice.

The Rand values of the penalties to be imposed per incident or violation are provided in **Annexure 1**. They reflect first-time incidents of non-compliance only. Penalties of repeat offences are calculated at an incremental increase of 10% up to a maximum of R100 000. Thus, the penalty for a first-time repeat incident would be 110% of the original penalty value, 120% for a second-time repeat incident, etc. Certain penalties may be waived or reduced at the discretion of the Project Engineer (with the approval of the Authority's Environmental Manager). Where deemed necessary (e.g. where the receiving environment is particularly sensitive), penalty values greater than those contained in **Annexure 1** may be stipulated in the Site-Specific Addendum to the EMPr.

The enforcement of penalties shall be through a separate agreement between the employer, Project Engineer and Contractor.

Penalties for non-compliance are imposed over and above the costs required for remediation/rehabilitation, and/or penalties that may be imposed in terms of relevant legislation.

3.3.6 Regulatory Authorities' Site Inspections

DAEA, and other relevant authorities, e.g. DWA may conduct site inspections as desired.

3.3.7 Record Keeping

The Environmental Manager and ECO must ensure that all documentation related to the EMPr is filed, and made available on request to the authorities. The following documents may be relevant:

- Environmental Management Programme.
- Weekly site inspection checklists.
- Monthly audit reports.
- Design documents and drawings.
- Construction site layout plans.
- Method statements.
- Communication and correspondence.
- Environmental awareness training programme.
- Environmental incident and accident reports.
- Emergency preparedness and response plans.
- Complaints register.
- Environmental performance certificates.

3.4 Environmental Awareness Training

A copy of the approved EMPr shall be available at the construction site at all times and all staff; Contractors and Sub-contractors shall be familiar with or be made aware of the contents of the EMPr and environmental authorisation.

The ECO must prepare and present an environmental awareness training programme to the Contractor, Sub-contractors and employees in English and isiZulu.

The environmental awareness training programme must include the following:

- The importance of compliance with all environmental policies, procedures, plans and systems.
- Understanding, the importance of, and the reasons why, the environment must be protected.
- Basic awareness and understanding of the key environmental features of the work site and environs, particularly sensitive habitats.
- The significant environmental impacts, actual or potential, as a result of their work activities.
- The mitigation measures required to be implemented when carrying out their work activities.
- The environmental benefits of positive environmental performance.
- The various roles and responsibilities in achieving compliance with the environmental policy and procedures, including emergency preparedness and response requirements.
- The potential consequences of departure from specified operating procedures.
- Health and safety awareness.

The Contractor must ensure that its Sub-contractors and employees (and any other third parties) attend the course. At the discretion of the ECO and Environmental Manager, employees involved in events of non-compliance may be given further relevant training by the ECO.

A record of the environmental awareness training programme must be kept by the ECO and RE.

3.5 Emergency Preparedness and Reporting

The Contractor must compile and maintain environmental emergency procedures to ensure that there will be an appropriate response to unexpected or accidental actions or incidents that will cause environmental impacts. The RE should be familiar with these procedures and be responsible for the co-ordination thereof should there be multiple Contractors on site simultaneously.

Emergencies are defined as serious cases of the following incidents, which cannot be dealt with according to the standard specifications contained in Sections 4 - 8, and include:

- Accidental discharges to water and land.
- Accidents involving members of the public.
- Accidental exposure of employees to hazardous substances.
- Accidental veld or forest fires.
- Accidental spillage of hazardous substances.
- Injurious encounters with dangerous animals.
- Natural disasters (e.g. flooding).

These plans should include:

- Emergency organisation (manpower) and responsibilities, accountability and liability.
- A list of key personnel.
- Details of emergency services applicable to the various areas along the route (e.g. the fire department, ambulance services, spill clean-up services, etc.).

- Internal and external communication plans, including prescribed reporting procedures where required by legislation.
- Actions to be taken in the event of different types of emergencies.
- Incident recording, progress reporting and remediation measures required to be implemented.
- Information on hazardous materials, including the potential impact associated with each, and measures to be taken in the event of accidental release.
- Training plans, testing exercises and schedules for effectiveness.

In compiling the emergency plans, the Contractor shall comply with the emergency preparedness and incident and accident-reporting requirements, as required by the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), the National Environmental Management Act, 1998 (Act No. 107 of 1998), the National Water Act, 1998 (Act No. 36 of 1998) and the National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998) as amended and/or any other relevant legislation.

3.6 Liaison with Interested and Affected Parties

Liaison with I&APs is to be co-ordinated by the Project Engineer and the Contractor. This shall include liaison with landowners and land users, utility providers[4], neighbours, and relevant authorities.

Complaints or queries received from I&APs and actions taken to address complaints shall be addressed in writing (with copies forwarded to the Environmental Manager and ECO). Copies of all interactions and correspondence shall be kept as part of record keeping by the Environmental Manager and ECO.

3.7 Review and Updating of the EMPr

The EMPr is a living document and should be reviewed and updated in response to new or changing technical information, environmental conditions, legislation and policy, and environmental best practice. Substantial changes must be approved by DAEA.

Sections 4 to 8 contain the environmental specifications required for each of the stages, viz. design, pre-construction, construction, rehabilitation and operation. These sections are deliberately repetitive, as in many cases, an environmental aspect requires attention at more than one stage of the project cycle.

[4] The Project Engineer is to ensure liaison with utility operators regarding safety requirements for work within or crossing utilities.

4 DESIGN PHASE

Various environmental management considerations must be dealt with prior to construction by the Project Engineer, ECO and/or the Contractor. Responsible parties are indicated in the sections below.

4.1 Technical design

- Environmental sensitivities identified during the environmental impact assessment (EIA) process must be communicated to the Project Engineer by the relevant Environmental Assessment Practitioner so that, where applicable, project specific mitigation measures may be incorporated into the technical designs.

4.2 Erosion Control and Drainage

- Technical design and planned construction methods must build in measures to prevent soil erosion associated with construction, with particular attention given to scour points, crossings of water bodies and drainage lines, storm water outlets and other areas of high erosion potential, such as steep slopes (where these cannot be avoided).
- In determining the location of the construction camp, stockpile areas, pipe storage yards as well as any required new access roads and borrow pits/quarries (if required), areas of high erosion potential must be avoided.
- The design must allow for the ground conditions encountered, including adequate allowance for settlement of embankments and drainage layers.
- Technical design and planned construction methods must build in measures to avoid soil compaction associated with construction.
- Drainage systems must be kept as natural as possible. Natural drainage must be retained, and normal flow ensured at all times.
- Runoff must not be canalised or concentrated in areas where sheet flow may occur, or where highly erodible soils occur.
- Erosion or scouring of any watercourses resulting from construction must be prevented.
- Alteration of groundwater movement patterns must be prevented. To this end, design and planned construction techniques to provide for subsurface water movement are to be implemented.
- No excavation of alternative channels to re-route any river/stream may be done (to avoid unnecessary erosion).
- Design must include measures such as drainage layer, well pointing, shoring and concrete encasement of the pipeline in sensitive areas.
- Excavation will be selective to ensure that the topsoil is placed back on top.
- Concrete encasement and other pipe protection measures will be used where the structural integrity of the pipe is compromised.
- Shoring must occur where excavation is in loose sand.

Refer to Section 6.8 for further detail regarding erosion control and drainage considerations.

4.3 Protection of Sensitive Ecosystems and Habitats

- Prior to construction commencing, the project area must be inspected by the ECO to identify the following:
  - Protected trees should be avoided as far as possible.
  - In the event that a protected tree species needs to be removed, the Contractor must obtain ECO agreement and the necessary license from DWA for its removal.
  - Identify and mark large, established, indigenous trees that should not be removed.

- Suitable sites for the relocation of sensitive plant material to be removed and trees to be transplanted (Annexure 2).
- Areas outside the construction site for off-site mitigation replanting (where relocation is not possible).
- Identify, delineate, photograph and clearly mark likely wetlands and rivers/streams to be intersected by the project.
- Where necessary, appoint a suitably qualified botanist to provide assistance with the above-mentioned tasks.

- The Project Engineer, in consultation with the Environmental Manager and ECO, must prepare a programme to remove alien invasive plants on site during the construction period.
- The construction servitude must not be wider than 20 metres.
- In sensitive areas, such as wetlands and indigenous forest, it is recommended that the construction servitude be narrower.
- Watercourse and wetland protection measures must be put in place.
- Concrete encasement and other pipe protection measures will be used where the structural integrity of the pipe is compromised.

Refer to Section 6.1.4 for further detail regarding the protection of sensitive environments.

4.4 Stockpile Areas

- Where possible, stockpile areas must be identified and approved by the Project Engineer and ECO during the design phase.
- Where possible, stockpile areas must be located within the construction site.
- Environmentally sensitive and no-go areas must be avoided.
- If the stockpile area is located closer than 50 m to a watercourse, erosion prevention measures must be designed and implemented.
- As far as possible, existing roads must be used to access stockpile areas.

Refer to Section 6.6 for further detail regarding stockpiling.

4.5 Spoil Areas

- The Contractor must dispose of excess trench excavation material and construction rubble.
- Where possible, spoil sites must be identified and approved during the design phase. In determining the appropriate location of spoil areas, cognisance must be taken of sensitive and no-go areas.
- The reinstated site may be used as a spoil area for excess trench excavation material provided that the net increase in ground level is less than 200 mm. The reinstated servitude must be lightly compacted and made free-draining.
- Excess trench material may also be used to replace unsuitable local material (e.g. bedding for pipes).
- The Contractor may be allocated a spoil burial site (approved by the Resident Engineer and ECO) where the construction rubble can be buried without causing future problems.
- Spoil areas must not negatively affect surface drainage, and must not alter the topography to the extent that they become visually intrusive.
- Spoil areas must be re-vegetated and rehabilitated after construction.

Refer to Section 6.6.2 for further detail regarding spoil.

4.6 Construction Site

4.6.1 Construction Site Layout Plan

A construction site layout plan must be compiled during the design phase by the Project Engineer, with assistance from the Environmental Manager. The plan should show the positions and extent of the known permanent and temporary site structures and infrastructure as listed below (as applicable). Additional items and amendments to this plan must be made during the pre-construction phase.

- Site access (including entry and exit points).
- Roads and haul/access routes.
- Buildings and structures.
- Contractor camp(s).
- Pipe storage yards.
- Site office.
- Security requirements (including temporary and permanent fencing, and lighting) and accommodation areas for security staff.
- Gates and fences.
- Concrete batching areas.
- Essential services (permanent and temporary water, electricity and sewage).
- Sanitation (including the treatment/removal of sewage).
- Construction materials storage areas including the storage of fuels.
- Vehicle and equipment storage areas.
- Wash bays.
- Storm water control measures.
- Borrow areas (if required).
- Excavations and trenches.
- Stockpile/lay-down areas.
- Spoil areas.
- Waste management including waste storage and disposal sites.
- Areas where vegetation will need to be cleared.
- Features and plants to be conserved.

4.6.2 Construction Camps

The following must be designed for with regard to the construction camps:

- In determining the location and layout of these areas, cognisance must be taken of sensitive and no-go areas. The construction camp and pipe storage yards must be located in areas that will have minimal environmental impact, such as grazing areas, agricultural land, for which compensation may need to be paid.
- The construction camp and pipe storage yards must be sited within previously disturbed areas, but may not be located within 50 m of identified ecologically sensitive areas such as watercourses, drainage lines or wetland areas.
- No staff accommodation is allowed on site, except for security/emergency personnel.
- Strict stock control systems must be enforced in storage areas.
- The construction camp must be fenced.

4.7 Access/Haul Roads

- The design phase must make provision for the utilisation of existing roads in the area (as far as possible).
- The design phase must make provision for the establishment of required temporary haul/access roads within the boundaries of the construction site. Where roads are required outside the construction site, sensitive and no-go areas must be avoided.
- The final design must detail all access/haul roads outside the construction site.
- Any clearing for access or haul roads, both within, and where necessary, outside the construction site may only be undertaken once the necessary landowner permission has been obtained.

Refer to Section 6.2.6 for further detail regarding roads and access.

4.8 Disturbance to Landowners and Service Providers

- The minimum disruption to services must be maintained at all times.
- The design must address the disturbance of access to affected landowners during the construction phase, and must make provisions for maintaining access, adequate notice of access closures and alternative routing if required.
- The accommodation of services, e.g. Telkom, Eskom and other utilities must be incorporated into the design with full liaison with the relevant utility companies regarding safety requirements for work within or crossing utility servitudes.
- Direct liaison is required between the design engineers and the relevant organs of state in order to identify exact positions, to negotiate permission to cross servitudes and/or services infrastructure and to identify optimal ways to minimise disruption and interruptions to services.
- Dust control management practices and procedures must be defined during the design phase to ensure the effective suppression of dust during construction.
- Design must include mitigation measures in order to ensure construction noise levels are within permitted levels.
- Sufficient notice to the local community, including affected landowners and/or tenants, must be provided by the Project Engineer in consultation with the Environmental Manager and ECO, before construction commences. Information regarding the expected types of construction activities must be supplied.

Refer to Section 6.10 for further detail regarding Nuisance control.

4.9 Servitude Negotiations and Compensation

As soon as possible, the employer must commence with servitude negotiations for land acquisition for the project elements (pipeline, temporary access roads, etc):

- The Project Engineer must ensure that liaison regarding land acquisition has been undertaken and that compensation has been agreed upon. The process must be aimed at obtaining mutual acceptance of compensation by all affected parties.
- Independent property valuators must be appointed (by the employer) to determine the extent of compensation to affected parties.
- Compensation must be paid by the employer.
- Information must be provided to affected landowners regarding any servitude restrictions.
- Agreements must be entered into between the employer and landowners for access to the project site.

4.10 Aesthetics

- During design, the overall aesthetics of the project must be considered, with a view to minimise any potential negative impacts and/or to improve the visual aesthetics of the local environment.

5 PRE-CONSTRUCTION PHASE

The pre-construction phase refers to the period following final project planning and the tender phase, leading up to, but not including, the establishment on site by the appointed Contractor. These items may be the responsibility of the **Contractor** or the **Project Engineer**. Input and assistance may be obtained, where necessary, from the **Environmental Manager** and **ECO**.

5.1 Construction Site Layout Plan

A construction site layout plan must be compiled during the design phase by the Project Engineer, with assistance from the Environmental Manager. The plan should show the positions and extent of the known permanent and temporary site structures and infrastructure as listed below (as applicable):

- Site access (including entry and exit points).
- Roads and haul/access routes.
- Buildings and structures.
- Contractor camp(s).
- Pipe storage yards.
- Site office.
- Security requirements (including temporary and permanent fencing, and lighting) and accommodation areas for security staff.
- Gates and fences.
- Concrete batching areas.
- Essential services (permanent and temporary water, electricity and sewage).
- Sanitation (including the treatment/removal of sewage).
- Construction materials storage areas including the storage of fuels.
- Vehicle and equipment storage areas.
- Wash bays.
- Storm water control measures.
- Borrow areas (if required).
- Excavations and trenches.
- Stockpile/lay-down areas.
- Spoil areas.
- Waste management including waste storage and disposal sites.
- Areas where vegetation will need to be cleared.
- Features and plants to be conserved.

5.2 Construction Preparation

- The Contractor must ensure that any required written permission from the landowner for use of land for the construction camp, pipe storage yards, stores and stockpile areas has been obtained.
- The ECO must take detailed, colour photographs of the site before any clearing may commence.
- The Contractor must ensure that he/she is familiar with the following prior to construction commencing:
  - Sensitive areas.
  - Mitigation measures.
  - Large, established, indigenous trees that should not be removed.
  - Wetlands and rivers/streams likely to be intersected by the project.
- Sanitation arrangements must be made to the satisfaction of the Environmental Manager, the ECO, and the local authorities, and be compliant with all applicable legal requirements.
- The Contractor must ensure that the Project Engineer and Environmental Manager are given timeous notice of the intention to commence construction.

5.3 Acquisition of Permits and Licenses

Applicable permits and licences must be obtained prior to construction, as per section 2.3.

5.4 Procurement Process

- The Contractor's procurement process is bound by the contract agreement with the employer and must be in accordance with applicable procurement norms and standards.
- Local institutional structures, e.g. Amakhosi, must be included in the procurement process.
- Where practical and applicable, training must be provided to local labourers in order to perform more specialised jobs.
- The Contractor must trade locally for goods and services, where possible and practical.
- The Contractor is encouraged to make use of emerging contractors from formerly disadvantaged communities, as sub-contractors or by the formation of joint ventures.

6 CONSTRUCTION PHASE

The construction phase refers to the period of the project during which construction activities are carried out. This section of the EMPr outlines those general environmental specifications that are required to be implemented by the **Contractor** during construction. Where applicable, approval, assistance and/or guidance may be sought from the **Project Engineer**, **RE**, **Environmental Manager** and the **ECO**.

6.1 Site Establishment

When establishing the site, the environmental objective is to minimise the footprint of disturbance and to minimise the extent of soil erosion, loss of vegetation and the potential for pollution of soils and water resources.

The site must be established in accordance with the approved construction site layout plan, prior to the commencement of construction. Any relaxation or modification of the construction site layout plan must be approved by the Project Engineer and ECO.

6.1.1 Demarcation of the Site

The extent of the construction site, including working areas, must be clearly demarcated and no movement or work outside these areas is permitted.

The Contractor must:

- Identify and demarcate the extent of the construction site as indicated on the approved construction site layout plan using barrier tape with steel droppers or another method as approved by the Project Engineer and ECO.
- Minimise the extent of the construction site footprint as much as possible.
- Ensure that the main site camp is completely fenced and has controlled security access.
- Identify and demarcate sensitive sites in collaboration with the ECO. This may require perimeter fencing or steel droppers with barrier tape.
- Maintain site demarcations in position until the cessation of construction works and ensure that no personnel or construction materials move outside the designated site.
- Ensure that the site is not used for any other purpose other than for the carrying out of construction activities.
- Ensure that no natural features are painted or permanently marked. Marking for surveying and other purposes must be done using pegs, beacons or rope and droppers.
- Ensure that security lighting from the construction camp and pump stations does not unduly disturb neighbours.

6.1.2 Site clearance

- Detailed, colour photographs shall be taken of the proposed site before any clearing may commence. These records are to be kept by the ECO to aid in the rehabilitation of the site.
- Prior to site clearance, the ECO must be informed, with 14 days notice, in order to identify and demarcate any indigenous trees or plants, nesting sites or heritage sites that required protection or translocation.
- Areas of the construction site requiring clearance shall only be cleared immediately prior to construction activities commencing, i.e. at the last practicable stage.
- Clearance of indigenous vegetation must be kept to an absolute minimum.

- No indigenous trees or shrubs may be felled, lopped, pruned or removed without the prior permission of the ECO. De-bushing and de-stumping are dealt with in section 6.1.6 of this document.
- Topsoil is to be stripped, together with grass, groundcover and sedges, from all areas where permanent or temporary structures and access roads are to be constructed. Conservation and handling of topsoil is to be in terms of this document (Section 6.1.5).

Wood obtained from clearing and grubbing operations remains the property of the Authority and must be stacked at sites designated by the ECO. The Contractor shall be required to remove and dispose of any wood from site at a designated site for vegetation disposal, should this be required.

6.1.3 Protection of Sensitive Habitats

- The Contractor must ensure that the necessary rescue and translocation of plants and animals be undertaken prior to the commencement of construction.
- The width of the initial clearance for the construction servitude must be minimised to reduce the loss of indigenous vegetation and natural forest
- The removal of indigenous vegetation must be kept to a minimum by minimising the construction footprint and by confining areas for structures, services, stockpiling, new temporary access roads, etc, to existing disturbed areas or areas within the construction servitude.
- Protected trees should be avoided as far as possible. However, in the event of avoidance being impossible, the Contractor should obtain ECO agreement for the removal. The ECO must identify these trees, in consultation with a suitably qualified botanist, before the commencement of construction.
- As far as possible, indigenous plants or natural features should not be disturbed, defaced, destroyed or removed. The Contractor will be held liable for the replacement of any indigenous plant or natural feature that is removed or damaged by the Contractor's negligence or mismanagement.
- Should the ECO confirm that clearing of indigenous vegetation is unavoidable, plant material must be transplanted where practical and possible.
- Where possible, the clearance of indigenous forest should be mitigated by replanting elsewhere in the area with appropriate locally indigenous species.
- The method of excavation must be selected to minimise interference with indigenous forest to be retained on either side of the servitude, i.e. manual labour should be utilised for pipelaying in sensitive areas (large excavation machinery can cause considerable damage to trees outside of the construction footprint if working in a narrow corridor flanked by tall trees either side).
- No material storage or laydown is permitted under trees.
- Vehicle and pedestrian traffic outside the construction area must be avoided.

6.1.3.1 Protection of Watercourses and Drainage Lines

- The Contractor must not cause any physical damage to any aspect of a watercourse, other than that necessary to complete the works as specified and in accordance with the accepted method statement.
- Short lengths of concrete encasement must be utilised to avoid erosion of the pipe fill material.
- The Contractor must repair the existing drainage systems and augment these where applicable with additional drainage or increased capacity so as to accommodate normal, as well as flood conditions.
- The Contractor must ensure that uncovered soil and stockpiles are not eroded and material washed away.
- The Contractor must not alter the flow of water, i.e. it may not be stopped, disconnected, diverted, ponded, or caused to become stagnant.

6.1.3.2 Wetland and River/Stream Crossings

- The ECO and Contractor must ensure that all wetlands and rivers/streams likely to be intersected by the project have been identified, delineated, photographed and clearly marked by the ECO prior to any construction work on the pipeline route.
- Timing of trenching and pipe laying through wetland and river/stream areas should be during the low flow season to minimise increased sedimentation and turbidity.
- The Contractor must avoid the unnecessary compaction and impacts on sensitive wetland and riparian soils.
- No construction materials may be stockpiled in any wetland and riparian areas.
- Watercourses must be crossed with an open cut trench through the stream, with the pipe buried sufficiently deep not to interfere with the backfilled stream bed.
- Concrete encasement and other pipe protection measures should be used where the structural integrity of the pipe is compromised.
- For the trenching operation in rivers/streams, the use of coffer dams to cross rivers/streams and confining construction work to the existing river/stream channel at all times is recommended.
- To avoid unnecessary erosion, no excavation of alternative channels to re-route any river/stream is allowed.
- Replanting of wetland and riparian vegetation must be undertaken immediately after surface reinstatement is complete.
- Where possible, plants must be replanted in wetland and river/stream areas from which they were removed.
- The pre-construction profile of the wetland and river/stream must be returned to one similar to before construction.
- Wetlands must have no created “ridge or channel” features present to ensure that no depressions remain, which could act as channels for preferential water flow thereby affecting the hydrological regime of the wetland.

6.1.3.3 Protection of Fauna

- Wild animals must not be fed, handled, removed, hunted, snared, captured, injured or killed or otherwise interfered with. The penalty clause associated with the needless destruction of wildlife is a fine and/or imprisonment[5].
- The Contractor must ensure that the construction area is kept clean, tidy and free of litter/rubbish that would attract animal pests.
- The Contractor must not use any pesticides, unless approved by the ECO.
- Where trenches pose a safety risk to animals, the Contractor must ensure that they are adequately cordoned off.
- The ECO, in consultation with the Contractor, must report problem or injured wild animals to EKZNW.

6.1.4 Protection of Cultural Heritage Resources

If a cultural heritage artefact on site is uncovered, work in the immediate vicinity must be stopped immediately. The Contractor must take reasonable precautions to prevent any person from removing or damaging any such article and must immediately inform the Environmental Manager of such a discovery. Amafa aKwaZulu-Natali, the provincial heritage authority of KwaZulu-Natal must be contacted so that an archaeological/heritage resources consultant can be appointed to record the site and excavate if necessary. Work may only resume once clearance is given in writing by Amafa aKwaZulu-Natali.

[5] In terms of the Animals Protection Act, 1962 (Act 71 of 1962) Section 2.

6.1.5 Topsoil Conservation

- Ahead of all construction, the topsoil layer must be stripped from all areas to be cleared, excavated, compacted or otherwise disturbed.
- In the absence of a recognisable topsoil layer, the upper most 300 mm of soil must be stripped.
- The topsoil must be stockpiled separately from overburden material (subsoil and rocky material).
- Construction works must be co-ordinated to limit unnecessarily prolonged exposure of stripped areas and stockpiles.
- Vegetation and soil must be retained in position for as long as possible, removing it immediately ahead of construction/earthworks in that area.
- Herbaceous vegetation, along with overlying grass and other fine organic matter must be stripped and stockpiled.
- The stockpile height of topsoil must not exceed 2 m unless approved by the ECO.
- The stripped topsoil must be stored at an approved location and in an approved manner for later reuse in the rehabilitation process.
- Topsoil stripped from different sites must be stockpiled separately, as re-application during rehabilitation must preferably be site specific.
- Topsoil obtained from different sites must not be mixed.

6.1.6 De-bushing and de-stumping

- Prior to any disturbance/stockpiling and clearing of natural vegetation and soil (either within the construction servitude, working footprint or at designated or instructed areas outside the construction servitude), the Contractor must submit a method statement to the Project Engineer for approval (in line with the approved construction site layout plan (Sections 5.6.1 and 6.1)). The plan must contain reference points (e.g. chainage) of the areas to be disturbed for easy identification at a later stage.
- The Contractor must obtain permission from the ECO to proceed with debushing as this needs to be carefully co-ordinated with specified plant rescue and the DWA permit requirements[6] (Section 2.2).
- The Contractor must only debush specified areas as indicated on the approved construction site layout plan (Sections 5.6.1 and 6.1).
- Remaining plant material and stumps must be disposed of as solid waste or left on site to decompose naturally as advised by the ECO.
- De-stumping must only be carried out in consultation with the ECO

6.2 Site Infrastructure

6.2.1 Structures

- All buildings and structures, including offices, workshops, stores, etc. must be located as per the approved construction site layout plan.
- Only security and emergency personnel may be housed on the construction site. Accommodation for other construction staff must be located in suitable venues off site.
- On site accommodation for security and emergency personnel must be securely fenced. These fences must remain in position for the duration of construction.
- Essential services must be provided and maintained in a functional state and not overloaded. Defects and inadequacies must be rectified immediately.

[6] Permits in terms of the National Forests Act, 1998 (Act No. 84 of 1998).

6.2.2 Services

6.2.2.1 Water

- Permission from the relevant landowner and DWA must be obtained prior to abstracting water from any watercourse where the volumes abstracted require registration or licensing in terms of the National Water Act, 1998 (Act No. 36 of 1998) and any general authorisation in terms of Section 39(1) of the National Water Act.
- The point and method of abstraction must be approved by the ECO.

6.2.2.2 Sanitation and Ablution Facilities

- The Contractor's intended methods for waste management and waste minimisation must be implemented at the outset of the contract, and approved by the Project Engineer.
- Adequate sanitation facilities[7] must be provided and maintained for construction workers and security personnel along the entire route of the project.
- Sanitation facilities must be in the form of portable serviced toilets.
- Separate sanitation facilities must be provided for male and female workers.
- Outside toilets must be must be adequately secured to prevent them from blowing over and provided with locks and doors.
- The facilities must be placed outside areas susceptible to flooding.
- Grey water must not be discharged via French drains or directly into the surrounding environment where there is a high groundwater level and associated risk of contamination.

6.2.2.3 Power supply

- The power supply to be used is to be approved by the Project Engineer and ECO.
- If generators are to be used, establish generators, motors and stored fuel on a hardened, bunded surface and ensure any associated pollution is controlled (Section 6.4.4).
- Noise from generators must be controlled (Section 6.4.6).

6.2.3 Batching Sites

- Locate the batching activity in an area of low environmental sensitivity[8] to be identified and approved by the ECO.
- Clear topsoil from the batching site and stockpile for later rehabilitation purposes.
- Cement may not be mixed directly on the ground, but rather on a protective sheet or board.
- Protect the batching plant on the up-slope side by an earth berm or sandbag system to deflect clean surface runoff away from the plant.
- Contain the batching plant on the down-slope side by a trench and earth berm or sandbag system to control contaminated runoff and construction water emanating from within the plant.
- Effluent from concrete batch plants should be treated in a designated sedimentation (sludge) dam to the legally required standards to prevent surface and groundwater pollution.
- Ensure that measures are in place to prevent the overflow of sludge dams during heavy rains and storm conditions.
- Ensure screening and containment are in place to prevent wind-blown contamination associated with bulk cement silos, loading and batching

[7] Chemical toilets and hand washing facilities.

[8] Do not locate batching plants or associated sludge dams within the 1:100 year flood line, or within a horizontal distance of 100 m (whichever is greater) of a watercourse, drainage line or identified wetland, unless unavoidable and approved by the ECO. Do not locate batching plants or associated sludge dams within any riparian vegetation zone.

6.2.4 Construction Camp, Lay-Down Areas and Pipe Storage Yards

- The construction camp will house administrative offices, construction plant, material stockpiles, fuels, storage facilities and security guard accommodation.
- No construction workers may be accommodated at the construction camp.
- All pipe storage yards, storage areas and material lay-down sites must be located within predetermined zones as per the approved construction site layout plan.
- Additional areas required by the Contractor for pipe storage yards, lay-down and storage must be approved by the Project Engineer with input from the ECO, in the form of an amended construction site layout plan indicating the extent and anticipated utilisation of the storage and lay-down areas.
- The construction camp, pipe storage yards and lay-down areas must be kept secure and neat at all times with appropriate access control measures employed during construction.
- Security lighting must be positioned so that it does not pose a nuisance to neighbouring properties or a danger to road users.

6.2.5 Storm Water Control

- Appropriate drainage measures must be taken to ensure that excessive run-off, and as a result, soil erosion, does not occur from the construction site.
- Where directed by the ECO, embankments must be grassed to minimise erosion.
- Storm water diversions must be constructed above the construction campsite to direct run-off away from the site.

6.2.6 Roads and Access

- As far as possible, existing roads must be used for access/haulage purposes, as per the construction site layout plan.
- Adequate vehicle turning areas must be allowed for.
- Alternative temporary access routes must be provided where construction will obstruct existing access.
- Routes through drainage lines and riparian zones must be avoided wherever possible. When this is unavoidable, only one road is permitted, constructed perpendicular to the drainage line (use of existing crossing points is recommended).
- Speed limits appropriate to the type and condition of road must be enforced at all times.
- Safe pedestrian access and crossing must be provided where necessary.
- All access routes and roads must be adequately maintained in order to minimise erosion, undue surface damage and pollution.
- Topsoil (and other material) that has accumulated inside drains of roadways must be regularly removed to keep these open and functional.
- Gravel or cement spillage must be cleared immediately (both within and outside the construction site).
- Damage to public or private roads caused by the Contractor during the construction phase must be repaired immediately to the same or a better state.
- No off-road driving is permitted outside of the demarcated construction area or in sensitive areas.
- Traffic disruptions along roads must be minimised and controlled.

6.3 Implements and Equipment

- Mobile plant and equipment which is appropriate to the task must be utilised in order to minimise the impact on and extent of damage to the environment.
- Should the ECO at any time determine that the method, mobile plant or equipment utilised by the Contractor is unsuitable for the task at hand, or unnecessarily detrimental to the environment, then he/she must specify the use of a suitable alternative.

6.4 Site Management

6.4.1 Solid Waste

- The Contractor must ensure that personnel make use of the litter bins provided and that the construction site and the construction camp are kept tidy and litter-free at all times.
- All domestic waste must be collected in litter bins.
- Litter bins must be equipped with a closing mechanism to prevent their contents from blowing out and scavengers from getting in.
- Litter bins must be emptied weekly (or as required before they reach capacity).
- Domestic waste must be taken to a licensed landfill site. Waste must be transported responsibly, avoiding waste spills en-route.
- Where necessary, a storage area must be dedicated on site for the collection of construction waste.
- No solid waste may be burned or buried on site or disposed of by any other method.
- Where feasible, waste paper, glass and metal waste must be collected separately and arranged for collection by recycling Contractors.
- No burning of waste is permitted.

6.4.2 Liquid Waste

- Suitable, sufficient and conveniently located sanitation facilities must be provided as per the approved construction site layout plan.
- Toilets must be regularly emptied and serviced.
- The Contractor is entirely responsible for enforcing their use and for maintaining all toilets in a clean, orderly and sanitary condition to the satisfaction of the ECO.
- Sewage must be disposed of at a licensed wastewater treatment site and may under no circumstances be dumped in the bush or buried.

6.4.3 Hazardous Waste

- Compliance with all national, regional and local legislation must be ensured with regard to the storage, handling and disposal of hydrocarbons, chemicals, solvents and any other harmful and hazardous substances and materials.
- Hazardous waste must be stored as indicated on the approved construction site layout plan.
- Drip trays must be used where dispensing mechanisms or stored receptacles may leak.
- No spillage of hazardous products must be allowed on site. Special care must be taken to avoid contamination of surface or groundwater.
- Under no circumstances shall the spoiling of hazardous products on site be allowed.
- Waste oils and batteries must be retained for recycling by the supplier, wherever possible.
- Used oil and lubricants must be collected in a holding tank and disposed of at a registered hazardous waste disposal site.
- Hazardous waste not earmarked for reuse, recycling or resale must be disposed of at a registered hazardous waste disposal site.
- The repair and/or maintenance of vehicles and equipments on site are not permitted.

6.4.4 Pollution Control

- The storage for any substance, which causes or is likely to cause pollution must not be located within the 1:100 year flood line, or within a horizontal distance of 100 m (whichever is greater) of a watercourse, drainage line or identified wetland.
- Waste or foreign material must not be dumped into any watercourses or wetland areas.
- Watercourses and wetland areas must not be used for swimming, bathing, or the cleaning of clothing, tools or equipment.
- The discharge of water containing polluting matter or visible suspended materials, fines and sediments directly into drainage lines or wetlands must be prevented.
- Unpolluted water/runoff must be deflected away from any dirty area.
- Where necessary, turbid water pumped from excavations within watercourses must be passed through a sand filter or settling pond before being released back into the watercourse. Discharge of this water must be in a controlled manner, and no erosion may result.
- No storm water must enter any drainage installation for the reception, conveyance, storage and/or treatment of sewage.
- Special care during rainy periods must be taken to prevent the contents of sumps and drip trays from overflowing.
- Before any water is permitted to enter natural drainage lines, the quality of the water must comply with the South African Water Quality Guidelines (Department of Water Affairs and Forestry, 1996) and the Standard Requirements for Effluent and Waste Water[9].
- Watercourses must be protected from direct or indirect spillage of pollutants such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate, tailings, wash water, organic materials, etc.
- The Contractor must ensure that an emergency preparedness plan is in place for implementation in the case of a spill or substances that can be harmful to an individual or the receiving environment.
- The Contractor must ensure that accidental oil or fuel spills or leakages (other than those classed as emergency) are immediately contained and cleaned up.
- Oil or fuel spills must not be hosed into a storm water drain or sewer, or into the surrounding natural environment.
- Small oil or fuel spills must be cleaned with an approved absorbent material, such as 'Drizit' or ‘Spill-sorb’.
- Oil or fuel spills must be contained in water using an approved oil absorbent fibre.
- Soil contaminated by oil or fuel must be treated using one of the following approved methods, as per instruction of the ECO:
  - The soil to the depth of the contamination must be removed and disposed of at a registered hazardous waste disposal site.
  - The soil to the depth of the contamination must be removed and regenerated using approved bio-remediation methods.
- All on-site operations that involve the use of cement and concrete must be carefully controlled.
- Cement and concrete mixing must be limited to single sites, where possible.
- Plastic trays or liners must be used when mixing cement and concrete (cement and concrete must not be mixed directly on the ground).
- All visible remains of excess cement and concrete must be disposed of after the completion of tasks. Solid waste concrete must be treated as inert construction rubble, but wet cement and liquid slurry, as well as cement powder must be treated as hazardous waste.
- Water and slurry from cement and concrete mixing operations must be contained and directed into a settlement pond or sludge dam for later disposal.

[9] As set out in Government Notice 399 (26 March 2004) – Revision of General Authorisations in terms of Section 39 of the National Water Act, 1998 (Act No 36 of 1998) Sections 21(f), (h) and (g).

- Trucks delivering concrete may be washed only within designated wash bays equipped with runoff containment and infrastructure to direct wastewater into a settlement pond or sludge dam for later disposal. Trucks must deliver bags and aggregate along existing access roads/tracks.

6.4.5 Air Quality

- Dust-suppression techniques (e.g. the use of water spray vehicles) must be employed on all exposed surfaces during periods of high wind. Potential methods include:
  - Remove only limited vegetation to accommodate construction activities.
  - Spray unpaved roads and construction areas, including stockpiles and spoil, with water routinely throughout construction to contain dust.
  - All surfaced public roads shall be cleaned within 50 metres of points of ingress and egress in order that mud and dust on the road surface is minimised.
  - Implement traffic control measures to limit vehicle entrained dust from unpaved roads (e.g. by limiting construction vehicle speeds and by restricting traffic volumes).
  - Re-vegetate verges and cuttings once all construction is completed, and when the lay down area/construction camp is vacated.
- Vehicles emitting black smoke and fumes must be repaired and maintained.
- No burning of waste material shall be allowed anywhere on site.

6.4.6 Noise Control

- Compliance with the legislation with respect to noise is mandatory.
- Noisy activities must take place during normal working hours.
- Adjacent residents must be notified of after-hours construction work and of any other activity that is likely to cause a nuisance.
- If noise levels at the boundaries of the site exceed 7dB above ambient levels, then the local health authorities must be informed.
- Noise suppression measures must be applied to all construction equipment.
- Construction equipment must be kept in good working order and, where appropriate, fitted with silencers.
- Community complaints with regard to noise generation must be responded to, taking reasonable action to ameliorate the impact.

6.4.7 Fire Control

- The Project Engineer must ensure that he is aware of the requirements of landowners, in terms of fire control regulations on their property and impart this information as necessary to the RE and Contractor(s).
- Adequate precautions must be taken to ensure that fires are not started as a result of construction. The Contractor will be held liable for any damage to property adjoining the site as a result of any fire caused by one of his employees.
- The Contractor must agree to a fire reporting and extinguishing protocol with each affected landowner.
- The Contractor must compensate affected landowners for any loss due to fire resulting from the contract.
- The construction camp must be equipped with adequate fire fighting equipment[10] (this includes at least rubber beaters when working in veld areas, and at least one fire extinguisher of the appropriate type, irrespective of the site).
- Immediate steps must be taken to extinguish any fire, which may break out on the construction site.
- No open fires are permitted anywhere on site.

[10] In terms of SABS 1200.

- Contained fires for heating and cooking (i.e. in a fire drum) must be restricted to designated areas on site. Employees must be prevented from creating fires randomly outside designated areas.
- Fuel or chemicals must not be stored under trees.
- Gas and liquid fuel must not be stored in the same storage area.
- Smoking must not be permitted within 3 m of any fuel or chemical storage area, or refuelling area.

6.4.8 Health and Safety

- Adhere to the requirements of the Occupational Health and Safety Act, and associated Construction Regulations.
- Ensure that emergency numbers and First Aid supplies are always easily accessible.
- Obey speed limits and travel more slowly where conditions dictate.
- Ensure that operators and drivers limit their potential to endanger humans and animals at all times, by observing strict safety precautions

6.4.9 Safety and Security

Where relevant, implement security measures to:

- Prevent access by people with criminal intent.
- Prevent dangerous animals entering the site.
- Comply with the relevant provisions under the Occupational Health and Safety Act, and associated Construction Regulations.
- Inform staff of the risk of contraction, the symptoms thereof, and the steps for prevention and treatment of the following:
  - HIV/AIDS.
  - Malaria.
  - Tick bite fever.
  - Heat stroke.
  - Cholera (Guidelines for cholera are available from the Department of Environmental Health, Pietermaritzburg).

6.5 Earthworks

6.5.1 Excavations and Trenches

- Excavations must be undertaken carefully, incorporating appropriate drainage.
- For significant trees identified by the ECO, trenching must be outside the drip line of the tree as specified by the ECO.
- The pipeline must be constructed with the dig and lay method where pipes are laid length by length. Excavate and backfill trenches on a progressive basis.
- The Contractor must not have more than 500 m of trench open at any one time.
- Excavations must not stand open for longer than two days, where possible (maximum of four days). Excavations should preferably be opened and closed on the same day.
- If de-watering is required where the water table is high, the trench should only be open for one day.
- Where trenches pose a risk to human or animal safety, they must be adequately cordoned off to prevent accidents.
- Wild animals that are found trapped in excavations must be assisted provided there is no risk to workers' safety. Should there be a danger to workers or the animal is injured, the matter should be reported to EKZNW as soon as possible.
- Excavation must be programmed to take place once the required materials are on site. This facilitates the immediate laying of services and/or construction of subsurface infrastructure and minimises open trench time.

- Where trenching through wetlands and drainage lines is required (as per the approved site layout plan), the Contractor must return the profile of the wetland/drainage line to one similar to the pre-construction profile. No ridge or channel feature may remain.
- During construction through a wetland, the majority of the flow of the wetland must be allowed to pass downstream (i.e. no damming must be allowed to take place). In-stream diversions must be used rather than the construction of new channels.

6.5.2 Shaping and Trimming

- The Contractor must execute bulk (shaping) and fine (trimming) earthworks according to the design (aimed at the prevention of soil erosion, of efficient storm water control, of the eventual reestablishment of vegetation and of ultimately achieving aesthetically acceptable landscapes).
- The shaping and trimming operations must be planned to allow for topsoil application: final trimmed levels must make provision for the specified depth of reapplied topsoil.
- Trimmed surfaces must be left slightly rough to facilitate topsoil binding for the natural establishment of vegetation.
- Where machine operations are not practicable, trimming must be carried out using hand tools.

6.5.3 Borrow Pits and Rock Quarries

- Where it is required to import material, this shall be from legal[11] commercial sources or legal borrow areas. Sources of material are to be approved by the ECO, to ensure that no importation of alien invasive plant seeds or other potentially hazardous substances enters the project environment.
- Do not commence with quarrying activities before the necessary DME approvals are in place.
- Comply with the provisions of the environmental management programme for the development, use and rehabilitation of the particular borrow pit. Of particular importance is to:
  - Remove and separately stockpile topsoil and overburden for use during rehabilitation, locating these in areas where they will not be disturbed by the progress of the gravel pit/quarry.
  - Avoid stripping material to bedrock. This limits rehabilitation potential for these areas.
  - Minimise the flow of any surface water or floodwater into borrow areas. Where necessary, protect borrow areas by an earth berm or sandbag system to deflect clean surface runoff away from the excavations.
  - Allow for the natural free drainage of borrow areas. All borrow areas must be drained unless otherwise specified.
  - Bury coarse material incapable of supporting vegetation beneath the finer material.

6.6 Stockpiles, Storage and Handling

6.6.1 Topsoil

- If temporary stockpiling is required, stockpiles must be positioned as indicated on the approved construction site layout plan.
- Any additional topsoil stockpile areas required by the Contractor must be approved by the ECO, in the form of an amended construction site layout plan indicating the position and extent thereof.
- Topsoil is to be kept separate from subsoil and handled twice only – once to strip and stockpile, and once to replace and level.
- Topsoil stockpiles must be positioned on the higher side of a disturbed area, and above a 1:50 year flood line wherever possible.
- Stockpile height must not exceed 2 m unless approved by the ECO.

[11] In terms of the requirements of the National Mineral and Petroleum Resources Development Act, 2002.

- All topsoil must be stored in such a way and in such a place that it will not cause the damming up of water, erosion gullies, or wash away itself.
- Topsoil must be stockpiled in windrows parallel to the excavation.
- Near watercourses or wetland areas, topsoil must be stockpiled above the riverine zone.
- Topsoil must not be stockpiled in drainage lines.
- Topsoil must not be stockpiled in sensitive areas.
- Topsoil must be stockpiled in a suitable form in order to minimise visual impact.
- Topsoil stockpiles must be protected from erosion by wind and water.
- Topsoil must not be compacted in any way during storage.
- Exotic/invasive plants and broad leaf weeds that emerge on topsoil stockpiles must be removed.
- If topsoil is to be stockpiled for extended periods, especially during the wet season, the ECO must recommend one of the following measures:
  - The stockpiles must be re-vegetated with indigenous grasses as indicated by the ECO.
  - The stockpiles must be covered with protective material, such as hessian mats.
- Topsoil must not be buried, mixed with spoil (excavated subsoil), rubble or building material, or subjected to compaction or contamination by vehicles or machinery. This will render the topsoil unsuitable for use during rehabilitation.
- The Contractor will be held liable for the replacement of any topsoil rendered unsuitable for use during rehabilitation, for reasons due to his negligence or mismanagement on site.

6.6.2 Spoil

- A photographic record (before construction and after rehabilitation) must be kept of all spoil sites for monitoring purposes.
- The reinstated construction site, used as a spoil area for excess trench excavation material, must only have a net increase in ground level of less than 200 mm. The reinstated site must be lightly compacted and made free-draining.
- Excess trench material may also be used to replace unsuitable local material (e.g. bedding for pipes).
- The allocated burial site (approved by the Resident Engineer and ECO) must be used for construction rubble.
- Spoil areas must not negatively affect surface drainage, and they must not alter the topography to the extent that they become visually intrusive.
- Dumping of material over embankments is not permitted.
- The use of spoil sites for the disposal of hazardous or toxic wastes is not permitted.
- No spoil site may be located within 500 m of any watercourse or in sensitive areas.
- Spoil must be positioned on the higher side of a disturbed area, and above a 1:20 year flood line wherever possible.
- Spoil must be stored in such a way and in such a place that it will not cause the damming up of water, erosion gullies, or wash away itself.
- No slopes steeper than 1(V):3(H) are allowed.
- Coarser material must be buried beneath the finer material, and all permanent spoil overlayed with a layer of 200 mm topsoil.
- If required, additional spoil storage areas required by the Contractor must be approved by the ECO, in the form of an amended construction site layout plan. The following information is required for approval:
  - The location, description and access to proposed sites.
  - The quantity of material to be spoiled.
  - The type of material to be spoiled.
  - The proposed method of spoiling.
  - A proposal for the reinstatement and rehabilitation plan, including the final profile.

- Written approval from the landowner/relevant authority that material may be spoiled on the land in question, subject to conditions.

- Spoil areas must be re-vegetated and rehabilitated after the construction phase.

6.6.3 Vehicles and Equipment

- Vehicles used during construction must have the minimum impact on the environment and other road users.
- Vehicles, machinery and equipment must be checked regularly to ensure that none have leaks or cause spills of oil, diesel, grease or hydraulic fluid. Problematic vehicles, machinery or equipment must be sent for repair or removed from site immediately.
- Drip trays must be provided for any machinery that will be in position for longer than one day. Drip trays are to be watertight, and must be emptied regularly and before rain events. The contents of drip trays are to be treated as hazardous waste.
- All the necessary handling and safety equipment for vehicles, machinery and equipment must be provided by the Contractor and used or worn by staff.

6.6.4 Fuel

- Fuel stores must be positioned as indicated on the approved construction site layout plan.
- Fuel depots must not be located within the 1:100 year flood line, or within a horizontal distance of 100 m (whichever is greater) of a watercourse, drainage line or identified wetland.
- In the event the contractor has a diesel tank on site at the construction camp, the diesel tank must be on a stand, within a bunded area, with a metal drip tray under the dispensing hose. The dispensing hose must have a control pump with a valve, tap, hose and funnel.
- An impervious layer (paving or PVC sheeting with a layer of sand) must be provided adjacent to the diesel tank upon which vehicles must park during refuelling. This will help to accommodate fuel spills during refuelling.
- All spills (within the bund and dispensing area) must be directed to a collection sump.
- Spills and the contents of the sump must be treated as hazardous waste.
- All the necessary handling and safety equipment for fuels must be provided by the Contractor and used or worn by staff.

6.6.5 Hazardous Substances

- Compliance with all national, regional and local legislation must be ensured with regard to the storage, transport and use of harmful and hazardous substances and materials.
- The Contractor must provide a register of hazardous substances to be used on site and must provide proof to the Project Engineer that relevant authorisation to store such substances has been obtained from the relevant authority. In addition, hazard signs indicating the nature of the stored materials must be clearly displayed on the storage facility or containment structure.
- The Contractor must provide the Project Engineer with details of the preventative measures that are proposed to be installed in order to mitigate against pollution of the surrounding environment from leaks or spillages. This must include the emergency procedures to be implemented in the event of misuse or spillage of substances that will negatively impact on an individual or the environment.
- Hazardous substance stores must be positioned as indicated on the approved construction site layout plan, in areas not threatening human life or the environment.
- Hazardous substances may only be stored under controlled conditions (in a secured, appointed area that is fenced, has restricted entry, has weatherproof facilities, and is underlain by a bunded concrete slab to protect against soil and water pollution).

- Controlled loading/unloading areas must be provided which are underlain by an impervious paving or PVC sheet to protect against soil and water pollution.
- Personnel handling hazardous substances must have been educated in terms of the correct handling, use and disposal thereof.
- Empty containers in which hazardous substances were kept must be treated as hazardous waste.
- The responsibility for spill treatment lies with the Contractor. The individual responsible for, or who discovers a hazardous waste spill must report the incident to the RE. The ECO must assess the situation in consultation with the RE and act as required. In all cases, the immediate response shall be to contain the spill. The exact treatment of polluted soil/water must be determined by the Environmental Manager in consultation with the Project Engineer. Areas cleared of hazardous waste must be re-vegetated according to the Environmental Manager's instructions.
- Should the spill be serious and constitute an emergency, the emergency procedure must be applied.
- Should water downstream of the spill be polluted, and fauna and flora show signs of deterioration or death, specialist hydrological or ecological advice must be sought for treatment and remedial procedures to be followed. The requirement for such input shall be agreed with the Environmental Manager. The costs of containment and rehabilitation shall be for the Contractor's account, including the costs of specialist input.

6.7 Water Use

- Water must not be wasted (e.g. leaks must be repaired).
- Where possible, water must be recycled on the construction site.

6.8 Erosion Control

6.8.1 Drainage Systems

- Culverts, pipes and channels shall be concrete lined.
- Design calculations shall prove that the optimum solution is being implemented.
- Drainage must be controlled to ensure that runoff from the site will not culminate in off-site pollution or cause water damage to properties downstream of the site.
- Drainage must be provided (e.g. mitre drains) in accordance with the local topography to accommodate storm water and to minimise soil erosion.
- Surface water or storm water must not be concentrated or permitted to flow down cut or fill slopes or along pipeline routes without erosion protection measures being in place.
- Wetlands, drainage lines and river banks must not be drained, filled or altered in any way, unless this forms part of construction or upon specific instruction by the ECO[12].
- The extent of hardened or paved areas must be kept to a minimum.
- Culvert design must encourage their use as underpass crossings for small to medium sized animals.

6.8.2 Erosion Protection

- All areas susceptible to erosion must be protected to ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and construction area.
- Natural trees, shrubbery and grass species must be retained, wherever possible.
- Vehicular or pedestrian access must not be permitted into areas beyond the demarcated boundary of the construction area.
- Only light equipment must be used for access and deliveries into areas of unstable soils, in areas where erosion is evident, and at stream and river embankments.

[12] Relevant permits from DWA and DAEA are to be in place before such instruction may be given.

- In sensitive areas, measures such as a drainage layer, well pointing, shoring and concrete encasement of the pipeline where the pipeline crosses watercourses, must be taken.
- Shoring must occur where excavation is in loose sand and/or swamp areas.
- Erosion donga crossings must be addressed as watercourse crossings, applying soil erosion control and bank stabilisation procedures as specified by the ECO.
- Erosion problems must be repaired on a progressive basis throughout the contract.
- Slopes steeper than 1(V):3(H) or slopes where the soils are by nature dispersive or sandy must be stabilised (in consultation with the ECO). One or more of the following methods may be required:
  - Topsoil covered with a geotextile[13], plus a specified grass seed mixture[14].
  - A 50:50 by volume rock:topsoil mix 200 mm thick, plus specified grass seed mixture[15].
  - Logging or stepping (logs placed in continuous lines following the contours).
  - Earth or rock-pack cut-off berms[16].
  - Benches (sand bags).
  - Packed branches.
  - Ripping and/or scarifying along the contours.
  - Storm water berms.
- Slopes of watercourse diversions must be protected with one or more of the following (in consultation with the ECO):
  - Sandbags.
  - Reno mattresses.
  - Plastic liners and/or coarse rock (undersize rip-rap).
- During the course of construction, the ECO may identify additional slopes in need of stabilisation and will specify actions in terms of the most appropriate approved method and technology.

6.9 Weed and Invader Plant Control

- The Contractor is responsible for the control of weeds and invader plants within the construction area for the duration of the construction phase.
- This control involves killing the plants present, killing the seedlings, which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion. Weeds and invader plants will be controlled in the manner prescribed for that category by the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) (as amended) or in terms of Working for Water guidelines.
- The ECO must identify alien plants (terrestrial and aquatic species) that should be removed by the Contractor.
- The ECO must monitor all sites disturbed by construction activities for colonisation by weeds, exotics or invasive plants, to be controlled by the Contractor as they emerge.
- Removed vegetation must be disposed of at a DWA approved waste disposal facility.
- Only properly trained people must handle and make use of chemical herbicides. Workers must wear protective clothing when applying the herbicides.
- Spraying must not take place in windy conditions, when the herbicide may drift onto healthy indigenous plants.
- The use of herbicides is not permitted within identified sensitive areas. The removal of weeds and invader plants within these areas must be undertaken by hand.
- Affected areas must be reinstated and rehabilitated as soon as practically possible.

13 Preferably made of sisal, with openings of at least be 225 mm^2 and guaranteed to last at least 24 months.
14 The subsoil must be broken up/roughened to properly bind with the topsoil.
15 The subsoil must be broken up/roughened to properly bind with the topsoil.
16 Angled across the contour at approximately 30 degrees form the bisector of the contour.

6.10 Nuisance Control

- Disruptions to farming activities must be minimised and managed.
- Private property, access roads and other existing services on and in the vicinity of the construction site must be treated with respect and protected against damage.
- The Contractor must bear the cost of the repair of damage as a result of the Contractor's operations on site.
- On-going liaison with affected landowners, service providers and other parties must be undertaken to minimise disruption and interruptions to services.
- The Contractor must accommodate planting, maintenance and harvesting regimes (sugarcane farms, timber plantations and subsistence farming) in the construction schedule.
- Sufficient prior notice must be provided to affected landowners, service providers and other parties of the disruption of access.
- Construction activities must be restricted to within the construction site.
- The movement of construction workers must be confined, as far as possible, to the construction area.
- Access points must be clearly demarcated with barrier tape and signage.
- While the trenches are open at access points, the access points must be clearly cordoned off with signage to prevent people or vehicles accidentally attempting to make use of the access points.
- Between the opening of trenches and the laying of the pipeline, ramps across trenches at access points must be provided in order to keep loss of access as short as possible.
- The trench must be back-filled and rehabilitated as soon as the pipe has been laid on a progressive basis.
- The local community must be kept informed as to restrictions within the servitude areas.

7. REHABILITATION PHASE

The concept of progressive rehabilitation is to be implemented throughout the life of the project. As soon as work in one area is complete the rehabilitation of that site is to commence. This will involve returning the condition of the disturbed areas to a state that they were in before the project began, or better. The Project Engineer will be responsible for the monitoring of rehabilitation.

Unless specified otherwise, the Contractor shall be held responsible for the re-establishment of vegetation within the construction site boundaries for all areas disturbed during construction.

7.1 General Specifications

- The principle of progressive reinstatement must be followed wherever possible. This includes the reinstatement of disturbed areas on an ongoing basis, immediately after the specified construction activities for that area are concluded.
- As soon as a section of pipeline or a reservoir site is finished and a construction site or pipe storage yard vacated, the disturbed areas must be rehabilitated by landscaping, levelling, topsoil dressing, alien plant eradication and vegetation establishment, including the planting of replacement trees where trees have had to be removed.
- Erosion control measures must be implemented and the effectiveness thereof must be monitored and corrected where necessary. Environmental damage due to the failure of erosion control measures must be rehabilitated to a state agreed with DAEA.

7.2 Removal of Structures and Infrastructure

- All construction plant, equipment, signage, storage containers, temporary fencing and gates, temporary services, fixtures, foundations and any other temporary construction infrastructure must be cleared from the construction site.
- Access roads utilised during construction (which are not earmarked for closure and rehabilitation) must be returned to a usable state and/or a state no worse than prior to construction.
- Unless otherwise directed by the Project Engineer, all temporary access and haul roads earmarked for closure must be ripped, scarified, top soiled and seeded.

7.3 Stockpiles, Inert Waste and Rubble

- All stockpiles and surplus material must be transported to an approved location off site.
- After the stockpiled material has been removed, the site must be re-instated and rehabilitated.
- The site must be cleared of all inert waste and rubble, including surplus rock and foundations.
- Excess spoil and inert rubble must be transported to waste sites as approved by the Project Engineer and ECO.
- All domestic waste must be removed and disposed of at a registered waste disposal site.

7.4 Hazardous Waste and Pollution Control

- All fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps must be removed from site.
- Pollution containment structures must be removed from site.
- All sanitation infrastructure and wastewater disposal systems must be removed from site.

7.5 Final Shaping

- All excavations must be backfilled with *in situ* material.
- All dangerous excavations must be made safe by backfilling and grading as required.
- The reinstated construction site must be graded to ensure free flow of run-off and to prevent damming of water.
- Slopes must not be steeper than 1(V):3(H). The slopes must mimic the natural slopes and topography of the surrounding environment.
- The backfilling of excavations must be programmed so that subsoil is deposited first, followed by topsoil. The layers must be compacted as part of final shaping.
- Backfilled areas must be monitored for subsidence (as the backfill settles) and depressions filled using available material.
- Temporary drifts and watercourse crossings must be dismantled and flattened, reinstating all drainage lines to approximate the original profile.
- All disturbed areas must be shaped to blend in with the surrounding landscape.
- No excavated material or stockpiles must be left on site and all material remaining after backfilling must be smoothed over to blend in with the surrounding landscape.
- The site must be monitored for signs of erosion and remedial action taken where there are problems.

7.6 Topsoil Replacement and Soil Amelioration

- Topsoil must be replaced prior to the rainy season or any expected wet weather conditions.
- Stockpiled topsoil must be replaced and redistributed, together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the construction site, including temporary access routes and roads.
- Topsoil must be replaced to the original depth (i.e. as much as was removed prior to construction).
- Topsoil must be replaced in the same area from where it was stripped. If there is insufficient topsoil available from a particular soil zone to produce the minimum specified depth, topsoil of similar quality may be brought from other areas[17] (this must be approved by the ECO).
- Topsoil suspected to be contaminated with the seed of alien vegetation must not be used.
- Imported topsoil must be sprayed with specified herbicides (approved by the ECO).
- Topsoil not utilised must be shaped in an acceptable manner to blend in with the local surrounding area.
- After topsoil placement is complete, available stripped vegetation must be spread randomly by hand over the topsoiled area.
- In the event that no topsoil is available on site prior to construction, and thus no topsoil is available for rehabilitation, the following ameliorative action must be undertaken (in consultation with the ECO):
  - The soil to a depth of 200 mm must be sampled in all areas allocated for grass planting and the samples sent for soil analysis to determine the type of fertiliser and rate thereof to be applied.
  - The necessary soil ameliorants as indicated by soil tests must be added to and worked into the soil.
  - After the application of fertilisers, a waiting period of six to eight weeks is required prior to the execution of planting and/or grassing.

[17] The suitability of substitute material will be determined by means of a soil analysis addressing soil fraction, fertility, pH and drainage, and approved by the ECO.

7.7 Ripping and Scarifying

- Following the application of topsoil, all areas must be ripped[18] and/or scarified[19] to facilitate mixing of the upper most layers. The ECO will specify whether ripping and/or scarifying is necessary.
- All disturbed and compacted areas of the construction site must be ripped and/or scarified, including the site offices, stockpile areas, temporary access routes and roads.
- Ripping and/or scarifying must be done along the contour to prevent the creation of down-slope channels.
- Ripping and/or scarifying must be done at 300 mm intervals (not more than 400 mm intervals).
- Ripping and/or scarifying must not be done under wet conditions (the soil will not break up).

7.8 Reinstatement of wetland areas and water courses

Where water courses or wetlands have been affected by construction activities:

- Ensure that watercourse banks are returned to their original profile.
- The surface reinstatement of wetland areas is to ensure that no depressions remain that could act as channels for preferential water flow (thereby affecting the hydrological regime of the wetland).
- The Contractor shall preserve all riparian and wetland vegetation for use in rehabilitation of those environments. This vegetation is to be kept moist at all times. It is to be placed in the shade and covered with moistened hessian cloth until replanting, which is to be undertaken immediately after surface reinstatement is complete.
- Plants are to be, as nearly as possible, replanted in areas from which they were removed.

7.9 Planting

- All planting work must be undertaken by a suitably qualified Contractor.
- The sourcing of seed or other plant material used for vegetation establishment must be from within 50 km radius of the site and within the bio-climatic region.
- The reinstatement of disturbed areas with locally indigenous herbaceous vegetation must be conducted progressively.
- In moist areas, re-vegetation must include hygrophilous grassland or reed bed, and in dry areas indigenous runner grasses must be used.
- The use of fertilisers must be carefully controlled by the ECO. No fertiliser must be used in the re-vegetation process near watercourses or wetlands areas.
- If possible, reseeding and replanting must occur just prior to or during the wet season. If planting and reseeding occurs in a dry period, it may be necessary to irrigate plants to ensure their successful establishment.

7.10 Grassing

- Grassing must be undertaken by a suitably qualified Contractor.
- Affected areas must be grassed using the method specified on the plant plans.
- Affected areas must be trimmed to be grassed to the required level.
- Sodding may be done at any time of the year, but seeding must be done during summer when the germination rate is better.
- Hydro-seeding with a winter mix will only be specified where regrassing is urgent, and cannot wait for the summer.

[18] Loosening of the soil to a depth of 300 mm.

[19] The roughening of the surface of the soil to a depth of approximately 50 mm, creating a smoother surface than ripping.

- Within terrestrial, non-wetland areas, indigenous runner grasses must be used, such as *Stenotaphrum secundatum, Dactyloctenium australe* and *Cynodon dactylon*. Exotic invasive grasses, such as Kikuyu (*Pennisetum clandestinum*) must not be used.
- In wet areas, hygrophilous grassland or reed bed must be encouraged as the final vegetation cover depending on the degree of local wetness (temporary/seasonal/permanent wetland).

7.11 Weed and Invader Plant Control

- The Contractor is responsible for the control of weeds and invader plants within the construction site for the duration of the rehabilitation phase.
- The control involves killing the plants present, killing the seedlings, which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion. Weeds and invader plants will be controlled in the manner prescribed for that category by the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) (as amended) or in terms of Working for Water guidelines.
- Removed vegetation must be disposed of at a licensed waste disposal facility.
- Only properly trained people must handle and make use of chemical herbicides. Workers must wear protective clothing when applying the herbicides.
- Spraying must not take place in windy conditions, when the herbicide may drift onto healthy indigenous plants.
- The use of herbicides is not permitted within identified sensitive areas. The removal of weeds and invader plants within these areas must be undertaken by hand.
- Affected areas must be reinstated and rehabilitated as soon as practically possible.

7.12 Monitoring of Rehabilitated Areas

- Upon completion of all work, the ECO and Resident Engineer must survey all rehabilitated areas to ensure compliance with specifications.
- A monitoring and alien weed control programme must be implemented (by the employer) for a minimum of one year to ensure no nick-point erosion develops in disturbed soils, wetland vegetation re-establishes and that alien weeds are controlled.
- A photographic record must be maintained.
- Monitoring should be done quarterly each year, for the minimum of one year, or until the rehabilitated areas are well established.
- Alien weed control and soil erosion will be the main items that require monitoring.

8. OPERATIONS PHASE

The operations phase refers to the period of the project during which the project will be in operation. This section of the EMPr outlines general environmental specifications that are required to be implemented by the employer.

8.1 Operational Site

- The employer must identify and demarcate the extent of the operational servitude and its access points, and indicate these on an operational site layout plan.
- No movement or work outside the servitude is permitted other than activities involving gaining access to the site along approved access roads/tracks.
- Any areas disturbed outside of the operational servitude by the employer, its staff or visitors will be subject to reinstatement and rehabilitation at the employer's cost.

8.2 Maintenance of Water Supply Infrastructure

- The operational servitude may not be used for any other purpose other than for the proper carrying out of operational activities.
- A regular monitoring and maintenance program must be developed.
- Permission must be obtained from each relevant landowner prior to going on site.
- Operational staff must protect and maintain private property, fences and gates. The open or closed status of gates must be respected during operational activities.
- During maintenance activities, there must be minimal disruption to affected landowners and/or tenants.
- Operations staff should not create excess dust or noise during operational activities.
- On-going liaison with affected landowners, service providers and other parties must be undertaken to minimise disruption and interruptions to services.

8.3 Alien Invasive Species Control

- The employer is responsible for the control of weeds and invader plants. The employer must monitor all sites disturbed by operational activities for colonisation by weeds, exotics or invasive plants, and these are to be controlled as they emerge.
- The control involves killing the plants present, killing the seedlings which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion.
- Weeds and invader plants will be controlled in the manner prescribed for that category by the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) or in terms of Working for Water guidelines.
- Removed vegetation must be disposed of at a licensed waste disposal facility.
- Only properly trained people must handle and make use of chemical herbicides and workers must wear protective clothing when applying the herbicides.
- Spraying must not take place in windy conditions, when the herbicide may drift onto healthy indigenous plants.

8.4 Access Roads

- The project site must be accessed using existing roads.
- No private access roads other than those required directly for operational purposes may be used. The landowner's permission must be obtained.
- Speed limits, appropriate to road conditions and the vehicle driven, are to be observed at all times.

- Damage or erosion to access roads incurred as a result of operational activities must be rectified by the employer.
- Access roads must be adequately maintained in order to minimise erosion and undue surface damage. Runoff from roads must be managed to avoid erosion and pollution problems. Responsibility for the general maintenance of access roads should be clearly defined and understood between the relevant parties.

8.5 Soil Erosion and Storm Water Control

- Soils must be monitored for signs of erosion at regular intervals. Upon identification of a potential erosion problem, measures are to be put in place to prevent further soil loss.
- Particular attention must be paid to areas around scour valves.
- Any wetland and/or stream crossings that may occur along the route must be checked to ensure no nick-point erosion develops in disturbed soils and that no undue sedimentation is occurring downstream.
- Runoff must not be canalised or concentrated in areas where sheet flow may occur, or where highly erodible soils occur.
- Storm water drainage measures must be implemented where necessary to control runoff, prevent soil erosion and sedimentation of water bodies.

8.6 Waste Management and Pollution Control

- No litter or any other debris shall be left on site after the completion of monitoring or maintenance activities.
- Watercourses and rivers must be protected and maintained free of any pollution as a result of operational activities.

8.7 Protection of Fauna and Flora

- Fauna and flora within the operational servitude and surrounding environment must not be disturbed unnecessarily.
- Sensitive indigenous vegetation[20] must be avoided, where possible, by operations staff.
- The penalty clause associated with the needless destruction of wildlife is a fine and imprisonment[21].

8.8 Emergency Preparedness

The employer must compile and maintain environmental emergency procedures to ensure that there will be an appropriate response to emergency incidents that will cause environmental impacts, such as:

- Accidental discharges to water and land due to burst pipes from reservoir or storage facilities.
- Accidental veld or forest fires.

The employer must report any incidents to the authorities and undertake remedial actions as required in terms of Section 28 of NEMA.

[20] Swamp forest, indigenous natural forest, protected trees, wetlands, rivers and other watercourses (including riparian vegetation).

[21] In terms of the Animals Protection Act, 1962 (Act No. 71 of 1962) Section 2

8.9 Monitoring

- A monitoring programme, as well as a service and maintenance schedule, must be put in place to monitor the project for any infrastructural problems, e.g. cracks, leaks.
- The monitoring and maintenance programme must include the following:
  - A regular maintenance schedule to maintain the water supply infrastructure.
  - A monitoring schedule for alien invasive plant species.
  - A regular monitoring schedule for damage to access roads.
  - A monitoring schedule for soil erosion.
- Written records of monitoring programmes are to be maintained.
- A photographic record must be maintained.

8.10 Liaison with Interested and Affected Parties

Liaison with stakeholders, including local communities and their representatives, is to be undertaken by the employer as required and as appropriate. This must include liaison with landowners and land users, utility providers, neighbours, and relevant authorities. Complaints or queries received from stakeholders and actions taken to address complaints must be addressed in writing. Copies of all interactions and correspondence shall be kept as part of record keeping.

8.11 Registers

The employer must have registers for the following:

- Emergency procedures.
- Environmental incidents.
- Complaints and actions taken.

ANNEXURE 1

The following penalties for incidents of non-compliance shall apply:

Failure to demarcate working servitudes	R 1,000
Working outside of the demarcated servitude	R 2,500
Failure to strip topsoil with intact vegetation	R 2,500
Failure to stockpile topsoil correctly	R 2,500
Failure to stockpile or spoil materials in designated areas	R 2,000
Pollution of water bodies (including increased suspended solid loads)	R 5,000
Failure to control storm water runoff	R 5,000
Failure to prevent siltation of natural habitat outside of working servitudes	R 5,000
Failure to provide adequate sanitation	R 5,000
Unauthorised removal of indigenous woody vegetation	R 5,000 basic fine plus R 1,000 per shrub/tree
Failure to erect temporary fences	R 1,000
Failure to provide protection measures for hippopotami or rhinoceros in deep excavations	R 5,000
Failure to provide adequate waste disposal facilities and services	R 5,000
Failure to reinstate disturbed areas within the specified time frame	R 5,000
Failure to rehabilitate disturbed areas within the specified time frame	R 6,000
Failure to obey site protection measures	R 8,000
Failure to maintain demarcation tape	R 1,000
Fire – costs of runaway fires will be borne by the Contractor, should he/she be proven responsible for such fires	Costs to be borne by Contractor
Animal poaching	R 6,000
Medicinal plant and other plant removal	R 1,500
Any other contravention of the project specific specification	R 5,000
Any other contravention of the particular (general) environmental specification	R 5,000

In addition to a fine, the Contractor may be required to undertake the necessary rehabilitation/mitigation measures resulting from non-compliance. These will be as instructed by the Project Engineer, on the advice of the ECO.

ANNEXURE 2

PLANTING AND GRASSING

PLANTING

Transplanted plants

Transplanting entails the removal of plant material and replanting the same plants in another designated position. The following are guidelines, which should be applied:

- Where possible, transplant trees and shrubs during the winter (between April and September). Transplant deciduous trees, before the new growth appears.
- Prune back the plants to limit transpiration and spray foliage with an evapo-transpiration retardant liquid if they are evergreen.
- Aloes and bulbous plants may be transplanted at any time of the year.
- Trees to be transplanted must be carefully removed from the soil so as to retain as large a rootball as practically possible. Use the tree's driplines as an indicator: the larger the tree the larger the rootball (and subsequently the planting hole).
- Minimise disturbance of the soil and the remaining roots in the rootball during the lifting, moving and or transportation of all species.
- Wrap the rootball in Hessian or in plastic sheeting to retain the soil and to keep the rootball moist.
- Unless otherwise specified by the ECO, excavate square holes of 800 mm x 800 mm x 800 mm on average for trees and 500 mm x 500 mm x 500 mm on average for shrubs.
- If impenetrable shale, rock, clay or a high water table is encountered, making the above hole sizes impossible, then seek advice from the ECO.
- Where local soil has poor drainage, broken rock (approx. 75 mm in diameter) must be placed to a depth of 150 mm at the bottom of the planting hole prior to planting and backfilling with approved plant medium mixture.
- Backfill planting holes with excavated material/approved topsoil, thoroughly mixed with weed free manure or compost (per volume about one quarter of the plant hole). Approval from the ECO should be obtained for the application of fertiliser (e.g. 2:3:2 fertiliser) and/or pesticides (e.g. ant and termite poison) where required.
- Plant trees and shrubs so that their stems or trunks are at the same depth as in their original position.
- Orientate trees and shrubs in the same direction as in their original position.
- Plant aloes and bulbs in similar soil conditions and to the same depth as in their original position.
- Stake all trees using three weather resistant wooden or steel stakes anchored firmly into the ground. Two of the three stakes are to be located on the windward side of the plant. Galvanised wire binding, 3 mm thick, covered with a 20 mm diameter plastic hosepipe must be tied tightly to the stakes, half to two thirds the height of the tree above the ground and looped around the trunk of the tree.
- Place stakes at least 500 mm apart and away from the stem and roots of the tree, so as not to damage the tree or its roots. This distance will depend upon the size of the tree planted and must be approved by the ECO before staking.
- Where necessary, protect newly planted trees against wind, and wild animals by means of fencing or sacking, as specified by the ECO.
- Water transplanted trees and shrubs as required until the plants are able to survive independently (i.e. depending on the rainfall).

- A raised circular 200 mm high subsoil berm, placed 500 mm (shrubs) to 750 mm (trees) from the plant's stem must be provided for the watering. Do not simply leave the excavated plant hole partially backfilled for this purpose – the berm must be raised above the natural soil level.
- Water aloes and bulbs once directly after transplanting to settle the soil.
- Remove stakes and wire binds over time as required, as plants become established.

Plants sourced from nurseries

- Plant all trees, shrubs and individual plants in positions as indicated on the plant plans or as indicated by the ECO.
- Planting should preferably be done during the rainy season.
- Unless otherwise specified by the ECO, excavate square holes of 800 mm x 800 mm x 800 mm on average for trees and 500 mm x 500 mm x 500 mm on average for shrubs.
- If impenetrable shale, rock, clay or a high water table is encountered, making the above hole sizes impossible, then seek advice from the ECO.
- Where local soil has poor drainage, broken rock (approx. 75 mm in diameter) must be placed to a depth of 150 mm at the bottom of the planting hole prior to planting and backfilling with approved plant medium mixture.
- Backfill planting holes with excavated material/approved topsoil, thoroughly mixed with weed free manure or compost (per volume about one quarter of the plant hole). Approval from the ECO should be obtained for the application of fertilizer (e.g. 2:3:2 fertiliser) and/or pesticides (e.g. ant and termite poison) where required.
- As much of the soil from container plants as possible must be retained around the roots of the plant during planting.
- The plant must be planted into the specified hole size with the approved soil, compost and fertiliser mix used to refill the plant hole and must cover all the roots and be well firmed down to a level equal to that of the surrounding in situ material.
- After planting, each plant must be well watered, adding more soil upon settlement if necessary.
- Add mulch to the surface area of the bermed basin.
- Stake all trees using three weather resistant wooden or steel stakes anchored firmly into the ground. Two of the three stakes are to be located on the windward side of the plant. Galvanised wire binding, 3 mm thick, covered with a 20 mm diameter plastic hosepipe must be tied tightly to the stakes, half to two thirds the height of the tree above the ground and looped around the trunk of the tree.
- Place stakes at least 500 mm apart and away from the stem and roots of the tree, so as not to damage the tree or its roots. This distance will depend upon the size of the tree planted and must be approved by the ECO before staking.
- Where necessary, protect newly planted trees against wind and wild animals by means of fencing or sacking, as specified by the ECO.
- Thoroughly water plants as required until the plants are able to survive independently (i.e. depending on the rainfall).
- A raised circular 200 mm high subsoil berm, placed 500 mm (shrubs) to 750 mm (trees) from the plant's stem must be provided for the watering. Do not simply leave the excavated plant hole partially backfilled for this purpose – the berm must be raised above the natural soil level.
- Water aloes and bulbs once directly after transplanting to settle the soil.
- Remove stakes and wire binds over time as required, as plants become established.

Seeds and seedlings

- All planting work is to be undertaken by a suitably qualified Contractor, making use of the appropriate equipment.
- An alternative to harvesting seeds and germinating these is to uproot small seedlings between 40 mm to 100 mm high from an area of mature forest undergrowth where there are many. Best results are obtained immediately after heavy rain.
- Tree seedling material should be fresh and of local origin. Resist using plants from far afield as they may not be best suited to local climatic or soil conditions.
- Small seedlings are likely to transplant more successfully than large ones. These should be potted and kept under nursery conditions until they are large enough to plant out.

GRASSING

Sods

Sodding is defined as the laying of grass sods.

- The soil should be uniformly wet to a depth of at least 150 mm before planting of grass sods.
- Protect sods against drying out: Keep these moist from the time of harvesting until final placement.
- Rake or spike the area to give a loose surface to a depth of 100 mm.
- Lay the first row of sods in a straight line, starting at the bottom of a slope, where possible.
- Place the next row of sods in the same way, tightly against the bottom row with the joints staggered, until the full area is covered with sods.
- Tightly butt sods together, taking care not to stretch or overlap sods.
- Where a good fit cannot be obtained, the intervening spaces may be filled with parts of sods or topsoil.
- On steep slopes the sods must be secured using timber stakes of at least 300 mm in length.
- After planting, water sods to prevent drying out.
- Irrigate as required until the grass is able to survive independently (i.e. depending on the rainfall).

Runners

- Plant grass runners evenly by hand or by mechanical means at a rate of at least 400 runners per hectare (i.e. at 250 mm centres).
- Use only fresh runners, avoiding grass runners that have been allowed to dry out.
- Rake or spike the area to give a loose surface to a depth of 100 mm.
- The soil should be uniformly wet to a depth of at least 150 mm before planting of grass runners.
- After planting, runners must be given copious amounts of water and, when sufficiently dry, must be rolled with a light agricultural roller and re-watered.
- Irrigate as required until the grass is able to survive independently (i.e. depending on the rainfall).

Hand seeding

- All seed supplied should be labelled in accordance with the Government Seed Act, 1961 (Act No. 20 of 1961).
- The soil should be loose and uniformly wet to a depth specified by the ECO, before any seeding commences.
- Halve the seed and fertiliser mixture as specified and apply evenly in two immediate successive applications perpendicular to each other.

- The seeded area must be raked over after seed application and well watered.
- Irrigate as required until the grass is able to survive independently (i.e. depending on the rainfall).

Hydroseeding

- Hydroseeding entails adding a specified seed mix to a slurry containing water and other approved materials to enhance plant growth potential. This mixture is applied by means of a spraying device onto the prepared ground areas to be seeded.
- All seed supplied should be labelled in accordance with the Government Seed Act, 1961 (Act No. 20 of 1961).
- The soil should be loose and uniformly wet to a depth specified by the ECO, before any seeding commences.
- Add the specified seed mix and necessary fertiliser to the required amount of water and apply using an approved hydroseeding machine.
- Unless otherwise specified, the rate of application of the slurry will not be less than 30 cubic metres per hectare and will be applied in such a manner as to ensure even distribution of seed and fertiliser throughout.
- Additional ingredients to be added to the slurry may be specified.
- In certain cases, the specification may require that mulch be applied by hand to the area to be hydroseeded, prior to hydroseeding.
- If possible, keep the seedbed moist after hydroseeding, to ensure good germination.
- Irrigate as required until the grass is able to survive independently (i.e. depending on the rainfall).

ANNEXURE D: HEALTH AND SAFETY SPECIFICATION

CLIENT HEALTH AND SAFETY SPECIFICATIONS AS PER CONSTRUCTION REGULATION 5(1)(b), 2014 OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

KING CETSHWAYO
DISTRICT MUNICIPALITY

KING CETSHWAYO DISTRICT MUNICIPALITY

PROJECT NO: R10-007-06

GREATER MTHONJANENI SSA4: BULK WATER SUPPLY IMPROVEMENTS

PREPARED BY

ASHE GROUP

CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

1. BACKGROUND

In terms of the Construction Regulation 5(1)(b), 2014 of the Occupational Health and Safety Act, No. 85 of 1993, the Client, is required to compile an Health & Safety Specification for any intended project and provide such specification to Contractor.

The Project is located within the boundaries of the King Cetshwayo District Municipality (KCDM) in Kwazulu Natal, South Africa.

2. SCOPE

The scope is the development of a health & safety specification that addresses all aspects of occupational health and safety as affected by construction work.

The primary objective of the Project is to ensure sufficient water supply to the community by confirming the adequacy of the SSA 4 and 5 bulk infrastructure to supply the current and future SSAs at a higher demand complying with the policies and norms of the KCDM.

The bulk infrastructure section from Zimela Pump Station 1, 2 and 3 up to and including Zimela Reservoir R2-1 is a critical component of the bulk supply to the Greater Mthonjaneni region. Should a single pump station fail, no water will be supplied to the Zimela Reservoir R2-1. Ilifa Africa therefore recommended the upgrading Zimela Pump Station 1, 2 and 3 by the addition of a pump and electrical components at each pump station as well as to increase the storage capacity of Zimela Reservoir R2-1 by the provision of an additional 2500kℓ storage reservoir.

The Construction Work on project will therefore entail the following:

- Surveying and Setting Out
- Installation of Pipes
- Clear & Grub
- Excavation Work
- Mass Earthworks & Layer Works
- Construction of Reservoir
- Loading & Hauling
- Operating Mobile Machinery
- Loading & Lifting Operations
- Reinforced steel fixing
- Temporary Works (Erecting, Inspection, Use and Removal)
- Concrete works
- General building work (brick laying & plastering)
- Electrical work
- Plumbing work
- Installation of Support Services for water supply
- Symbolic Signage

Also refer to the Design Report and Scope of work as per Bill of Quantities.

3. DEFINITIONS

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

AIA means an Inspection Authority approved by the chief inspector: Provided that an inspection authority approved by the chief inspector with respect to any particular service shall be an Approved Inspection Authority with respect to that service only.

Client: means any person for whom construction work is being performed, namely y King Cetshwayo District Municipality (KCDM)

Client's Health and Safety Agent: SHE Group, 5 Walter Sisulu Road, Universitas, Bloemfontein, 9321. Tel. 0514369675

Competent person: means any person having the knowledge, training, experience and qualifications specific to the work or task being performed.

Construction work: means any work in connection with—
- the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

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

Contractor: means an employer, as defined in section 1 of the Occupational Health and Safety Act, who performs construction work and includes principal contractors;

Hazard identification: means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed;

Health and safety file: means a file or other record in permanent form, containing the information required as contemplated in these regulations;

Health and safety plan: means a documented plan, which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

Health and safety specification: means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

HCA: Hazardous Chemical Agents

MSDS: Material Safety Data Sheet

PPE: Personal Protective Equipment

OREP: Occupational Risk Exposure Profile

OH&S: Occupational Health and Safety

Pr. CHSA: Professional Construction Health and Safety Agent

Reg: Regulations

SWP: Safe Work Procedure

KCDM: King Cetshwayo District Municipality

SSA: Sub-Supply Area

Medical Certificate of Fitness: means a certificate contemplated in Construction Regulation 7(8);

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

Occupational Health Practitioner means an occupational medicine practitioner or a person who holds a qualification in occupational health recognized as such by the South African Medical and Dental Council as referred to in the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act No. 56 of 1974), or the South African Nursing Council as referred to in the Nursing Act, 1978 (Act No. 50 of 1978);

Occupational Hygiene Survey: means a Survey or Analysis on Hazardous Environmental Exposure e.g. Noise, Lead, Asbestos, Airborne Pollutants, Thermal Stress, Hazardous Chemical Agents, etc. to Persons conducted by an Inspection Authority Approved by the Department of Labour for the Exposure identified, provided that an inspection authority approved by the chief inspector with respect to any particular service shall be an Approved Inspection Authority with respect to that service only

Occupational Hygiene: means the anticipation, recognition, evaluation and control of conditions arising in or from the workplace, which may cause illness or adverse health effects to persons;

Principal contractor: means an employer, as defined in section 1 of the Occupational Health and Safety Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

Risk assessment: means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard;

Structure: means any building, steel or reinforced concrete structure

SACPCMP means the South African Council for the Project and Construction Management Professions

Designer: means a competent person who

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

Construction manager: means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

Construction site: means a work place where construction work is being performed

"COVID-19" means Coronavirus Disease 2019;

"Disaster Management Act" means the Disaster Management Act, 2002 (Act No. 57 of 2002);

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

"Virus" means the SARS-CoV-2 virus;

"Worker" means any person who works in an employer's workplace including an employee of the employer or contractor, a self-employed person or volunteer;

"Workplace" means any premises or place where a person performs work.

"Transmission" or "Transmitting" is the passing of a pathogen causing communicable disease from an infected host individual or group to a particular individual or group, regardless of whether the other individual was previously infected.

4. OH&S MANAGEMENT

4.1 Notification of Construction Work

The Principal Contractor shall, as the contract meets the requirements laid down in Construction Regulations 4, prior to commencement of the works, notify Department of Labour of intended Construction Work.

Proof of Submittal shall be kept on the OH&S file and a copy submitted to Client / Client's Pr. CHSA.

No Construction activities may take place before Notification of Construction Work has been submitted to the Department of Labour and proof submitted to Client

4.2 Structure and Organisation of OH&S Responsibilities

4.2.1. *Overall Supervision and Responsibility for OH&S*

- The Client must ensure that the Principal Contractor, is appointed in terms of Construction Regulation 5(1)(*k*), implements and maintains the agreed and approved OH&S Plan.

- The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the Act must ensure that his Employees (as defined in the Act) complies with the Act. Legal Compliance Audit must be used for this purpose.

- Any OH&S Act, No 85 of 1993, Section 16(2) appointee/s as detailed in his/her/their respective appointment forms is responsible to enforce all applicable legislation

- The Construction Manager, Assistant Construction Manager, Supervisor and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 8 should provide proof of OHS training and fully understand their duties and responsibilities outlined by the respective appointments. Legal Liability Training is a minimum requirement

- The principal contractor shall appoint as a minimum a Full Time competent Health and Safety Officer that is registered with the SACPCMP.

4.2.2 Further (Specific) Responsibilities for OH&S

The contractor shall note that it is a generic list only and is intended for use as a guideline.

Appointment	**Legal Reference**
Construction Manager	Construction Regulation 8(1)
Assistant Construction Manager	Construction Regulation 8(2)
OH&S Officer	Construction Regulation 8(5)
Construction Supervisor	Construction Regulation 8(7)
Risk Assessor	Construction Regulation 9
Fall Protection Plan Developer	Construction Regulation 10
Structures Supervisor/Inspector	Construction Regulation 11
Temporary Works Supervisor	Construction Regulation 12
Excavation Supervisor	Construction Regulation 13
Scaffold Erector / Inspector	Construction Regulation 16
Bulk Mixing Plant Supervisor	Construction Regulation 20
Crane Inspector	Construction Regulation 22
Construction Vehicle / Mobile Plant / Machinery Supervisor	Construction Regulation 23
Drivers / Operators of Construction Vehicles / Plant	Construction Regulation 23
Electrical Installation and Appliances Inspector	Construction Regulation 24
Hazardous Chemical Agents Supervisor	HCA Regulations & CR 25
Stacking & Storage Supervisor	Construction Regulation 28

Appointment	Legal Reference
Emergency/Security/Fire Coordinator	Construction Regulation 29
First Aider	General Safety Regulation 3
Fire Equipment Inspector	Construction Regulation 29)
Incident Investigator	General Admin Regulation 9
Ladder Inspector	General Safety Regulation 13A
OH&S Committee	OHS Act Section 19
OH&S Representatives	OHS Act Section 17
Person Responsible for Machinery	General Machinery Regulation 2
Pressure Equipment Supervisor	Pressure Equipment Regulations
Welding Supervisor	General Safety Regulation 9
COVID19 Compliance Officer	Disaster Management Act

The above appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated and agreed with the appointees.

Competencies of all Appointed Personnel to be attached to Appointment and Placed on Health and Safety File

The principal contractor shall, furthermore, provide the Pr. CHSA with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site.

4.3 Communication & Liaison

4.3.1 OH&S Liaison between the Client, the principal Contractor, the other Contractors, the Designer and other concerned parties will be through the OH&S committee or Committee established by Client for this purpose.

4.3.2 In addition to the above, communication may be directly to the Client or his appointed Pr. CHSA, verbally or in writing, as and when the need arises.

4.3.3 Consultation with the workforce on OH&S matters will be through their Supervisors, OH&S Representatives, the OH&S committee and their elected Trade Union Representatives, if any.

4.3.4 The Principal Contractor will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

4.4 OH&S File

The Principal Contractor must, in terms of Construction Regulation 7(1)(b), keep a health & safety file on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done.

The following documents must inter alia be kept in the OH&S file:

1. Notification of Construction Work (Construction Regulation 4.)
2. Copy of OH&S Act (updated) (General Administrative Regulation 4.)
3. Proof of Registration and good standing with a COID Insurer - Construction Regulation 5(1)(j)
4. OH&S Plan agreed with client including the underpinning Risk Assessment/s & Method Statements (Construction regulation 5(1)(l))
5. Policies
6. Risk assessment conducted and reviewed during works.
7. Safe Work Procedures
8. Health and safety specifications provided by the client.
9. Designs/drawings (Construction Regulation 6&7)
10. Traffic Management / Accommodation Drawings
11. A list of Contractors (Sub-Contractors) including copies of the agreements between the parties and the type of work being done by each Contractor (Construction Regulation 7)
12. Appointment/Designation forms as per 4.2.2 above.
13. Competency Certificates
14. Occupational Medical Certificates of all personnel working on site to proof Fitness to work
15. AIA Certificate of Service Provider responsible for Occupational Hygiene Monitoring
16. Minutes of Safety Committee Monthly meetings
17. Statistical Data
18. Way bills / Way leaves

19. Registers as follow:
    - Risk Register
    - PPE - Personal Protective Clothing and Equipment issued
    - Daily Mobile Machinery Checklists
    - Generator and Other Fuel Driven Machinery Registers
    - Registers / Checklists for all Equipment being used on site
    - Stacking & Storage Inspection Register
    - Excavations Inspection Register – Daily
    - Scaffolding, Formwork and Support Work – Daily
    - Monthly Environmental Checklist
    - Weekly Hygiene Facility Inspection Register – Ablutions and Eating areas
    - Incident Register
    - Safe Area Declarations
    - Fire Extinguishing Equipment Register
    - Training Attendance Registers
    - First Aid Box and Equipment Checklist
    - Dressing Record Register – To be placed in First Aid kit
    - Risk Assessment Communication Registers
    - Lock-out Request Forms (Water and Electricity)
    - Lock-out Permits (Water and Electricity)
    - SHE Officer Inspection Register (Non-Conformance Register) – Monthly checklist and deviations
    - Traffic Drawing Inspection Register
    - COVID19 Documents as per Disaster Management Act and COVID19 OHS Guidelines from Department of Employment and Labour

4.5. <u>OH&S Goals and Objectives and Arrangements for Monitoring and Review of OH&S Performance</u>

The Principal Contractor is required to maintain a DIFR of less than 1 and report on this to the Client on a monthly basis.

4.6 <u>Identification of Hazards and Development of Risk Assessments, Standard Working Procedures (SWP) and Method Statements</u>

The Principal Contractor is required to develop Risk Assessments, Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project (See Section 5 below "Project/Site Specific Requirements")

4.7. Arrangements for Monitoring and Review

4.7.1. Monthly Audit by Client

The Client will be conducting monthly Audits to comply with Construction Regulation 5(1)(o) to ensure that the principal Contractor has implemented and is maintaining the agreed and approved OH&S Plan.

If contractor is non-compliant according to Client's Health and Safety Audit, the Client's Agent / Representative may stop the work or a specific work activity and request a re-audit that must be approved by the client and the contractor will be held liable for the cost.

4.7.2. Other Audits and Inspections by Client

The Client reserves the right to conduct other ad hoc audits and inspections as deemed necessary.

The Principal Contractor must conduct a Monthly Internal Health and Safety Audit and an Audit on all Sub-Contractors. The Audit must be conducted by an independent person of the contractor or contractor's representative, which is not working on the site, on condition that the person is qualified to conduct an Occupational Health and Safety Audit.

4.7.3. A representative of the Principal Contractor must accompany the Client on all Audits and Inspections and may conduct his/her own audit/inspection at the same time. Each party will, however, take responsibility for the results of his/her own audit/inspection results.

The client's representative / Agent must approve the Principal Contractor's Health and Safety Audit Template, to be used, before work commences

4.7.4. Reports

4.7.4.1 The Principal Contractor is required to provide the Client with a monthly report.

4.7.4.2 The Principal Contractor must report all incidents where an employee is injured on duty to the extent that he/she:

* dies

* becomes unconscious
* loses a limb or part of a limb
* is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

OR where:

* a major incident occurred
* the health or safety of any person was endangered
* where a dangerous substance was spilled
* the uncontrolled release of any substance under pressure took place machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
* machinery ran out of control to the Provincial Director of the Department of Labour within seven days. (Section 24 of the Act & General Administrative Regulation 8.)

4.7.4.3. The Principal Contractor is required to provide the Client with copies of all statutory reports required in terms of the Act. The Principal Contractor is required to provide the Client with copies of all internal and external accident/incident investigation reports.

4.7.5. *Review*

4.7.5.1 The Principal Contractor is to review the Hazard Identification, Risk Assessments and SWP's at each Production Planning and Progress Report meeting as the construction work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

4.7.5.2 The Principal Contractor must provide the Client, other Contractors and all other concerned parties with copies of any changes, alterations or amendments.

4.8 <u>Site Rules and other Restrictions</u>

4.8.1 Site OH&S Rules

The Principal Contractor must develop a set of site-specific OH&S rules that will be applied to regulate the OH&S aspects of the construction.

4.8.2. *Security Arrangements*

4.8.2.1 The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees will not be allowed on site unaccompanied.

4.8.2.2 The Principal Contractor must develop a set of Security rules and procedures and maintain these throughout the construction period.

4.8.2.3 The Principal Contractor must appoint a competent Emergency Controller who must develop emergency contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing program for the plans e.g. January: Fall Accident, February: Electrical Shock, etc. and practiced/tested with all persons on site at the time, participating.

4.9 Training

The contents and syllabi of all training required by the Act and Regulations to be included in the Principal Contractor's OH&S Plan.

4.9.1 General Induction Training
All employees of the Principal and other Contractors to be in possession of proof of General Induction training

4.9.2 Site Specific Induction Training
All employees of the Principal and other Contractors to be in possession of Site Specific OH&S Induction training.

4.9.3 Other Training

4.9.3.1 All operators, drivers and users of construction vehicles, mobile plant and other equipment to be in possession of Competency Certificates & Medical Certificates of Fitness (Construction Regulation 23).

4.9.3.2 All employees in jobs requiring training in terms of the Act and Regulations to be in possession of valid proof of training.

4.9.3.3 OH&S Training Requirements: (as required by the Construction Regulations and as indicated by the OH&S Specification & the Risk Assessment/s):

* General Induction (Section 8 of the Act)
* Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act)
* Construction Management for Managers
* Construction Supervision for Supervisor
* Traffic Accommodation
* OH&S Representatives (Section 18 (3) of the Act)
* Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Reg 23)
* Basic Fire Prevention & Protection (Environmental Reg 9 and Construction Reg 29)
* Basic First Aid (General Safety Regulations 3)
* Storekeeping Methods & Safe Stacking (Construction Regulation 28)
* Emergency, Security and Fire coordinator
* Work and Appointment Related training
* Work at Heights Training (Where Required)
* COVID19 Training

4.10. Accident and Incident Investigation

4.10.1 The Principal Contractor is responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. (General Administrative Regulation 9)

4.10.2. The results of the investigation to be entered into the Accident/Incident Register: Annexure 1. (General Administrative Regulation 9)

4.10.3. The Principal Contractor is responsible for the investigation of all non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

4.10.4. The Principal Contractor is responsible for the investigation of accidents and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

4.10.5. All COVID19 or Other Disease infections on project must be investigated and reported to Site Management who will inform all relevant stakeholders

4.11 OH&S Representatives and Committees

4.11.1 Designation of OH&S Representatives

Before commencing work, the Principal Contractor shall designate a competent Safety, Health and Environmental representative (SHE Rep) who shall be acceptable to the Agent, to represent and act for the Contractor and Sub Contractors. This person may be the appointed Full-Time Construction Health and Safety Officer

It should be noted that the Principal Contractor is held responsible for the activities of the Sub Contractors. Failure of Health and Safety measures by the Sub Contractor will revert directly back to the Principal Contractor.

The Contractor shall inform the Agent in writing of the name and address of the Contractor's SHE Rep and of any subsequent changes in the name and address of the SHE Rep, together with the scope and limitations of the SHE Rep's authority to act for the Contractor.

The Contractor's SHE Rep shall make available to the Employer an all-hours telephone number at which the SHE Rep can be contacted at any time in the event of an emergency involving any of the Contractor's employees, or other persons at the Works.

The Contractor must also ensure that Health and Safety Representatives (H&S) as per Section 17 of the Act is Nominated by the Employees, Trained and Appointed

4.11.1.2 OH&S Representatives have to be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

4.11.2 Duties and Functions of the OH&S Representatives

4.11.2.1 The Principal Contractor must ensure that the designated OH&S Representatives conduct a minimum monthly inspection of their respective areas of responsibility using a checklist and report thereon to the Principal Contractor.

4.11.2.2 OH&S representatives must be included in accident/incident investigations.

4.11.2.3 OH&S representatives must attend all OH&S committee meetings.

4.11.3. *Appointment of OH&S Committee*

4.11.3.1 The Principal Contractor must establish an OH&S Committee consisting of all the designated OH&S Representatives together with a number of management representatives that are not allowed to exceed the number of OH&S representatives on the committee. The members of the OH&S committee must be appointed in writing.

4.11.3.2. The OH&S Committee must meet minimum monthly and consider, at least, the following Agenda:

1) Opening
2) Previous Minutes
3) Observations
4) Program and Safety considerations
5) Occupational Health
6) Housekeeping improvement
7) Incidents & Accidents / Injuries / Illnesses / Diseases
8) Equipment Registers
9) Safety performance Evaluations
10) Occupational Hygiene monitoring and measuring
11) Education & Safety promotion program
12) Legal Non-Compliances
13) Traffic Accommodation
14) Community Complaints
15) General
16) Date of Next Meeting
17) Closing

4.12 Occupational Medicals

4.12.1 Principal Contractor must ensure that all employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner as per Annexure 3 of Construction Regulation, 2014 - Construction Regulation 7(1)(g)

4.13 Traffic Management

4.13.1 Principal Contractor must ensure that Traffic Management must be done according to Client's Specifications and Approved Drawings (If required)

4.14 Fines & Penalties

4.14.1 Repeated non-conformances raised during Audits may be subjected to a Minimum Fine of R 250.00 per Finding and a Maximum Fine of R 5,000.00 per finding.

4.14.2 The value of the fine will be recommended by the Pr. CHSA and Finally Approved by the Client's Project Manager

5 PROJECT/SITE SPECIFIC REQUIREMENTS

5.1 The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Work Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

- Site Establishment
- Offices & Ablution Facilities
- Secure / safe storage for materials, plant and equipment
- Vehicle access to the site
- Dealing with existing structures
- Location of existing structures
- Installation and Maintenance of temporary construction electrical supply
- Adjacent land uses / surrounding property exposures
- Boundary and access control
- Public liability exposures
- Health risks arising from neighboring as well as own activities and from the environment e.g. diseases, threats by dogs, bees, snakes, lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Dealing with HIV/Aids, TB, COVID19 and other diseases
- Use of portable electrical equipment
- Excavations & Trenching
- Loading and offloading of trucks
- Manual and mechanical handling

- Lifting and lowering operations
- Working at Heights
- Surveying and Setting Out
- Traffic Accommodation & Control
- Barricading & Traffic Signage
- Clear & Grub
- Laying and Bedding
- Backfilling of Trenches
- Earthworks & Layer works
- Construction of Structures
- Loading & Hauling
- Driving & Operation of Construction Vehicles and Mobile Plant
- Use and Storage of Flammable Liquids and other Hazardous Agents
- Concrete works
- As discovered by the principal contractors hazard identification exercise
- As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site.
- As discovered from any accident / Incident Investigation

The following are particular requirements of works and will form a basis for compliance audits.

1. Administrative & Legal Requirements
2. Education, Training & Promotion
3. Public Safety & Emergency Preparedness
4. Personal Protective Equipment
5. Housekeeping
6. Working at Heights
7. Temporary Structures
8. Traffic Control & Accommodation
9. Electrical Safeguarding
10. Emergency/Fire Prevention & Protection
11. Excavations & Trenching
12. Ladders & Tools
13. Lifting Equipment
14. Permits
15. Transport & Materials Handling
16. Site Plant & Machinery
17. Plant & Storage Yard

18. Occupational Health & Hygiene
19. Construction Activities

5.2 Construction Vehicles and Mobile Plant – Regulation 23

The Contractor shall ensure that drivers of motor vehicles are in possession of a driver's license, valid for the class of vehicle which they are required to drive and shall produce the license on request.

The Contractor shall not permit any driver to be in control of a vehicle at the Works while under the influence of alcohol, drugs or other substance.

A register shall be kept of workers operating construction vehicles and mobile plant.

The register shall contain proof of training of operators to operate construction vehicles and mobile plant, certification of competency and authorization of operators to operate machinery, vehicles or plant.

Names of operators and their relevant training with date and time stamps together with name of course instructor shall be kept in the Health and Safety File on site.

Physical and Psychological fitness shall be proved by way of a medical certificate of fitness of the said operators before allowing operators to operate machinery, vehicles or plant.

The Health and Safety File shall include the written training material offered to operators for the different construction vehicles and mobile plant.

Each and every driver shall be trained on risks involved and safety procedures.

All Construction vehicles and mobile plant must be of acceptable design and construction and used according to their design.

All construction vehicles and mobile plant must be maintained in good working order.

A register of all vehicles and plant shall be kept on site together with names of operators responsible for each.

The register shall report all maintenance activities performed on these vehicles and plant as well as signatures certifying the condition of the vehicles as in a good working order.

All requirements on the vehicles and mobile plant with regard to safety and health shall be inspected and certified

During use of Construction vehicles or mobile plant the following rules shall be adhered to:

- Construction vehicles or mobile plant must be prevented from falling into excavations, water or any other area lower than the working surface. These protection must consist of adequate edge protection e.g. Guard rails and/or crash barriers
- No person shall be allowed to or require to ride on any Construction Vehicle or Mobile Plant in a position otherwise than a safe place provided for on the construction vehicle or mobile plant as designed for that purpose.
- The construction site must be organized in such a way that as far as is reasonable practical, pedestrians and vehicles can move safely and without risks to health and safety.
- No tools and/or material shall be transported in the same compartment as the operators/drivers/employees unless the said are secured against movement during transportation.
- Mobile Machinery, when being repaired or when not in use, must be fully lowered or blocked with controls in a neutral position, motors stopped and brakes set.
- Reflective indicators must be provided to workers in the form of reflective yellow jackets or vests as specified and worn by workers working on/or adjacent to public roads

5.3 Excavation Work Construction - Regulation 13

An excavation could be a hole or trench of any size and shape. A Risk Assessment must be done prior to making an excavation.

The following must be taken in consideration when doing the Risk Assessment:

- Depth of the excavation
- Length of the excavation
- Existing services
- Barricading and demarcation
- Depth of the excavation

Should an excavation be more than chest deep (1.2m), it must be adequately shored or braced.

Slopes or trenches shall be as flat as possible, 1 x vertical to 2 x horizontal must be considered maximum for dry conditions. In wet conditions either a much lower slope shall be used, or if space is a constraint, shoring and de-watering shall be applied.

A competent person shall be appointed to supervise excavation work. Stability evaluation of ground must be done and a certificate shall be issued.

A plan for prevention of persons being trap due to collapse shall be provided by the Contractor

The design of shoring shall be documented by Contractor in the Health and Safety file as provided by the competent designer of shoring.

The maximum loading of sides of an excavation must be documented in a usable format If adjacent structures and buildings are present and can be affected a design and construction of supporting details shall be represented.

Provision shall be made for access routes to the excavation. Routes must not be more than 6 meters away from worker.

Contractor must establish all existing services in area of excavations. Plan of existing services shall be documented in the Health and Safety file. Existing services include Telkom, Gas, Water, Electricity Supplies and other similar services.

Excavation Inspection shall be done on a

- daily basis & prior to each shift
- after every blasting operation
- after an unexpected fall of ground
- after substantial damage to supports
- after rain

5.4 Barricading and Demarcation

The construction site shall be barricaded to prevent pedestrians and vehicles to enter the construction area by means of solid barricading.

Barricading on the site must be in the form of a physical barrier and appropriate signage, to prevent public from entering the area.

It is advised to use 1.2m high DAY-GLO Mesh (barrier netting) and Concrete Barriers is used to prevent pedestrians to enter the specific construction area.

5.5 Housekeeping and Construction Sites – Regulation 27

The Contractor shall at all time carry out the Works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall take all precautions, which are necessary and adequate to eliminate any conditions, which contribute to the risk of injury to persons or damage to property.

The Contractor shall continuously inspect all work, materials and equipment to discover and determine any such conditions and shall be solely responsible for the discovery, determination and elimination of such conditions.

During the period of this Contract, the Contractor shall be responsible for the safe storage of all materials and equipment required for execution of the Contract, and for disposal of all non-usable waste material in an orderly manner.

All materials, whether stored on the construction site or within the Contractor's designated area, shall be stored neatly and safely to prevent possible injury to any personnel.

The material shall be stored to facilitate safe access to, and removal of the material from the storage area.

Any flammable material, such as paint, diesel fuel and oil, shall be stored in lockable non-combustible structures, which shall be clearly marked to indicate the hazardous nature of the materials stored within. The flammable materials stores shall be located in safe areas away from hazardous surroundings and adequate and suitable fire-fighting equipment shall be provided within easy reach of the materials stores.

Loose material need for use shall not accumulate so as to obstruct means of access to and egress from the workplace.

Scrap and waste shall not be allowed on site and must be removed daily.

5.6 Stacking and Storage on Construction Sites – Regulation 28

A Competent person shall be appointed in writing with the duty of supervising all stacking and storage of material on site.

Adequate storage areas shall be provided which includes demarcated areas. All storage areas shall be kept neat and under control. Stacking / Storage Registers and checklist shall be kept on site

5.7 First Aid

5.7.1 Safety Notice Board

The Contractor shall provide a Safety Notice Board where safety notices, site regulations concerning safe working practices and information on the location of the nearest first aid station, can be conspicuously displayed to all staff. The size of the notice board shall be at least 600 mm x 800 mm.

5.7.2 First Aid Equipment

The Contractor shall provide for its employees a stretcher for emergencies and an approved first aid box. The first aid box shall be checked weekly by a responsible person, who shall be appointed by the Contractor, and a record shall be kept of the contents. Any deficient medical supplies shall be promptly replenished by the Contractor.

5.7.3 Hazard Notices

The Contractor shall display hazard notices in all areas where hazardous conditions prevail or may occur.

5.7.4 Reporting of Incidents and/or Injuries

All incidents in respect of damage to Works, property or machinery, or injury to persons, shall be reported by the Contractor's SHE Rep by the quickest means possible.

A mandatory incident report form, containing full details of the incident, shall be completed and submitted to the Site Agent and the Department of Labour within twenty four (24) hours of the occurrence of the incident

5.8 Fire Precautions on Construction Sites – Regulation 29

A register shall be kept on all Acetylene and Oxygen cylinders used on the site. Condition of components, sub-components and safety components (e.g. Flame back arrestors) shall be listed in the register and signed by the construction supervisor at regular intervals as required with time and date stamp.

Acetylene, Oxygen and LP Gas cylinders shall be stored in suitable places to minimize the risk of fire.

Suitable storage to be provided for flammable liquids, e.g. petrol, diesel, paint, thinners.

Smoking shall be prohibited in the workplace and notices posted accordingly.

Suitable and sufficient firefighting equipment shall be placed in strategic positions in the work place. (On vehicles and other positions as deemed necessary).

A register shall be kept on type and number of equipment for each site in the Health and Safety File.

A competent person shall inspect all firefighting equipment. A sufficient number of employees shall be trained in the use of firefighting equipment.

A register shall be kept in the Health and Safety File on site with names of employees and type of firefighting training completed with date.

Suitable signs shall be erected in work places indicating escape routes.

Emergency plans shall be in Health and Safety File as part of Induction Training.

Combustible materials shall not accumulated on site.

5.9 Construction Welfare Facilities – Regulation 30

On each site where existing facilities are not present, at least one sanitary facility shall be erected for every 10 workers, one shower for every 15 workers, a changing facility for each sex and sheltered eating areas.

Mobile toilets with bucket system or Chemical Toilets shall be installed at the site. Cleaning of Toilet Facilities shall be arranged with the City Council or an Approved / Registered Service Provider.

Eating facilities shall be made available in the form of a shaded net, table and chairs.

5.10 Hazardous Chemical Agents

The Contractor shall exercise all necessary care in the handling of toxic compounds and shall be able to identify the major chemical components in the event of medical treatment being required.

5.10.1 Hazardous Chemicals and Materials

a) The Contractor shall provide suitable and adequate protective equipment when working in an area where hazardous chemicals and materials are being used.

b) The Contractor shall ensure that its employees have familiarized themselves with the material safety data sheets applicable to the specific site as well as the location of firefighting and other emergency equipment prior to commencement of work.

5.11 Commissioning Safety Precautions

The Contractor shall ensure that wherever repairs, adjustments or any other work are undertaken on any plant or machinery, the power supply is switched off, disconnected or the plant / machinery disengaged until the work or repairs have been completed.

5.12 Electrical Installations and Machinery on Construction Sites – Regulation 24

Before construction commences or any other related works and during the progress thereof adequate steps must be taken to establish the presence of and guard against any danger to the workers in respect to electrical cables or apparatus.

In areas where it cannot be established where electrical devices are, the employees must use tools of which the handles are insulated or rubber insulated gloves.

Any temporary electrical installation set up by the principal contractor must be inspected at least once a week by a competent person. The inspections shall be recorded in a register and kept in the Health and Safety File.

When working on or next to live electrical Machinery/Equipment the Principal Contractor or Contractor must provide insulated stands, trestles and mats.

When rewiring of systems is done the feeder breakers at the other end of the supply cables shall be locked out and the cable earthed to prevent any injury to workers by Electrical Shock.

A register shall be kept on site in the Health and Safety File indicating all signatures of competent persons switching electricity supply on or off with time and date stamp.

No person shall use or permit to use a portable electric load operating at a voltage exceeding 50V to earth unless it is connected to a source of electrical energy incorporating an earth leakage protection device.

A register shall be kept on site in which all daily checks of portable electric tools are performed and signed by the responsible person. Checks shall include condition of plug top, power cord, on-off switch and insulation condition of electric tool.

All tools shall be numbered and entered accordingly into the register. Condition of tools as listed in the register shall be inspected and signed by the construction supervisor at regular intervals as required by the nature of the equipment.

5.13 Dealing with Diseases e.g. COVID19, HIV / Aids, etc.

The Principal Contractor need to comply with Section 8 of the Occupational Health & Safety Act, taking into consideration transmittable diseases (e.g. COVID19 virus).

5.13.1 Health & Safety Planning

The Health & Safety Management Plan must include the planning in relation to dealing with transmittable diseases and must include the following as a minimum

- Method of Transmitting
- Risk of Transmitting
- Control or Mitigation measures to minimise the risk of transmission

5.13.2 Awareness

An awareness programme must be implemented by the Principal Contractor pertaining to transmittable diseases such as COVID9.

The awareness programme may include aspects such as, displaying posters, washing and personal hygiene, toolbox Talks, etc.

An COVID19 Prevention & Emergency Response Plan must be compiled by the Principal Contractor including the latest applicable Regulations and minimum control measures as per Legislation and all personnel must be informed of content

COVID-19 management and control procedure must be discussed with all personnel on project

5.13.3 Risk Assessment and Safe Operating Procedure:

A risk assessment will be compiled for transmittable diseases including the following:

- Identification of hazards pertaining to the disease
- Identifying the risks involved
- Evaluating these risks (evaluating in accordance with risk matrix)
- Control or Mitigation measures

When compiling documentation, the Principal Contractor must take the following into consideration:

- Section 8 of the Occupation Health & Safety Act:
    - Section 8 (1) - Duties of Employers to Employees

  - *Every employer shall provide and maintain, as far as reasonably practicable, a working environment that is safe and without risk to the health of his employees.*
- *Other specified regulations pertaining to a specific disease (e.g. COVID-19)*
- Use and supply of proper personal protective equipment and other items (e.g. condoms) in the workplace

5.14 Ergonomics – Ergonomic Regulations 2019

The Contractor shall:

Ensure a training programme is established for employees who may be potentially affected or exposed to ergonomic risks. Such training shall prior to placement of the relevant employee in the workplace. Refresher training shall also be conduct when recommended by the health and safety committee.

Ensure that all employees obey any lawful instruction given to him/her regarding the

- The use of measures adopted to control ergonomic risks
- Cooperating with employer in determining his/her exposure to ergonomic risks
- The reporting of potential ergonomic risks to the health and safety representative
- Reporting for medical surveillance as required in ER 8
- Information, instructions and training received as contemplated in ER 3

Ensure a risk assessment is conducted by a competent person before any work commence that may exposed employees to ergonomic risks. Risk assessment shall include:

- A complete hazard identification
- The identification of all persons who may be affected by the ergonomic risks
- How employees may be affected by the ergonomic risks
- The analysis and evaluation of the ergonomic risks
- The prioritisation of the ergonomic risks

Revision of Ergonomic Risk Assessment:

- When Assessment in no longer valid
- When control measures are no longer effective
- When Technological or scientific advances allow for more effective control measures
- When there is a change in: work method, the type of work carried out, the type of equipment used to control the exposure and an accident occurs or medical surveillance reveals an adverse health effect, where ergonomic risks are identified as a contributing factor.

Ensure all ergonomic risks are prevented or when not reasonably practicable adequately controlled to the benefit of the employee

Ensure all employees are placed under medical surveillance, which is overseen by a registered occupational medicine practitioner as required in ER 8

Ensure all records are kept as contemplated in Environmental Regulation 3, 6, 7, 8, 9.

End of Document

ANNEXURE E: BASELINE RISK ASSESSMENT

1. Objective

The objective of this baseline risk assessment was to identify and categorise the low to high hazards associated with performing tasks during different work categories.

The evaluation of results will assist management to eliminate, minimise or control risks to workers associated with the tasks performed or exposure to the working environment.

This risk assessment was also conducted to assist management in identifying training needs in order to concentrate efforts where it is mostly needed.

1.1 According to the **Occupational Health and Safety Act 85 of 1993**, all companies must assess where they stand in terms of risk, identifying the major risks which they are exposed to thereby establishing their priorities and a system for future risk control. A baseline risk assessment must be comprehensive and may well lead to further, separate and more in-depth risk assessment studies.

1.2 The baseline risk assessment should be reviewed periodically, about every year, after every accident/incident, change of work force or change of plant/equipment to ensure that it is still relevant and accurate. Any other studies will need to be incorporated to achieve a 'complete picture".

2. Scope of work

The scope is the development of a baseline risk assessment that addresses all aspects of occupational health and safety as affected by the construction work.

The primary objective of the Project is to ensure sufficient water supply to the community by confirming the adequacy of the SSA 4 and 5 bulk infrastructure to supply the current and future SSAs at a higher demand complying with the policies and norms of the KCDM.

The bulk infrastructure section from Zimela Pump Station 1, 2 and 3 up to and including Zimela Reservoir R2-1 is a critical component of the bulk supply to the Greater Mthonjaneni region. Should a single pump station fail, no water will be supplied to the Zimela Reservoir R2-1. Ilifa Africa therefore recommended the upgrading Zimela Pump Station 1, 2 and 3 by the addition of a pump and electrical components at each pump station as well as to increase the storage capacity of Zimela Reservoir R2-1 by the provision of an additional 2500kℓ storage reservoir.

The Construction Work on project will therefore entail the following:

- Surveying and Setting Out
- Installation of Pipes
- Clear & Grub
- Excavation Work
- Mass Earthworks & Layer Works
- Construction of Reservoir
- Loading & Hauling
- Operating Mobile Machinery

- Loading & Lifting Operations
- Reinforced steel fixing
- Temporary Works (Erecting, Inspection, Use and Removal)
- Concrete works
- General building work (brick laying & plastering)
- Electrical work
- Plumbing work
- Installation of Support Services for water supply
- Symbolic Signage

Also refer to the scope of work as per Bill of Quantities in tender document and Greater Mthonjaneni SSA4 Bulk Water Supply Improvements: Scoping Report (Rev 1)

3. Risk Analysis Method

The risk analysis considered all the tasks as described in the safe work procedures developed for this specific operation.

The risk analysis included

a. Description of the task/system under analysis.

b. Evaluation of each risk by determining the probability of recurrence and severity of each event.

3.1 Evaluation of current and planned controls, barriers and safeguards.

3.2 A selected team of personnel were involved to conduct this on the job task analysis to determine baseline risk assessment

4. Determination of Levels of Risk

a. Risks associated with each step in the operational process were considered.

b. The following factors were considered and rated in accordance with the effect it would have on the items described below, should the event occur:

- Threat to the health and safety of a worker
- Severity of the event
- Likelihood of the event happening
- Event consequence

A risk level was attributed to each event in the following manner:

Low risk	=	1-6
Medium risk	=	7-14
High Risk	=	15-25

5. Risk Ranking & Calculation of risk

5.1 Risk Ranking:

Consequence:

Fatality or permanent disability	- 5
Major Injury	- 4
Average lost time injury	- 3
Minor Injury	- 2
Medical treatment only or less	- 1

Probability:

Has Happened	- 5
Happen during last year	- 4
Could Happen	- 3
Not Likely to Happen	- 2
Very Unlikely	- 1

5.2 Calculation of Risk:

Consequence: Probability = Risk Ranking (see table in risk assessment)

6. Evaluation of Results

Activities listed in the high risk categories must be seen as tasks requiring immediate attention. Training will, in most instances, solve the problem satisfactorily.

An implementation plan may then be devised to address the outstanding issues. This action plan must take cognisance of the hazards that should be eliminated concurrently.

7. Abbreviations

PTO - Planned Task Observation

SWP - Safe Work Procedure

SOP - Safe Operating Procedure

DSTI - Daily Safety Task Instruction

SDS - Safety Data Sheets

HCA - Hazardous Chemical Agents

KCDM - King Cetshwayo District Municipality

SSA - Sub-Supply Area

8. Assessment Team

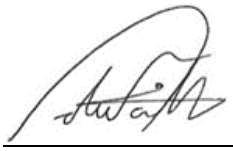
The following people were involved in establishing the relevant task groups and analysis.

- F du Toit - Risk Assessment Team Leader
- E Pieterse - Risk Assessor
- R Grabe - Occupational Hygienist
- C van Niekerk - Designer Team
- J Scalliet - Designer Team

9. Task Specific-Risk Assessment

Should the baseline assessment indicate tasks in High risk, a specific task risk assessment must be conducted. This assessment will then target the specific tasks and the hazards attached to it.

Compiled By: EF Pieterse (Can CHSA/044/2016 – SACPCMP)



Reviewed By: F du Toit
Risk Assessment Team Leader

RISK ASSESSMENT TITLE / TASK	**BASELINE RISK ASSESSMENT**
PROJECT NUMBER	**R10-007-06**
RISK ASSESSMENT REFERENCE NO	**SHE/BLRA/ILIFA/MTHONJANENI/SSA4/2022/01**
REVISION STATUS	**00**
BRIEF DESCRIPTION OF WORK/ACTIVITY	**BULK WATER SUPPLY IMPROVEMENTS**

START DATE	**TO BE DETERMINED**				
END DATE	**TO BE DETERMINED**				
REVISION DATE	**TO BE DETERMINED**				

REQUIRED AND EXISTING CONTROL MEASURES	**Available**		**Adequate**		**REMARKS**
	Yes	**No**	**Yes**	**No**	
Scope of Work (logical steps on how task will be performed)	✓		✓		
Procedures: (WI / SOP / Vendor Spec)	✓		✓		
Training, Induction, Competency Certificates, Specific Training / Other Instructions	✓		✓		Induction Training to be given before any work may commence
Special permits required (specify)	✓		✓		Notification of Construction Work
Equipment / Tool Registers / Others (specify)	✓		✓		
Other		✓	✓		

PROBABILITY LEGEND		**CONSEQUENCE / INJURY / LOSS**	
5	Has happened	**5**	Fatality or permanent disability or > R 5,000,000
4	Quite possible to happen (Happen during last year)	**4**	Major Injury or > R 1,000,000 < R 5,000,000
3	Could Happen (No record of recent occurrence)	**3**	Average Lost time Injury or > R 500,000 < R 1,000,000
2	Not likely to happen	**2**	Minor Injury or < R 500,000
1	Very Unlikely	**1**	Medical Treatment only or Less or No Financial loss

RANKING					
	5	**4**	**3**	**2**	**1**
5	25	20	15	10	5
4	20	16	12	8	4
3	15	12	9	6	3
2	10	8	6	4	2
1	5	4	3	2	1

HIGH RISK = 15-25	**MEDIUM RISK = 7-14**	**LOW RISK = 1-6**	**PROB:** Probability	**CON:** Consequence

BASIC PPE REQUIRED FOR TASK	☑ **HARD HAT**	☑ **OVERALL**	☑ **EAR PROTECTION**	☑ **DUST MUSK**
	☑ **SAFETY GLASSES**	☑ **SAFETY FOOTWEAR**	☑ **GLOVES**	☑ **SAFETY VEST**
ADDITIONAL REFERENCES TO TASK	☑ **METHOD STATEMENT**	☑ **MSDS**	☑ **PLANNED TASK OBSERVATION**	☑ **SAFE WORK PROCEDURE**
	☑ **WORK INSTRUCTION**	☑ **COVID19 CONTROLS**	-	-

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
1	Site Identification & Establishment	Project Mobilization of Personnel	Incompetent personnel appointed	Project interruption	3	4	12	• Ensure all responsible person on site submit CV's. • Legal appointment letters to be signed prior to commencement of work. • Competencies to be verified. Occupational medicals to be in place prior to commencement of work
				Legal liability claims	3	5	15	
				Financial loss	3	3	9	
			Workers not informed of hazards and risks associated with tasks	Serious injuries or Fatalities	3	5	15	• Site specific Induction training to be conducted on all personnel prior to commencing work.
			Workers exposed to unknown / unidentified hazards	Serious injuries or Fatalities due to unknown hazards	3	5	15	• Appointed Risk Assessor to be in possession of a HIRA certificate (Hazard Identification and Risk Assessment). • Task specific risk assessments to be carried out. • Employees to be trained in the content of the risk assessments. • Attendance registers to be in place

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Project Mobilization of Plant and Equipment	Poor / unsafe offloading practices	Load falling on employees	3	5	15	• Method statement / safe operating procedure to be in place for offloading plant and equipment. • To be communicated to employees. • Employees to stand clear of offloading operations
			Operators under the influence of Alcohol or other substances while transporting machinery and equipment to site establishment area	Accident causing property damage	3	2	6	• Company substance abuse / alcohol policy to be available and implemented by communicating the policy to all employees.
				Serious Injuries or Fatalities	3	5	15	
			Pedestrians / public passing by	Pedestrians / public hit by plant and machinery	3	5	15	• Camp area to be fenced off to prevent unauthorised entry. • Unauthorised and general warning signs to be displayed.
			Theft of material, equipment and machinery	Project interruption	3	3	9	• Project program to be compiled to prevent machinery and equipment to be left unattended. • Security to be implemented.
		Setting up Camp & Storage Facilities	Abnormal load	Accident	2	5	10	• Special arrangements to be made for abnormal loads. • Abnormal load signage to be displayed on trucks if applicable. • Valid driver's licence of driver.
			Containers placed on uneven surfaces	Property damage	2	3	6	• Containers / offices to be placed on level surface.

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Using defective / incorrect equipment to offload containers	Load falling on employees	3	5	15	• Lifting equipment to be load tested. • Load test certificates to be available. • Lifting equipment to be placed on register and inspected on a monthly basis. • Employees to stand clear of lifting operations and no employees allowed underneath suspended loads.
			Sub-standard housekeeping	Incidents / accidents	3	2	6	• High standards of housekeeping to be maintained. • Stacking and storage supervisor to be appointed in writing. • Monthly inspections to be conducted on stacking and storing on site
		Installation of Temporary Services	Incompetent person conducting installation	Property damage	3	2	6	• Competent / registered electrician to conduct temporary electrical installations. • Electrical CoC to be issued and kept on H&S file
				Electrocution	3	5	15	
			Incorrect location / layout plan	Financial loss	3	3	9	• Temporary electrical installations to be done on exact location provided by after consultation with client
		Clearing and Grubbing	Poor visibility	Incident / Accident	3	4	12	• Pre-start inspections to be conducted • Windscreens to be kept clean • Occupational medicals to be conducted to ensure operator has good eye sight

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Collision	Property Damage	3	4	12	• Speed limit to be adhered to • Occupational medical to be available • Proper supervision
				Incident / Accident / Fatality	3	5	15	• Workers to stand clear from moving machinery when clearing and grubbing takes place
			Excessive Dust	Occupational Illness	3	3	9	• Water Truck to be used to spray working areas in order to suppress dust
2	Excavations	Excavate by hand	Underground Services	Financial Loss	3	3	9	• Identify underground services • Location of underground services to be communicated to all relevant personnel • Excavation work to take place only as per approved permit / instruction
				Project Interruption	3	3	9	
		Excavate by Machinery	Employees standing too close to machinery	Bumping / hitting employee with bucket of machine causing serious injury	3	4	12	• Employees to stand clear of machinery in operation
			Incompetent / unfit operator	Accident causing fatality	3	5	15	• Operators to undergo occupational medical surveillance. • Occupational Medical Certificate to be available on H&S file • Operator competency to be available
			Underground Services	Financial Loss	3	4	12	• Identify underground services • Location of underground services to be communicated to all relevant personnel

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
				Project Interruption	3	4	12	• Excavation work to take place only as per approved permit / instruction
			Operating next to excavation edge / placing excavated material next to excavation	Collapse of trench / excavation (sides caving in)	3	5	15	• Ground stability to be tested in case of deep excavations • Excavated material to be placed away from excavation edge • Operator to be competent
		Working inside Confined Space	Exposure in confined space to lack of Oxygen / Air	Occupational Health Disease / Fatality	3	5	15	• Watchman to be appointed • Measurement of Oxygen / Air in confined space in order to control / prevent / mitigate exposure to Occupational Health Risks • Rotating of workers to reduce the exposure in confined space • Confined Space entry Permit and Procedure to be implemented and communicated to employees
		Backfilling	Employees standing too close to machinery	Bumping / hitting employee with bucket of machine causing serious injury	3	4	12	• Employees to stand clear of machinery in operation
3	Working near services	Plant operating near power lines	Exposure to live and static electricity	Electrocution	3	5	15	• Contractor to refer to design drawings indicating powerlines and to plan accordingly. • Prestart checklist • Operator authorised, competent and medically fit • Machinery may not exceed height of overhead power lines • Supervision • Banksmen/Spotter checking plant height
			Overhead power lines knocked over	Property damage	3	3	9	
			Damaging power lines	Property damage	3	2	6	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Excavating near overhead power lines	Striking overhead power line structures	Electrocution	3	5	15	• Contractor to refer to design drawings indicating powerlines and to plan accordingly. • Prestart checklist • Operator authorised, competent and medically fit • Machinery may not exceed height of overhead power lines • Supervision • Banksmen/Spotter checking plant height
				Legal Liability Claims	3	5	15	
				Property damage	3	3	9	
		Excavating near underground power lines	Striking overhead underground electrical cables	Electrocution	3	5	15	• Contractor to refer to design drawings indicating underground powerlines and to plan accordingly. • Prestart checklist • Operator authorised, competent and medically fit • Machinery may not exceed height of overhead power lines • Supervision • Banksmen/Spotter checking plant height
				Legal Liability Claims	3	5	15	
				Property damage	3	3	9	
4	Installation of Pipes	Lowering pipes into trench / excavation	Overcrowding at work area	Injuries	3	4	12	• Proper supervision • Daily Safe Task Instructions • Safe Operating Procedures
			Unauthorised operator	Incident / accident	3	4	12	• Operator of Crane to be competent to the specific lifting machine operated • Occupational medical to be available
			Faulty lifting equipment	Falling objects causing injuries / fatality	3	4	12	• Lifting equipment to be placed on register and inspected regularly • Lifting equipment to be load tested

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Installation of Pipes	Confined space	Health risk	3	4	12	• Confined space entry permit to be issued to individuals prior to working in confined spaces • Occupational medicals to be of personnel to be available
			Misuse of equipment	Injuries	3	3	9	• Task specific training • Correct equipment to be used for specific tasks • Proper supervision
			Faulty equipment	Injuries	3	3	9	• Equipment to be inspected on a monthly basis and deviations to be recorded and reported
		Commissioning of System / Testing of pipes	Sub-standard housekeeping	Employees tripping over obstacles causing injuries	3	2	6	• High standards of housekeeping to be maintained
			Leakage could result in pipes bursting	Injuries	3	3	9	• Competent person to conduct / supervise plumbing work
			High pressure 10 – 20 bar	Project interruption	3	4	12	• Competent person to conduct / supervise plumbing work
5	Lifting & Lowering Operation	Mobile Cranes / Truck-mounted crane	Incorrect slinging	Employees struck by swinging load	3	4	12	• Crane / Truck-mounted crane operator to be competent in the operation of the specific machine. Employees to stand clear of lifting operations
			Defective Crane	Load falling on employees	3	5	15	• Crane to be load tested. Pre-start inspection to be conducted on a daily basis prior to shift. Employees to stand clear of lifting operations and no employees allowed underneath lifted loads.

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Incompetent operator / not medically fit to operate	Incident / Accident	3	4	12	• Operators (and all other employees) to be sent for Occupational medical surveillance. Medical certificates and Annexure 3 to be placed on the H&S file.
			Exceeding maximum load capacity	Crane toppling over	3	5	15	• Crane to be load tested. Maximum Load Capacity to be displayed on Crane. Outriggers of crane to be placed in order to keep crane steady. Crane spec to be available for reference purposes.
		Chains / Slings	Defective equipment used causing falling objects	Load falling on employees	3	5	15	• Lifting equipment to be load tested. Load test certificates to be available. Lifting equipment to be placed on register and inspected on a monthly basis. Employees to stand clear of lifting operations and no employees allowed underneath lifted loads.
			Objects not correctly hooked	Serious injuries, Fatality due to falling loads / objects	3	5	15	• Competent rigger to be appointed.
6	Hot works	Gas Welding & Cutting	Incorrect storage of gas cylinders	Sudden release of pressurised gas	3	4	12	• Gas cylinders to be stored in accordance with requirements. TO be stored in a designated area. Gas cylinders to be chained.
			Hot surfaces	Burns	3	3	9	• Task specific training to be conducted on employees conducting hot works. • Competent First aider and box to be readily available on site. • Employees to wear the relevant PPE, e.g. welding helmet, apron, welding gloves etc.

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Fire hazard	Explosion	3	5	15	• Designated smoking area to be established. No smoking near hot work activities. • Gas cylinders to be secured at all times.
			No flashback arrestors	Explosion	3	5	15	• Gas welding equipment to be in accordance with requirements. • Flashback arrestors to be fitted to gas welding and cutting equipment
		Electrical Welding & Cutting	Incompetent person operating welding machine	Incident / Accident	3	3	9	• Task specific training to be conducted. • Competency to be available and person to be appointed in writing
			Not wearing a welding helmet	Sparks in face / Arc eyes	3	3	9	• Welding helmet to be issued to persons conducting welding. • Employees conducting welding, to wear the relevant PPE, e.g. welding helmet, apron, welding gloves etc.
			Exposed electrical wiring	Electrocution	3	5	15	• Monthly inspections to be conducted on electrical arc welding machine and deviations to be recorded and reported.
7	Concrete Works	Ready-Mix	Unauthorised personnel pouring concrete	Injuries	3	3	9	• Only authorised personnel to pour concrete
			Concrete truck running over personnel, equipment or material	Fatalities	3	5	15	• Occupational medical certificate of operator to be available • First aid to be on site at all times • Workers to always wear correct PPE • Workers working with vibration equipment must ensure they have firm footing
				Property damage	3	3	9	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
				Project interruption	3	4	12	• Concrete truck driver to ensure that the handbrake is secured to prevent truck from running out of control. • Task Specific Training
		On Site Mixing	Exposed moving parts	Loss of limb	4	4	16	• All moving parts of concrete mixer to be guarded • Correct PPE to be worn by employees operating concrete mixer
			Excessive concrete dust	Occupational Illness or Disease	4	4	16	
		Using Concrete Pump	Concrete pump hitting workers	Injuries	3	3	9	• Workers to always stand clear from pump movements
8	Temporary Works	Manual handling of formwork material	Incorrect handling of temporary works / formwork material. Improper manual lifting techniques	Injuries	2	2	4	• Task specific training to be provided to employees. • Ergonomical risks to be taken into account
		Temporary Works Erection	Incorrect erection of temporary works	Temporary works collapsing	3	5	15	• To be erected as per design drawings • Temporary Works Designer and Supervisor to be appointed and competent • Authorisation to cast concrete to be done in writing by the temporary works designer • Inspections to be done on temporary works before, during and after concrete is cast
		Concrete poured into formwork / temporary works	Temporary works not positioned as per drawing and temporary works material damaged	Formwork / temporary works collapsing causing serious injuries or fatalities	3	5	15	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Removal of temporary works after concrete has set	Pre-removal of temporary works	Collapsing of roof deck due to pre-removal of temporary works	3	5	15	• Engineer to sign off on work prior to removal of temporary works (approval) • Inspections to be done on temporary works before, during and after concrete is cast • PC to ensure that the specified time is given for concrete to set
9	Scaffold work	Scaffold Erection	Incorrect erection of scaffolding	Collapse of scaffold causing serious injury or fatality	3	5	15	• Scaffolding to be erected by a competent scaffold erector, appointed in writing • Scaffolding to be inspected by a competent person, appointed in writing. Inspections to be done daily and recorded in writing • Scaffolding to be erected in accordance with SANS 10085
		Working on scaffolding	Falling from heights	Serious injury / fatality	3	5	15	• Employees to be issued with specific safety harnesses for the specified work • Safety harnesses to be worn by employees whilst working on scaffolding and to be hooked to scaffold / anchor points. • Safety harnesses to be in good condition, on register and inspected regularly

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Scaffold collapsing	Serious injury / fatality	3	5	15	• Scaffolding to be erected by a competent scaffold erector, appointed in writing • Scaffolding to be inspected by a competent person, appointed in writing. Inspections to be done daily and recorded in writing • Scaffolding to be erected in accordance with SANS 10085 • Scaffold to be anchored / erected in such a way to prevent collapse.
			Falling tools and equipment	Head injury	3	4	12	• Tools and equipment may not be placed on edge of platform boards. • Lifting and lowering of tools must be done properly in a bucket with a rope and no tools may be thrown from heights.
		Disassemble scaffolding	Falling from heights	Serious injury / fatality	3	5	15	• Scaffolding to be disassembled under proper supervision • To be disassembled from top to bottom • Employees to wear safety harnesses while conducting this activity
10	Working at heights	Edge Work	Falling off edges	Major injuries (fractures), etc.	3	3	9	• Edge protection to be in place. • Employees working near edges to wear safety lanyards to prevent them from falling over edge
				Fatality	3	5	15	
		Openings	Falling into openings	Major injuries (fractures), etc.	3	3	9	• All openings to be covered. • Employees working near openings to wear safety lanyards to prevent them from falling into openings
				Fatality	3	5	15	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
11	Concrete Works (Reservoir)	On Site Mixing	Exposed moving parts	Loss of limb	3	4	12	• All moving parts of concrete mixer to be guarded • Correct PPE to be worn by employees operating concrete mixer Only authorised personnel to pour concrete
			Excessive concrete dust	Occupational Illness or Disease	3	4	12	
		Using Concrete Pump	Concrete pump hitting workers	Injuries	3	3	9	• Workers to always stand clear from pump movements
		Steel fixing for walls and reservoir roof	Incorrect handling of reinforcement material	Injuries	3	3	9	• Correct manual lifting techniques to be communicated to employees
			Working without proper personal protective equipment	Hand injuries	3	2	6	• Monthly inspections on PPE to be done • Correct PPE to be issued to workers
			Steel fixing at reservoir roof – falling from heights	Major injuries (fractures), etc.	3	3	9	• Scaffolding to be erected in accordance with SANS 10085 • Constant Supervision • First Aid assistance at hand • Employees working near edges while conducting steel fixing for at heights to wear safety harnesses
				Fatality	3	5	15	
		Erecting Form / Support work for Walls and Roof	Incorrect manual handling of from / support work material	Injuries	3	3	9	• Correct manual lifting techniques to be communicated to employees
			Falling objects while erecting support work for reservoir roof	Fatality	3	5	15	• Constant Supervision • Competent person to supervise erection of temporary works • To be erected as per design drawing
		Casting Concrete for Reservoir Floor, Wall and Roof	Unauthorised personnel pouring concrete	Injuries	3	3	9	• Only authorised personnel to pour concrete

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Concrete truck running over personnel, equipment or material	Fatalities	3	5	15	• Occupational medical certificate of operator to be available • First aid to be on site at all times • Workers to always wear correct PPE • Workers working with vibration equipment must ensure they have firm footing • Concrete truck driver to ensure that the handbrake is secured to prevent truck from running out of control. • Task Specific Training
				Property damage	3	3	9	
				Project interruption	3	4	12	
			Temporary works not positioned as per drawing and temporary works material damaged	Formwork / temporary works collapsing causing serious injuries or fatalities	3	5	15	• To be erected as per design drawings • Temporary Works Designer and Supervisor to be appointed and competent • Authorisation to cast concrete to be done in writing by the temporary works designer • Inspections to be done on temporary works before, during and after concrete is cast
			Fall from heights when assisting to cast concrete for roof of reservoir	Serious injury / Fatality	3	5	15	• Employees working on heights and assisting with the casting of concrete at heights to wear the safety harnesses. • Occupational Medical to be available of all persons working at heights in the form of Annexure 3

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Working inside reservoir (Confined Space)	Exposure in confined space to lack of Oxygen / Air	Occupational Health Disease / Fatality	3	5	15	• Watchman to be appointed • Measurement of Oxygen / Air in confined space in order to control / prevent / mitigate exposure to Occupational Health Risks • Rotating of workers to reduce the exposure in confined space • Confined Space entry Permit and Procedure to be implemented and communicated to employees
		Stripping of Temporary works in reservoir	Pre-removal of temporary works	Collapsing of roof deck due to pre-removal of temporary works	3	5	15	• Engineer to sign off on work prior to removal of temporary works (approval) • Inspections to be done on temporary works before, during and after concrete is cast • PC to ensure that the specified time is given for concrete to set
			Incorrect manual handling of from / support work material	Injuries	3	3	9	• Correct manual lifting techniques to be communicated to employees
			Poor vision inside reservoir causing employees to fall from or off structures	Injuries / Fatality	3	5	15	• Proper lighting to be provided when stripping formwork inside reservoir to ensure visibility
12	Hazardous Chemical Agents	Handling	Incorrect handling	Skin irritation	2	3	6	• MSDS's to be available • MSDS's to be communicated to all employees handling HCA • Task specific training
			Exposed to HCA	Occupational Illness or Disease	3	4	12	
			Not trained to work with HCA	Occupational Illness or Disease	3	4	12	
		Storage	Incorrect storage of HCA	Production time loss	3	3	9	• Task specific training • HCA inspections • PPE • HCA compatibility chat to be available and implemented • HCA to be stored in accordance with compatibility chart
			Fire hazard	Explosion	3	5	15	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
13	Electrical Works and Connection to Pump House	Installation of Electrical Cables	Exposure to live electricity	Electrocution	4	5	20	• Electrical source to be isolated when conducting installation work • Competent and registered electrician to conduct the electrical installation work • Occupational medical to be available
			Incompetent person conducting electrical installations	Project interruption	4	5	20	
		Connecting of electricity to existing systems	Exposure to live electricity	Electrocution	4	5	20	• Electrical source to be isolated when conducting installation work • Competent and registered electrician to conduct the electrical installation work • Occupational medical to be available
			Incompetent person conducting electrical connection	Project interruption	4	5	20	
		Commissioning of Electrical System	Using electrical equipment in wet areas or outside in wet conditions	Electrocution	4	5	20	• Electrical equipment may not be used in wet areas or wet conditions • Task specific training
14	Electrical Works and Connection to Pump House		Overloaded power-points	Fire risk	3	4	12	• Competent and registered electrician to conduct the electrical installation work • Fire equipment to be readily available
			Trailing cables from static equipment and whilst using portable electrical equipment	Short circuit	3	3	9	• Antistatic PPE
				Fire Risk	3	4	12	• Competent and registered electrician to conduct the electrical installation work • Fire equipment to be readily available

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Faulty cables	Electrocution	4	5	20	• Electrical source to be isolated • Competent and registered electrician to conduct the electrical installation work • Occupational medical to be available
				Short circuit	3	3	9	• Antistatic PPE
				Fire Risk	3	4	12	• Competent and registered electrician to conduct the electrical installation work • Fire equipment to be readily available
15	Stacking & Storage	Stacking and storage of material and equipment	Sub-standard stacking and storing practices	Collapsing of stacked / stored material causing serious injuries	3	3	9	• Stacking and storage supervisor to be appointed in writing. • Monthly inspections to be conducted on stacking and storing on site
16	Transmittable Diseases (e.g. COVID-19)	Coming into contact with other workers. Normal working activities on site	Workers exposed to Health Hazards namely Diseases / Bacteria / Viruses (e.g. COVID-19)	Serious illnesses due to Health hazards. Contracting disease.	4	5	20	• Health and Safety Management Plan to include planning around transmittable diseases and the relevant regulations • Compile and implement a Risk Assessment and Safe Operating Procedure pertaining to the transmittable disease • Emergency Response and Prevention Plan to be developed and implemented • Employees to be trained in the content of documents

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
17	Site Demobilization	Disconnect Services	Incompetent person disconnecting temporary electrical distribution boards	Property damage	3	2	6	• Competent / registered electrician to conduct the disconnection of temporary electrical installations.
				Electrocution	3	5	15	
		Loading of material, equipment and offices	Employees standing underneath lifting operations	Load falling on employees	3	5	15	• Lifting equipment to be load tested. • Load test certificates to be available. • Lifting equipment to be placed on register and inspected on a monthly basis. • Employees to stand clear of lifting operations and no employees allowed underneath suspended loads. • Operators to be competent.
		Loading of Machinery on Trucks	Improper loading of plant and machinery	Plant / machinery falling off trucks causing property damage	3	5	15	
				Load falling on employees	3	5	15	
		Transporting of equipment, machinery and tools	Vehicle not roadworthy	Accident	3	5	15	• All construction vehicles to be roadworthy • Verification on roadworthiness to be done before entering site

ANNEXURE F: REQUIREMENTS OF THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)

This section provides specifications with regard to the following:

(a) The Expanded Public Works Programme (EPWP)

The Contractor shall be required to participate in job creation (employment of local labour) by executing various portions of the Works using local labour (unskilled or semi-skilled), recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project). Such local labour shall be the targeted participants in the EPWP programme.

Furthermore, in order to avoid duplication of training programmes and training facilities, all structured training, including the training for Small Contractor Development (SCD), (in those instances where SCD is included in the contract), shall be measured and paid for in terms of the pay items provided in this section.

1. Expanded Public Works Programme (EPWP)

1.1 Labour-Intensive Construction (LIC), supervision and management for the Expanded Public Works Programme (EPWP)

The Expanded Public Works Programme (EPWP) is a multi-sectoral government initiative to create jobs. In the case of the infrastructure sector, existing government expenditure is realigned using labour-intensive technologies to create job opportunities. This involves the use of both labour and plant, where labour is preferred and plant is used appropriately.

All work undertaken in terms of the Expanded Public Works Programme (EPWP) shall be implemented using labour-intensive construction methods to the extent economically feasible, in accordance with the “Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP) Third Edition 2015”.

The aforementioned guidelines can be downloaded from the EPWP website of the Department of Public Works (http://www.epwp.gov.za/).

Items scheduled for labour-intensive construction are marked with the letters “LI” in the schedule of quantities in the manner described in the Pricing Instructions.

Contractors shall note that they shall employ in labour-intensive works only those supervisory and management staff that have completed the required Skills Programme in terms of Appendix C of the aforementioned guidelines:

- Foremen / Supervisors at NQF level 4 “National Certificate: Supervision of Civil Engineering Construction Processes”;

- Site Agent / Construction Manager at NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent Quality Council for Trades and Occupations (QCTO) qualifications at NQF level 5 or 7.

In addition to their normal supervisory and management functions, the aforementioned supervisory and management staff shall also be responsible for setting the workers’ daily tasks in accordance with labour-intensive construction principles, and for ensuring that the EPWP job creation reporting data is accurately recorded on a daily basis and compiled and submitted to the Employer each month in accordance with clause 3 of this section.

1.2 Labour laws applicable to the Expanded Public Works Programme (EPWP)

The work to be undertaken on this contract by unskilled or semi-skilled workers under the Expanded Public Works Programme (EPWP) shall be implemented in accordance with:

- the Code of Good Practice for Employment and Conditions of Work for Expanded Public Works Programmes (EPWP), issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No. 129 of 18 February 2011 (Government Gazette No. 34032 of 18 February 2011); and

- 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 No. R347 of 4 May 2012.

The aforementioned Government Notice No. R347 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 Expanded Public Works Programme (EPWP).

The above documents can be downloaded from the EPWP website of the Department of Public Works (http://www.epwp.gov.za/).

1.3 Persons to be employed under the Expanded Public Works Programme (EPWP)

All local labour required for the execution of labour-intensive works shall be engaged strictly in accordance with prevailing legislation.

The Contractor shall, through the Project Liaison Committee (PLC) and with the assistance of the Community Liaison Officer (CLO), inform the local community of the labour-intensive works proposed and the employment opportunities thereby presented.

The Contractor shall determine the minimum education level / skills required to undertake the works specified. In consultation with the PLC and the War Room convener for each relevant ward, selection of the local labour shall be made from households on the Operation Sukuma Sakhe (OSS) database profiled through the War Room for each ward. The list obtained from the OSS database must be accompanied by a letter from the War Room convener confirming that all the information provided was sourced from the War Room and that all listed incumbents reside within the relevant ward. The Contractor must maintain records of household profiles as part of the portfolio of evidence for selection. Selection shall be based on the minimum education level / skills required and the most needy households, as determined by the household profiling. Preference shall be given for at least one person from each household in the community to be employed before further persons are considered for selection.

The Contractor shall endeavour to ensure that the number of temporary jobs using local labour (unskilled or semi-skilled), recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project), shall include for a minimum allocation of:

- 55% women;
- 55% youth who are between the ages of 16 and 35; and
- 2% persons with disabilities.

All labour recruitment, employment and associated risks shall remain the sole responsibility of the contractor.

The contractor shall comply with the minimum supervisor to worker ratio stated below, required to ensure the effective supervision of the labour-intensive works for all LI activities undertaken on this project.

Minimum supervisor to worker ratio = 1:12

1.4 Contract of employment with persons employed under the Expanded Public Works Programme (EPWP)

The Contractor shall enter into a formal contract of employment with each person employed under the Expanded Public Works Programme (EPWP), using the pro forma contract of employment attached at the end of this section: Particular Specifications.

The Contractor shall note that all such formal contracts of employment entered into with persons employed under the Expanded Public Works Programme (EPWP) shall expire on 31 March each year, and the Contractor shall therefore be required to enter into new contracts with such persons as of 1 April each year.

1.5 Employment of targeted labour under the Expanded Public Works Programme (EPWP)

The Contractor shall be contractually obliged to:

(a) brief EPWP workers on the conditions of employment;

(b) enter into a formal contract of employment with each EPWP worker, which contract will form part of the Employment Agreement;

(c) keep personnel files for all EPWP workers and make copies available to the Employer if and when requested; and

(d) ensure that payments to EPWP workers are made in accordance with Government Notice No. R347.

The rate of pay for persons employed under the Expanded Public Works Programme (EPWP) shall be:

R 95-44 per day (for time-rated workers).

During those periods when an EPWP worker is engaged in formal classroom training (other than in-service training), the rate of pay shall be equal to the minimum wage rate as set on an annual basis in the Ministerial Determination for the Expanded Public Works Programme.

Tasks set by the Contractor shall be such that:

(a) the average EPWP worker completes 5 tasks per week in 40 hours or less; and
(b) the weakest EPWP worker completes 5 tasks per week in 55 hours or less.

The Contractor shall revise the time taken to complete a task whenever it is established that the time taken per week to complete the tasks set does not fall within the limits indicated in (a) and (b) above.

1.6 Training of persons employed under the Expanded Public Works Programme (EPWP)

The training of persons employed under the Expanded Public Works Programme (EPWP) is described in clause 4 below.

1.7 Contractor's obligations towards persons employed under the Expanded Public Works Programme (EPWP)

Over and above implementing in accordance with Government Notice Nos. 129 and R347 the EPWP work to be undertaken on this contract, it shall be the responsibility of the Contractor to carry out the following functions with respect to the EPWP workers:

(a) ensure that all participants are covered by the Compensation for Occupational Injuries and Diseases Act, 1993, for as long as they are contracted to the Contractor, and pay in full to the Compensation Commissioner such amounts as are due in terms of the Act;

(b) pay in full to the Unemployment Insurance Fund for all participants such UIF contribution amounts as are due in terms of the Unemployment Insurance Act, 2001, as amended, and the Unemployment Insurance Contributions Act, 2002, as amended, and provide proof of such UIF payments upon request;

(c) ensure that all participants are paid their wages on time through the pre-agreed payment method as stipulated in the participant contract of employment;

(d) implement health and safety procedures with respect to the participants, ensuring that the health and safety regulations are adhered to;

(e) ensure that all participants receive induction on site safety prior to commencing with work on site;

(f) provide all participants with the necessary protective clothing and equipment as required by law for the specific tasks in which the participants are involved, in addition to the branded overalls stipulated for EPWP workers;

(g) provide safe on-site storage facilities for apparel and tools issued to the participants;

(h) assist in the assessment of participants with regard to their competencies;

(i) provide overall supervision and day-to-day management of participants; and

(j) implement strict quality control to ensure that the work carried out by the participants is of the required standard, and, where necessary, to train and mentor the participants to assist them in achieving the standards required.

1.8 Apparel and tools for persons employed under the Expanded Public Works Programme (EPWP)

The Contractor shall provide Personal Protective Equipment (PPE) to all EPWP workers in accordance with the requirements arising from Part E: OHSA 1993 Health and Safety Specification and the Contractor's site specific health and safety plan and accompanying risk assessments.

Where indicated below, certain items of the PPE issued by the Contractor to the EPWP workers shall include branded EPWP markings in accordance with the attached branding requirements.

PPE shall comprise the following:

(a) Compulsory PPE issued to all EPWP workers for use during general work activities:

- Protective overalls (two sets), green in colour, with EPWP branding;
- Lime green reflective safety vest with EPWP branding;
- Protective footwear; and
- Protective gloves.

(b) PPE issued to EPWP workers for specific activities where required in terms of the Contractor's site specific health and safety plan and accompanying risk assessments, such as:

- Protective headwear, green in colour, with EPWP branding;
- Protective eyewear such as spectacles and goggles;
- Protective face shields;
- Protective earplugs and earmuffs;
- Respiratory masks;
- Disposable safety apparel;
- Kidney belts;
- Safety harnesses; and
- Any other protective equipment identified.

The Contractor shall replace any item of issued PPE that becomes unserviceable.

The Contractor shall not charge any fee to the EPWP workers for the prescribed PPE issued except under the following circumstances:

- where the employee requests the issue of additional PPE in excess of what is prescribed;
- where the employee has patently abused or neglected the issued PPE leading to early failure; or
- where the employee has lost the issued PPE.

The Contractor shall instruct and train the EPWP workers in the use of all PPE issued, and shall ensure that they use the prescribed equipment.

EPWP workers shall not have the right to refuse to use or wear the equipment prescribed by the Contractor. If it is not possible for an EPWP worker, through health or any other reason, to use or wear the prescribed PPE issued, such employee shall not be allowed to continue working under the hazardous conditions for which the equipment was prescribed. Under such circumstances an alternative solution shall be found, and this may include relocating or discharging the employee.

The Contractor shall provide each EPWP worker with hand tools of adequate quality and of the type required to carry out the assigned tasks safely and efficiently.

The Contractor shall instruct and train the EPWP workers in the safe and efficient use of all hand tools issued.

The Contractor shall maintain the issued tools in a serviceable and safe working condition.

The EPWP workers shall be responsible for the safe on-site storage of all PPE and tools issued to them, using the storage facilities provided on site by the Contractor.

No separate payment shall be made for providing the EPWP workers with PPE, or for providing relevant items of PPE in the specified colours with branded EPWP markings. Furthermore, no separate payment shall be made for providing the EPWP workers with hand tools or for providing them with safe storage facilities on site for PPE and tools. The Contractor shall therefore make provision for all costs related to providing the PPE, tools and safe storage facilities in the tendered rates and prices for the various items of work scheduled throughout the schedule of quantities.

1.9 EPWP contract signboard

The Contractor will be required to erect a contract signboard displaying the EPWP logo, indicating that this project is part of the Expanded Public Works Programme (EPWP). All costs related to the provision, erection and subsequent removal of the contract signboard shall be refunded to the Contractor through the pay item provided in section 1300 of the schedule of quantities for this purpose.

1.10 Payment matters relating to the EPWP work

1.10.1 General

No separate pay items shall be provided in terms of the schedule of quantities for the construction work activities carried out by EPWP participants. Payment for such work activities shall be made only indirectly, in terms of the pay items scheduled for the work activities in which such persons are engaged.

Furthermore, no direct payment will be made to cover the Contractor’s costs associated with implementing the on-site work programme for the EPWP participants, for planning, organising, directing, controlling and administrating their day to day activities, including the setting of daily tasks, record keeping and any on-site liaison, training and mentoring required, and for the associated job creation reporting, and such costs shall therefore be built into the rates tendered for the various items of work scheduled throughout the schedule of quantities.

1.10.2 Payment for labour-intensive components of the work

Payment will be made for items which are designated for labour-intensive construction in the schedule of quantities only in those instances where such items are constructed using labour-intensive methods.

Any unauthorised use of plant to carry out work which was scheduled to be carried out using labour-intensive methods will not be condoned and any Works so constructed will not be certified for payment. Any non-payment for such Works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

During the course of construction, as a result of unforeseen site conditions or operating conditions encountered, it may happen that an item designated for labour-intensive construction can no longer be carried out in a safe and economically feasible manner, either in full or in part, using labour-intensive methods. In such instances the Employer’s Agent shall, where necessary, order a variation in terms of clause 6.3 of the of the General Conditions of Contract 2015 with respect to that portion of the item quantity that cannot be carried out using labour-intensive methods.

1.11 Penalty applicable to any shortfall in the local labour content achieved

The amount spent on wages for local labour (excluding VAT) for this project, as certified by the Employer's Agent, shall equal or exceed the specified minimum percentage of the contract amount which is the Contract Price (adjusted to exclude penalties and value added tax).

The Contractor is obliged to commit to or exceed the specified minimum percentage of local labour content stated by the Employer.

In the event that the Contractor fails to substantiate that any failure to achieve the minimum required local labour content for this project is due to quantitative underruns, the elimination of items contracted to local labour, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable for a financial penalty as prescribed in clause SCC 4.1.1 of the Special Conditions of Contract. The financial penalty shall be calculated as follows:

$P = 0,05 \times [(E - Eo)/100] \times CA$

where:

E is the specified minimum percentage for local labour content
Eo is the local labour content percentage which the Employer's Agent certifies as being achieved upon completion of the contract
CA is the contract amount which is the Contract Price (adjusted to exclude penalties and value added tax)
P is the monetary value of penalty payable

The penalty shall not apply to shortfalls in the allocations to the individual target groups (i.e., Women/Youth/Disabled as per clause 1.3 above), only to shortfalls in the total local labour content achieved.

The evaluation of the Contractor's achievement of the local labour content percentage shall be undertaken monthly by the Employer's Agent, based on the accumulative achievements in comparison to the programmed utilisation of local labour. Failure by the Contractor to achieve the interim target shall result in the Contractor being liable for a financial penalty as prescribed in this clause.

2. JOB CREATION REPORTING FOR EPWP

In order to assist the Employer in complying with the goal of creating EPWP job opportunities, the Contractor must provide the information specified in clause 3.1 below for reporting purposes.

In addition, the Contractor's payment certificates shall be accompanied by the information specified in clause 3.2 below.

2.1 Type of project data required per project

Every EPWP project shall collect and keep specific project data for the purpose of EPWP progress reporting on a monthly basis, using the EPWP Data Collection Tool template (this will be made available to the Contractor in Microsoft Excel format - refer to the pro forma spreadsheets at the end of this section of the Particular Specifications).

The data that is required to be kept, maintained and reported on a monthly basis for each project includes:

2.1.1 Participant (local labour) data

A participant list of the local labour employed must be maintained for every EPWP project. The data required in this participant list is indicated below. This data shall be recorded, checked and signed off by the Contractor, and shall be submitted to the Employer at each monthly site meeting. The participant list shall contain the following data and shall be kept and maintained on site for audit purposes:

(a) Participant identity – name, surname, initials, date of birth and identity number (or other unique identifier) plus certified copy of ID book.

(b) Participant profiles – nationality, gender, age, education level and disability status.

(c) Work data for participants – daily wage to be received, number of calendar days training attended and number of calendar days worked.

(d) Records of training – as required in terms of the EPWP Data Collection Tool template.

In addition, the signed contracts of employment between the Contractor and each EPWP participant shall be shall be kept and maintained on site for audit purposes.

2.1.2 Project work data

The project work data generally seeks to confirm the number of people at work daily on the project. This data shall be recorded, checked and signed off by the Contractor, and shall be submitted to the Employer at each monthly site meeting. The data shall be maintained on site by the Contractor, in order that it can be provided by the Employer to the National Department of Public Works upon request when the latter is undertaking sample auditing. The data shall include:

(a) Daily attendance register – register for each day showing all the workers that were registered as being at work on that day. Attendance registers shall be completed on site on a daily basis and signed off by the Contractor on a weekly basis.

(b) Summary of monthly attendance.

2.1.3 Project payment data

The project payment data generally seeks to confirm what was paid, for how much work and to whom. This data shall be recorded, checked and signed off by the Contractor, and shall be submitted to the Employer at each monthly site meeting.

It is required that the Contractor adopt one of the following methods as standard procedure for recording and maintaining this information:

(a) Payment register – this is a list of the workers showing the wages paid to each worker, and signed off by each worker as proof of receipt and acceptance of payment. Information on this register must include the name of the worker, either an identity number or other unique identifier, the number of calendar days that the pay period covers, the wage rate and the total wages paid; or

(b) Bank records showing the transfers to each worker account, signed off by the Contractor as proof of payment – these bank records must specifically show the name of the worker, either an identity number or other unique identifier, the period which the pay covers and the total wages paid.

The project payment data, as recorded and maintained by the Contractor in terms of either (a) or (b) above, must be available and applicable for the entire period for which the Employer claims an incentive reward for person-days of work created in terms of the project.

2.1.4 Employment output data

The Contractor shall submit to the Employer at each monthly site meeting a progress report detailing production output compared to the programme of works, together with the data necessary to enable the Employer to calculate the following employment output data in accordance with the EPWP Data Collection Tool template:

(a) Number of work opportunities created (where one work opportunity = paid work created for one individual on an EPWP project, for any period of time).

(b) Number of person-days of work created (where one person-day = one day of work carried out by one individual). The total number of person-days of work created on a particular EPWP project shall be obtained by summing the total number of person-days worked by each individual employed during the course of that EPWP project.

(c) Number of Full Time Equivalents (FTE) created (= total number of person-days of work created on the EPWP project divided by 230 working days). In terms of EPWP policy, one year of work created for one individual is assumed to comprise a total of 230 days of paid work carried out by that individual.

(d) Average duration of work opportunities created (= total number of person-days of work created on the EPWP project divided by the number of work opportunities created on that EPWP project).

(e) Average daily wage rates paid (= accumulated total of the wages paid to all individuals employed on an EPWP project divided by the total number of person-days of work created on that EPWP project).

(f) Training information.

2.2 Project data to be submitted with the Contractor's payment certificates

The Contractor's payment certificates shall be accompanied by labour returns providing the labour information for the corresponding period in a format specified by the Employer.

Should the Contractor choose to delay submitting payment certificates, the labour returns shall nevertheless still be submitted as per the frequency and timeframes stipulated by the Employer. The Contractor's payment certificates shall not be paid by the Employer until all pending labour information has been submitted.

The following information shall be maintained on site and submitted with each payment certificate in the format specified by the Employer:

(a) Copies of the signed contracts between the Contractor and any new EPWP participants (the Contractor shall note that all such formal contracts of employment entered into with persons employed under the Expanded Public Works Programme (EPWP) shall expire on 31 March each year, and the Contractor shall therefore be required to enter into new contracts with such persons as of 01 April each year, and shall be required to submit copies of all such new contracts with the first payment certificate thereafter);

(b) Certified ID copies of all local labour employed as EPWP participants;

(c) Attendance registers for the EPWP participants;

(d) Proof of payment of EPWP participants; and

(e) Information as required in terms of the EPWP Data Collection Tool template.

3. PROVISION OF STRUCTURED TRAINING

3.1 Scope of structured training

In order to avoid duplication of training programmes and training facilities, all structured training, shall be implemented, measured and paid for in accordance with the requirements of this section: Requirements of the Expanded Public Works Programme (EPWP).

The Employer's objectives include the training of local labour and Targeted Enterprises within a structured programme, in order to equip them with skills that will assist them in gaining future employment, and to facilitate targeted EPWP participants in gaining competencies and unit standard credits towards future full learnership qualifications.

Such training shall contain both theoretical and practical components and shall be conducted in accordance with the various laws and regulations contained in the South African Qualifications Authority (SAQA) statutes.

The following aspects of the structured training to be provided are noted:

The Employer has no service agreement or memorandum of understanding with any Education and Training Quality Assurance (ETQA) body, and therefore does not function as the employer as defined under any three-party learnership agreement between the learner, the training provider and the employer.

The structured training programmes implemented on this contract, although comprising several unit standards, are unlikely to total to sufficient credits for a full learnership qualification. Nevertheless, the competencies and credits achieved should contribute to a full learnership through the later acquisition by the learner of the remaining unit standards required for the full learnership.

The Contractor shall be required to provide a training facility on the Site, or in close proximity thereto, and to provide over the duration of the contract the following structured training for EPWP participants:

(a) Generic skills training;
(b) Entrepreneurial skills training;
(c) Construction skills training; and
(d) In-service training.

Generic skills training and in-service training shall be provided to all EPWP participants.

Entrepreneurial and construction skills training shall be provided to targeted EPWP participants only.

Entrepreneurial skills training comprises both management skills training and business development skills training.

Construction skills training comprises specific on-task skills training.

3.2 Training provider and trainers

The Contractor shall be required to procure the services of a training provider accredited by the Construction Education and Training Authority (CETA).

The training provider shall have in its employ trainers who are registered as assessors with the Construction Education and Training Authority (CETA), and who shall deliver the training.

Proof of the accreditation of the service provider and the registration of the trainers by the CETA shall be submitted to the Employer's Agent. Such accreditation and registration shall be current and valid, and the proof submitted shall include the NQF levels and unit standards for which each trainer is accredited.

3.3 Skills analysis and selection of targeted EPWP participants

Studying for any learnership requires minimum literacy and numeracy competencies as defined by SAQA. The actual literacy and numeracy levels of the persons employed on the Site shall provide a basis to guide the Contractor and the training provider on how to conduct the selection process.

The Contractor shall therefore conduct a skills analysis of the local labour and Targeted Enterprises employed, in order to determine the formal education qualifications of each employee.

The Contractor, in conjunction with the training provider, shall then identify those persons that display the potential to benefit from such structured entrepreneurial and construction skills training as may be provided for in the contract, and shall make recommendations in this regard to the Employer's Agent.

The final candidates selected for such training shall be decided between the Contractor and the Employer's Agent (or by the Project Management Team (PMT) in the case of training for Targeted Enterprises in terms of Part G: Small Contractor Development, where applicable).

3.4 Structured training programmes

The Contractor, supported by the training provider, shall plan then implement structured training programmes for generic, entrepreneurial and construction skills training.

Training courses shall commence within four months of the Contractor taking possession of the Site, and shall be completed before the Due Completion Date.

All training shall take place within normal working hours, or as otherwise agreed with the learners.

The training provider shall design, compile and deliver the structured training programmes, based on the information obtained from the skills analysis.

The structured training programmes designed by the training provider for the generic skills training shall comprise relevant general courses such as basic hygiene and HIV/AIDS awareness, first aid, road safety, managing personal finance, and other courses that would be useful to workers in the road construction industry or as life skills generally.

The structured training programmes designed by the training provider for the entrepreneurial skills training shall comprise unit standards that contribute towards one or more of the following full learnership qualifications, as appropriate taking into consideration the skills analysis information for the selected candidates (details of the learnership qualifications and the applicable unit standards may be found on the website www.saqa.org.za):

ENTREPRENEURIAL SKILLS TRAINING				
Qualification title	**SAQA qualification ID**	**NQF level**	**Minimum credits**	**Purpose of qualification**
National Certificate: Supervision of Construction Processes	49053	Level 4	176	Learners found competent against this qualification will be able to execute the supervision of construction processes, with specialisation in a specific context

The structured training programmes designed by the training provider for the construction skills training shall comprise unit standards that contribute towards one or more of the following full learnership qualifications, as appropriate taking into consideration the skills analysis information for the selected candidates (details of the learnership qualifications and the applicable unit standards may be found on the website www.saqa.org.za):

CONSTRUCTION SKILLS TRAINING				
Qualification title	**SAQA qualification ID**	**NQF level**	**Minimum credits**	**Purpose of qualification**
National Certificate: Supervision of Construction Processes	49053	Level 4	176	Learners found competent against this qualification will be able to execute the supervision of construction processes, with specialisation in a specific context
National Certificate: Construction: Roadworks	24173	Level 3	155	This qualification is for persons who work or intend to work within a construction context on a site, and who seek recognition for essential skills in construction operations in roadworks.
National Certificate: Construction: Roadworks	24133	Level 2	120	This qualification is for persons who work or intend to work within a construction context on a site, and who seek recognition for essential skills in construction operations in roadworks.
National Certificate: Occupational Health, Safety and Environment	74269	Level 2	120	This qualification is to equip learners working in any type of workplace with a broad understanding and knowledge of Occupational Health, Safety and Environmental (HSE) concepts and practices with sufficient detail to enable them to function in a safe and healthy way and to deal with health and safety problems and issues.

The Contractor's proposed training programmes shall be subject to the approval of the Employer's Agent, and the Contractor shall, if so instructed by the Employer's Agent, alter or amend the programmes and the course content to meet any additional needs identified.

The Contractor shall be responsible for everything necessary for the delivery of the training programmes, including:

(a) the provision of the trainers;
(b) the provision of a suitable secure venue complete with adequate furniture, lighting, air conditioning, power and ablution facilities;
(c) the provision of all necessary stationery, consumables and study materials;
(d) the transportation of the learners to and from the training facility;
(e) the payment of wages to all learners during the classroom training at a rate equal to the minimum wage rate as set on an annual basis in the Ministerial Determination for the Expanded Public Works Programme;
(f) the provision of any relevant Personal Protective Equipment (PPE) required for the training; and
(g) additional supervision of the learners during the practical learning stage of the training carried out by constructing relevant elements of the Works (wages for the learners during this stage of the training will be paid through the rates tendered for the relevant scheduled work items for those elements).

At the successful completion of each course, the Contractor's training provider shall, as proof of attendance and completion, issue each learner with a certificate indicating the course content.

The training provider shall also ensure that each unit standard contributing towards a full learnership qualification and successfully completed by the learner is entered onto the national database.

The Contractor shall keep comprehensive records of the training given to each learner and the certificates issued, and shall provide copies of such records to the Employer's Agent when required.

The Contractor shall also complete and submit to the Employer's Agent each month, in a format acceptable to the Employer (using the EPWP Data Collection Tool template), a return detailing the training provided, both for the month and cumulatively for the contract.

3.5 In-service training

The Contractor shall, from the commencement of the contract, implement an in-service training programme in which the various skills required for the execution and completion of the Works are imparted to the EPWP participants engaged thereon.

Throughout the duration of the contract, the EPWP participants shall be trained progressively through the various stages of each particular type of work in which they are engaged, and their work shall be supervised and monitored and their methods corrected where necessary.

The in-service training programme shall be submitted with the initial Works programme. The Contractor shall record the progress in relation to this programme on a monthly basis, and this progress report shall be incorporated in the monthly site meeting minutes and the payment certificate.

The Contractor shall provide sufficient skilled and competent trainers to train all EPWP participants engaged on the contract in the various skills required to enable them to carry out the required construction activities.

The in-service training of EPWP participants shall take place before commencement of the relevant construction activity, and the Contractor shall take into account in his programme the lead time required for such training. All in-service training shall be deemed to be an element of the relevant construction activity.

All formal in-service training shall be documented in terms of the EPWP Data Collection Tool template, and shall be accompanied by an attendance register of the EPWP participants on the applicable days.

All EPWP participants shall be remunerated at their agreed wage rate in respect of the time spent undergoing in-service training. The cost of the Contractor's in-service training obligations shall be deemed to be covered by the sums and rates tendered for items B13.01(a), (b) and (c) in the schedule of quantities.

On termination of their employment, the Contractor shall provide each EPWP participant engaged on the contract with a certificate of service on which the following information shall be recorded:

- the name of the Contractor;
- the name of the project / contract;
- the name of the employee;
- the nature of the work satisfactorily executed by the EPWP participant and the time spent thereon;
- the nature and extent of training provided to the EPWP participant; and
- the dates of service.

3.6 Training venue facility

The training venue facility to be provided by the Contractor shall be constructed, furnished and fully serviced for the duration of the contract in accordance with section 1400 of the COLTO standard specifications.

In order to minimise the cost of transporting the learners for training, the facility shall be located in secure premises on the Site, or in close proximity thereto.

This facility shall be used to deliver all training.

The facility shall accommodate a class of up to 25 learners and shall comprise the following:

(a)	Lecture room (interior area)	=	48 m^2
(b)	Ablutions (male)	=	6 m^2
(c)	Ablutions (female)	=	6 m^2
(d)	Chairs for learners (individual chairs, with backs)	=	25 off
(e)	Desk area for 25 learners (500 mm width)	=	12,5 m^2
(f)	Chairs for trainers and management (individual chairs, with backs)	=	5 off
(g)	Table area for trainers and management	=	3 m^2
(h)	220/250 volt power points	=	6 off
(i)	Double 80 watt fluorescent light fittings complete with ballast and tubes	=	6 off
(j)	Single incandescent light fittings complete with 100 watt globes	=	4 off
(k)	Wash hand basins complete with taps and drains	=	4 off
(l)	Fire extinguishers, 9,0 kg, all purpose dry powder type, complete, mounted on wall with brackets	=	2 off
(m)	Air conditioning units with 2,2 kW minimum capacity, mounted and with own power connection	=	4 off
(n)	Voltage stabilizers	=	2 off
(o)	Floodlights complete with poles and 500 Watt minimum globes and controlled by photocells	=	2 off
(p)	White boards (3 m x 1,5 m)	=	1 off
(q)	Venetian blinds	=	12 m^2

3.7 Construction skills training

The focus of training provided on the contract should be to support the development of the Targeted Enterprise. Construction skills training will be approved by the PMT only when appropriate.

The Targeted Enterprise, their workforce and hired labour that show initiative will be entitled to receive structured training that will improve on-task skills necessary for the execution and successful completion of the works. The Contractor, in conjunction with the Employer's Agent, shall monitor the progress of the hired labour and each Targeted Enterprise closely and shall identify those who, in their collective opinion, will benefit from structured construction skills training as may be provided for in the contract, and where required by the Employer's Agent shall make recommendations in this regard. The final list of candidates shall be decided between the Contractor and the Employer's Agent, and those selected shall receive formal construction skills training in a programmed and progressive manner throughout the duration of the contract.

The training programme shall offer complete courses that could comprise some or all of the following modules:

(i) Use and maintenance of hand tools;
(ii) Operation of equipment;
(iii) Manufacture and installation of minor precast concrete units;
(iv) Erect, dismantle and maintain formwork;

(v) Basic concrete skills;
(vi) Excavation, backfill and compaction;
(vii) Bricklaying;
(viii) Erosion protection using stone pitching, gabions or renos.

The Contractor shall be responsible for the provision of everything necessary for the delivery of the various training workshops and modules including:

(i) Provision of a suitable fully serviced training venue facility;
(ii) Procurement of suitable accredited trainers;
(iii) Provision, in conjunction with the accredited trainers, of all the necessary training materials, including stationery and study materials; and
(iv) transportation of the learners to and from the training venue facility (it is therefore in the Contractor's interest that the training venue facility be provided on the site in order to reduce these transportation costs).

In order to avoid duplication of training programmes and training facilities, all structured training, including the training described in this section: Small Contractor Development, shall be measured and paid for in terms of the pay items provided for training in Requirements of the Expanded Public Works Programme (EPWP).

4. COMMUNITY LIAISON

(a) Project Liaison Committee

The process of implementing infrastructure projects will be undertaken by means of structured engagement between those responsible for the delivery of the project and the community.

A Project Liaison Committee (PLC) is a vital means of communication between the parties involved with the project. A PLC may be formed if the project is such that a specific community can be identified.

The PLC comprises representatives of the employer, the engineer and formal structures within the community. The contractor shall make use of these communication channels, and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PLC, and this representative shall also attend the monthly PLC meetings when so requested.

The PLC 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.

The PLC deals with local labour on the project, and is tasked with:

- assisting with community liaison and the resolution of community disputes;
- devising fair and transparent procedures that will assist the contractor in the engagement of labour;
- advising on and monitoring labour issues; and
- assisting in the resolution of labour disputes.

All labour recruitment, employment and associated risks shall remain the sole responsibility of the contractor.

4.1 Community Liaison Officer (CLO)

The contractor, after consultation with the Project Liaison Committee (PLC), shall appoint a competent local person as a Community Liaison Officer (CLO). The contractor shall appoint the CLO as part of his site personnel, and shall direct all his liaison efforts with the local community through the appointed CLO.

The period of employment and the remuneration of the CLO shall be determined jointly by the contractor, the engineer and the employer.

The CLO shall:

(i) represent the community and assist the contractor, the engineer and the employer with communication between them and the community;

(ii) work an 8-hour day with a total of 40 hours worked per week, and shall be present on site each day except when performing off-site community liaison activities;

(iii) communicate daily with the contractor on labour related issues such as numbers and skill;

(iv) assist in the identification and screening of local labourers from the community in accordance with the contractor's requirements;

(v) inform local labour of their conditions of employment, including their period of employment;

(vi) attend disciplinary proceedings involving local labour, and ensure that hearings are fair and reasonable;

(vii) attend all meetings at which the community and/or local labour are present or are required to be represented;

(viii) attend monthly site meetings to report on community and local labour matters;

(ix) keep a daily written record of interviews and community liaison;

(x) submit monthly returns regarding community liaison; and

(xi) carry out all such other duties as agreed upon between all parties concerned.

A new pay item is included in section 1200 of the schedule of quantities relating to the payment of the CLO on a provisional sum basis. Payment under this item shall be made only for the period for which the duties of the CLO are required, and not necessarily for the full duration of the contract.

5. COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993

All labour employed on the site shall be covered by the Compensation for Occupational Injuries and Diseases Act (COIDA), 1993, as amended. The Contractor shall pay in full, including the payment of the necessary levies, such amounts as are due in terms of the Act. These amounts shall not be included in the wage rates and shall be payments allowed for by the contractor in addition to the wages paid to labour. The manner in which compensation in terms of this Act shall be handled shall be resolved by the Contractor at the commencement of the contract.

6. LABOUR

A Project Liaison Committee has been established and is a vital means of communication between all parties involved with the project. The composition of the PLC comprises representatives of the Employer, the Employer's Agent and formal structures within the community.

The Contractor shall make use of these communication channels, and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PLC, and this representative will be also required to attend the monthly PLC meetings.

It is mandatory that the Contractor shall interact with the community via proactive project liaison and project participation by its leaders and constituted organisations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

Local labour is to be used and the employment of such labour is to be done in conjunction with the PLC. The PLC has formed a Labour Committee who shall assist the Contractor with the recruitment of local labourers to ensure an equal distribution of people employed between the various Amakosi in the area.

6.1 Labour-intensive construction methods

Labour-intensive construction shall mean the economically efficient employment of as great a portion of local labour as is technically feasible to produce a standard of construction as demanded by the specifications with completion by the Due Completion Date, where local labour is the primary resource, supported by plant for activities that cannot be carried out feasibly by labour only.

Labour-intensive construction activities are to be planned as task-based work as a general rule. A task means a fixed quantity of work, to be performed to a clearly defined quality. Task-based work means work in which a worker is paid a fixed rate for performing a task, which is clearly defined in terms of quantity and quality. Typically a particular task can be completed within a working day.

Appropriate portions of the Works included in the Contract shall be carried out using labour-intensive construction methods.

Except where the use of plant is essential in order, in the opinion of the Employer's Agent, to meet the specified requirements by the Due Completion Date, or where the use of plant is essential as a result of occupational health and safety considerations, the Contractor shall use only hand tools and equipment in the construction of those portions of the Works that are required in terms of these Project Specifications to be constructed using labour-intensive construction methods.

Such portions of the Works shall be constructed utilizing only the local labour of the Contractor and/or the local labour of subcontractors, supplemented by the Contractor's key personnel to the extent necessary and unavoidable, unless otherwise instructed by the Employer's Agent and in accordance with the further provisions of the relevant sections of Part B of the Project Specifications.

Subject to considerations of occupational health and safety, and subject to the nature of the in situ materials being such that they can be excavated efficiently by hand, the portions of the Works to be carried out under supervision using labour-intensive construction methods, designated as LI items in the bill of quantities, include, but are not limited to, the following:

- Erection of the contractor's and engineer's site establishment facilities;
- Provision of domestic services at the site establishment facilities;
- Provision of flagmen and labour for erecting traffic accommodation facilities;
- Clearing of the Site;
- Excavation for structures and open drains up to 1,5 m deep where the depth of the water table permits such excavation to be carried out safely, and the subsequent backfilling thereof;
- Bedding, selected fill, backfilling and compaction of all trenches for prefabricated culverts irrespective of depth, but assisted by mechanical compaction equipment in order to achieve the specified densities;
- Transportation and spoiling of all trench materials, where the disposal site is located within 20 metres of the source;
- Mixing and placing of concrete for valve chambers, scour valve chambers, air valve chambers and anchor thrust blocks;
- Construction of all brickwork required;
- Erection of falsework and formwork;
- Fixing of reinforcement;
- Spreading of offloaded earthworks materials to the extent scheduled;
- Excavation for and construction of stone pitching, and subsequent backfilling;
- Excavation for and construction of gabion boxes and mattresses, and subsequent backfilling;
- Dismantling / erection of fences;
- Spreading of topsoil;
- Planting of grass cuttings, grass sodding and hand sowing of grass seeds; and
- Cleaning and tidying up of the Site.

In respect of those portions of the Works which are not listed above, the construction methods adopted and the plant utilized shall be at the discretion of the Contractor, provided always that the construction methods adopted and the plant utilized 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.

7. MATERIAL SOURCES, SPOIL AND STOCKPILE AREAS

Where possible, the contractor shall source material from within 0.1km.

Expanded Public Works Programme:

PPE BRANDING

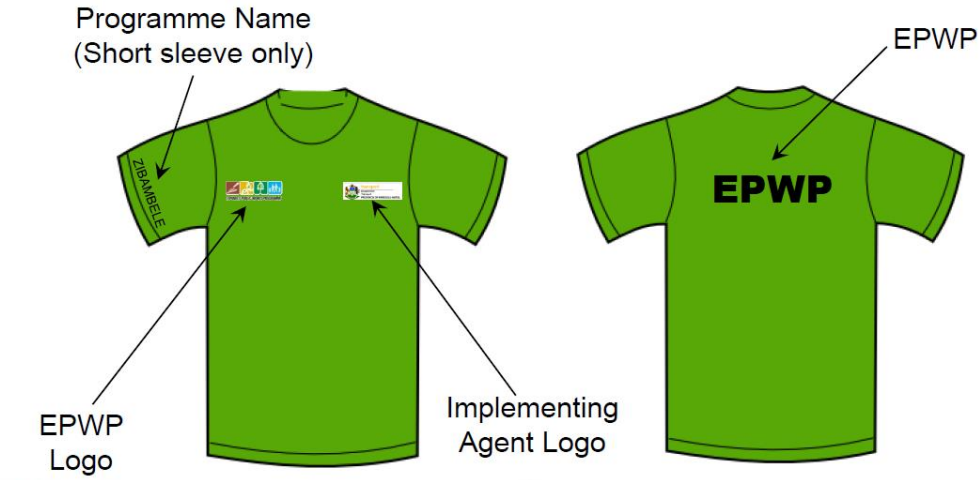
For EPWP Projects

transport
Department:
Transport
PROVINCE OF KWAZULU-NATAL

EXPANDED PUBLIC WORKS PROGRAMME



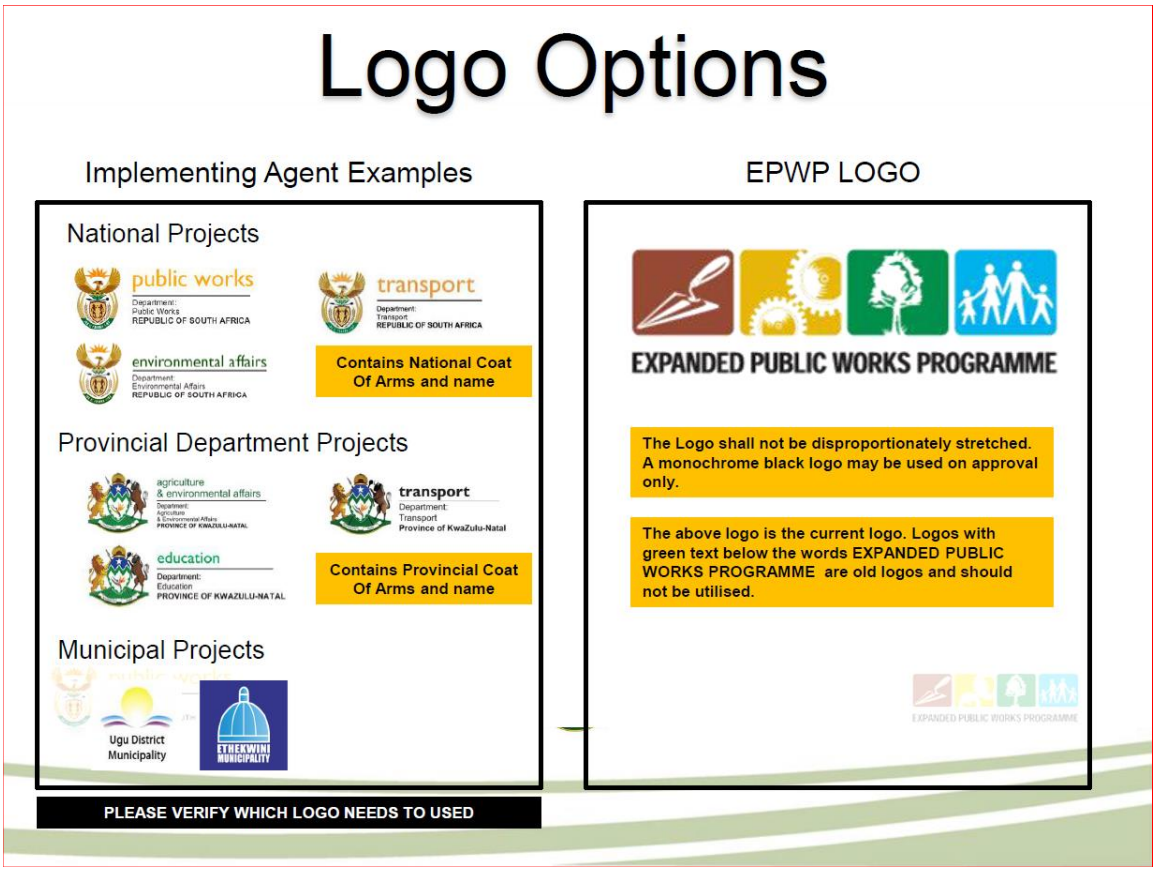
T-Shirt/Overall/Safety Vest Branding



public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

EXPANDED PUBLIC WORKS PROGRAMME

Logo Options

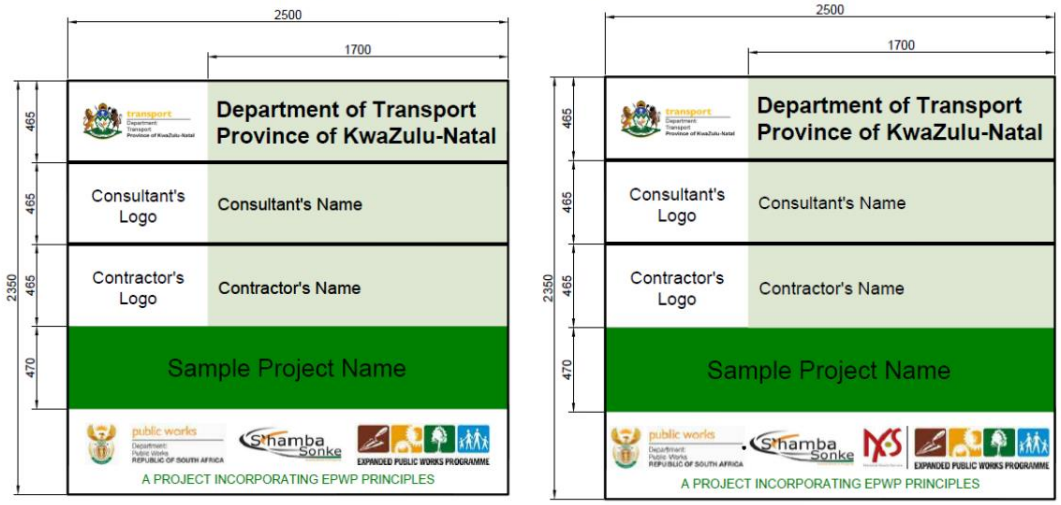


Printing on PPE

PPE (Overalls) shall be Pantone Green with/without reflective tape and shall be branded as follows:

- Implementer's Logo (printed or embroidered) on the left front pocket location ie over the heart position. (full colour)
- EPWP logo on the right front pocket (printed or embroidered) location (full colour)
- The letters EPWP on the back of the PPE in BLACK
- The program name eg Vuk'uphile is to be printed on the right sleeve of short sleeved apparel and need not be placed on long sleeved apparel.
- Where required, lime green safety vests are to be branded with similar specification above. In this instance the Overalls may not necessarily be branded provided that the use of high visibility vests is mandatory.
- All artwork and PPE samples shall be approved and signed off by the consultant prior to printing/embroidering.

Project Signboard



For further information contact:

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033-355-8023

public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

transport
Department:
Transport
PROVINCE OF KWAZULU-NATAL

EXPANDED PUBLIC WORKS PROGRAMME

6

PRO FORMA EPWP CONTRACT OF EMPLOYMENT

Contractor's Logo

EXPANDED PUBLIC WORKS PROGRAMME

This contract must be read in conjunction with the standard terms and conditions of employment on EPWP attached herein.

EPWP CONTRACT OF EMPLOYMENT between

Employer Details

Name	Click or tap here to enter text.	**Address**	Click or tap here to enter text.
Telephone	Click or tap here to enter text.		
Email	Click or tap here to enter text.		
Contact	Click or tap here to enter text.		

And

Employee Details

Name	Click or tap here to enter text.	Surname	Click or tap here to enter text.
ID:	Click or tap here to enter text.	Cell	Click or tap here to enter text.
Sex (M/F)	Male ☐ Female ☐	Disability	Yes ☐ No ☐
Primary Language	Click or tap here to enter text.	Physical Address	Click or tap here to enter text.
Other Languages	Click or tap here to enter text.		
Highest Education Level Achieved	Click or tap here to enter text.	Local Municipality	Click or tap here to enter text.
Other qualifications	Click or tap here to enter text.	Ward	Click or tap here to enter text.
Grant Received (Y/N)	Yes ☐ No ☐	Grant type:	

Employment Details

Name of project:	Click or tap here to enter text.		
Job Title:	Click or tap here to enter text.		
Duties:	Click or tap here to enter text.		
Contract Start Date	Click or tap here to enter text.	Contract Finish Date	Click or tap here to enter text.
The wage per task/day is:	R Click or tap here to enter text. / Hour/Day/task *(Specifier to select correct rate)*		

Special Conditions

You must be aware that this employment contract is a limited term contract and not a permanent job. This employment contract may be terminated for any one of the following reasons: a) The contractor does not get additional contracts from the EPWP. b) Funding for the programme in your area comes to an end. c) Underperformance: first offence – final written warning. Second offence – dismissal.	Payment a) You will be paid a fixed amount stipulated above for completing a fixed amount of work. b) The amount of work required for the agreed rate of pay will vary from task to task. You will be informed at the beginning of each task or group of tasks how much work you are expected to complete per day. c) You will only be paid for work completed. d) Payment during classroom training shall be R /day
Personal Protective Clothing will be supplied to the employee by the employer depending on the work to be performed, and will remain the property of the employee provided that the employee has worked for at least 3 months.	

Acceptance

Employer Name:	Employer Signature:	Employee Name:	Employee Signature:
Witness 1 Name:	Witness 1 Signature:	Witness 2 Name:	Witness 2 Signature:

APPENDIX E – Conditions of Service

1. Introduction

1.1. 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.

1.2. 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 an EPWP;

c) "worker" means any person working in an elementary occupation on an 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.

2. Terms of Work

2.1. Workers on an EPWP are employed on a temporary basis.

2.2. A worker may NOT be employed for longer than 24 months in any five-year cycle on an EPWP.

2.3. Employment on an EPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3. Normal Hours of Work

3.1. An employer may not set tasks or hours of work that require a worker to work–

a) more than forty hours in any week

i. on more than five days in any week; and

ii. for more than eight hours on any day.

3.2. 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.

3.3. 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.

4. Meal Breaks

4.1. A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

4.2. An employer and worker may agree on longer meal breaks.

4.3. 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.

4.4. 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.

5. Special Conditions for Security Guards

5.1. A security guard may work up to 55 hours per week and up to eleven hours per day.

5.2. 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.

6. Daily Rest Period

Every worker is entitled to a daily rest period of at least eight 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.

7. Weekly Rest Period

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").

8. Work on Sundays and Public Holidays

8.1. A worker may only work on a Sunday or public holiday to perform emergency or security work.

8.2. Work on Sundays is paid at the ordinary rate of pay.

8.3. A task-rated worker who works on a public holiday must be paid –

a) the worker's daily task rate, if the worker works for less than four hours;

b) double the worker's daily task rate, if the worker works for more than four hours.

8.4. A time-rated worker who works on a public holiday must be paid –

a) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;

b) double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

9. Sick Leave

9.1. Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.

9.2. 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.

9.3. A worker may accumulate a maximum of twelve days' sick leave in a year.

9.4. Accumulated sick-leave may not be transferred from one contract to another contract.

9.5. An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

9.6. An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

9.7. An employer must pay a worker sick pay on the worker's usual payday.

9.8. 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 –

a) absent from work for more than two consecutive days; or

b) absent from work on more than two occasions in any eight-week period.

9.9. 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.

9.10. 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.

Employer	Employee

10. Maternity Leave

10.1. A worker may take up to four consecutive months' unpaid maternity leave.
10.2. A worker is not entitled to any payment or employment-related benefits during maternity leave.
10.3. A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
10.4. 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.
10.5. 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.
10.6. 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.
10.7. A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the EPWP on which she was employed has ended.

11. Family responsibility leave

11.1. 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 -
a) when the employee's child is born;
b) when the employee's child is sick;
c) in the event of a death of –
i. the employee's spouse or life partner;
ii. the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

12. Statement of Conditions

12.1. 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.
12.2. An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
12.3. An employer must supply each worker with a copy of these conditions of employment.

13. Keeping Records

13.1. Every employer must keep a written record of at least the following –
a) the worker's name and position;
b) in the case of a task-rated worker, the number of tasks completed by the worker;
c) in the case of a time-rated worker, the time worked by the worker;
d) payments made to each worker.
13.2. The employer must keep this record for a period of at least three years after the completion of the EPWP.

14. Payment

14.1. An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
14.2. A task-rated worker will only be paid for tasks that have been completed.
14.3. 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.
14.4. A time-rated worker will be paid at the end of each month.
14.5. Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
14.6. 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.
14.7. 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.
14.8. 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
14.9. 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.

15. Deductions

15.1. An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
15.2. An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
15.3. 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 agreement law, court order or arbitration award concerned.
15.4. 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.

16. Health and Safety

16.1. Employers must take all reasonable steps to ensure that the working environment is healthy and safe.
16.2. 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.

17. Compensation for Injuries and Diseases

Employer	Employee

17.1. 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.
17.2. A worker must report any work-related injury or occupational disease to their employer or manager.
17.3. The employer must report the accident or disease to the Compensation Commissioner.
17.4. 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.

18. Termination

18.1. The employer may terminate the employment of a worker for good cause after following a fair procedure.
18.2. A worker will not receive severance pay on termination.
18.3. 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.
18.4. 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. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
18.5. 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 for the balance of the 24-month period.

19. Certificate of Service

19.1. 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. Either party can terminate this agreement with four weeks written notice. In the case where an employee is illiterate notice may be given by that employee verbally.

Employer	Employee

EPWP DATA COLLECTION TOOL TEMPLATE
(PRO FORMAS OF MICROSOFT EXCEL SPREADSHEETS)

EPWP REGISTRATION FORM		
Field requested	**Description if needed**	**Please complete the sections in white**
Project Details		
Profile ID	*Generated by the system*	
Project Name	*The name of the project*	
Project Reference Number	*Contract number*	
Project description	*Full description of what is happening in the project (as per the appointment letter) and the **community benefiting from the project***	
Duration		
Project Start Date	*Planned Start date of the particular contract*	
Project End Date	*Planned End date of the particular contract*	
Estimated Budget	*Overall Contract budget (excluding professional fees) for Current Financial Year*	
Project Location		
Province	*In which province is the project implemented?*	**KZN**
District Municipality	*Under which District Municipality does this project falls?*	
Local Municipality	*Under which Local Municipality does this project falls?*	
Latitude (in decimal format)	*Is generated by the system*	
Longitude (in decimal format)	*Is generated by the system*	
Project Location per site		
Locality name	*Where exactly is the project implemented? (Ward name)*	
Subplace	*Town / Village*	
Ward	*The project site is located in which ward?*	
Government facility	*Landmark near the project (Post office/school/clinic/library)*	
Spatial Data Type	*Geopoint (structure)/ Line (road)/ Polygon(area)*	
Site physical address	*Physical address of the site office*	
Public Body Details		
Public body sphere	*In which sphere is the project implemented? (National, Provincial or Municipal)*	Provincial
Reporting public body that is the project owner (and will report on the project)	*Which Institution or Department that owns / approved this project (Education, Health, City of Tshwane Metro etc.)*	KZN Department of Transport
Department in the Public body that is responsible for the project	*Which department /unit is responsible for this project? (e.g. Roads & storm water, Education, Community safety etc.)*	KZN Department of Transport
Implementing public body type	*In which sphere is this project implemented? (Metro,Distr,Mun, National or Provincial Dept.)*	Provincial
Public body that will implement the project	*Which institution that implements the project?*	KZN Department of Transport
Project Implementation		
Is this the project on the municipal IDP	*Yes / No*	N/A
IDP reference number allocated to the project	*The number reflected in your Municipal IDP document*	N/A
EPWP Details		
EPWP Sector	*The project is implemented in which sector? (Infrastructure, Environment & culture, Non-state or Social)*	Infrastructure
EPWP Programme	*The project is implemented under which programme?*	
EPWP Sub Programme	*The project is implemented under which sub-programme?*	

EPWP BUSINESS FORM		
Field requested	**Description if needed**	**Please complete the sections in white**
Project Details		
Profile ID	*Generated by the system*	
Project Name	*The name of the project*	
Project Reference Number	*Contract number*	
Project description	*Full description of what is happening in the project (as per the appointment letter) and the community benefiting from the project*	
Duration		
Project Start Date		
Project End Date		
Estimated Budget	*Project Budget*	
Project Location		
Province		KZN
District Municipality	*Under which District Municipality does this projects falls*	
Local Municipality	*Under which Local Municipality does this projects falls*	
Latitude (in decimal format)	*GPS coordinates*	
Longitude (in decimal format)		
Public Body Details		
Public body sphere	*Such as Municipal or Provincial*	Provincial
Reporting public body that is the project owner (and will report on the project)	*Which Department approved the project in (education, Health etc.)*	KZN Department of Transport
Department / Unit in the Public body that is responsible for the project	*Which Department budgeted for the project e.g. Education, Health Directorate*	KZN Department of Transport
Implementing public body type	*Example(Local Municipality, Distr. Mun or Provincial Dept.*	Provincial
Public body that will implement the project	*Infrastructure, Environment or Social*	KZN Department of Transport
Is this project on the Municipal IDP	*Municipal projects*	N/A
IDP reference number allocated to the project		N/A

EPWP Details		
EPWP Sector	*The project is implemented in which sector? (Infrastructure, Environment & culture, Non-state or Social)*	Infrastructure
EPWP programme	*The project is implemented under which programme?*	
EPWP Sub Programme	*The project is implemented under which sub-programme?*	
Budget Amount-(Allocations for the project duration)		
Funding Body	*Which Dept. is funding the project*	KZN Department of Transport
Funding Year	*Financial year/s for the project*	
Total Budget Amount	*(Exclude Professional Fees)*	
Incentive Grant(e.g. landcare / EPWP grant)	*Grant funding received*	
Total wages paid for the duration of the projects	*What amount will be spent on wages during the duration of the project*	
Wage Rate	*Daily Wage rate to be paid during productive work*	
Stipend Rate	*Daily wage rate to be paid during training*	
UIF	*The amount being paid to UIF (if applicable)*	
COIDA	*The amount being paid to COIDA(if applicable)*	
Training	*What amount will be spent on training*	
Administration	*The Administration costs*	
Equipment and materials	*Budget for Materials and Equipment*	
Other	*If other where chosen describe the other Such as Professional fees)*	
Describe other		
Project Outputs and Training		
Planned Primary Output	*eg walkways, gabions, kerb * channel, km of road constructed*	
Description of Planned Primary Output	*Describe the project output (end product and not the milestone) (e.g. kms of tar road constructed) Start with the unit of measure such as number of, kms, ha, sqms etc*	
Unit of measure of primary output	*Eg. m, m², m³, km, no, ha etc*	
Planned primary output quantity	*Specify the quanity of output planned*	
Number of persons to be trained	*How many persons are targeted for on job training*	

Contact person		
Title	*Person responsible for the Project in the Public Body (Project Manager)*	
Initials		
First Name		
Surname		
Email		
Tel (Office)		
Fax Number		
Cell Number		
Physical Address 1		
Physical Address 2		
Physical Address 3		
Physical Address 4		
Postal Address 1		
Postal Address 2		
Postal Address 3		
Postal Address 4		
Position of person		

Participant's personal details	No																										
	First Name as per ID document																										
	Initials																										
	Surname																										
	ID number																										
	Disability (Y/N)																										
	Education Level																										
	Start Date																										
	End Date																										
	Language ID																										
	Address																										
	Cell Number																										
Grants	Government Grant (Y/N) and Type																										
Experience/ Literacy	Other Language 1																										
	Other Language 2																										
Location Details	District Municipality																										
	Local Municipality																										
Nation-ality	Nationality (RSA/ Non-RSA)																										
Household Details	Number of people in Household																										
	Number of Dependants in Household																										
	Number of Children attending school																										
Quality Check	Picture Clear																										
	Text clear																										
	Certification within 3 months of employment																										
	Clear certification Stamp																										
	Commissioner details clear																										

Participant Training Data															
Course ID	Course Name	Code	Training category (Accredited / non-accredited)	Type of training course (Unit standard, Trade Titles, Short courses, Public body specific)	Start	End (for the entire training duration)	Number of Trainees	Number of Days	Cost (for the entire training course)	Status of training (Not started, In progress, Completed)	Training Provider Name	Training Provider Contact Number	Training Provider Address

EPWP Monthly Progress Form		
Field requested	**Description if needed**	**Please complete the sections in white**
Project Details		
Profile ID	*full descripton of what is happening in the project (as per the appointment letter) and the community benefiting from the project*	
Project Name	*The name of the project*	
Project Reference Number	*Contract number*	
Project description	*Full descripton of what is happening in the project (as per the appointment letter) and the community benefiting from the project*	
Month		
Reporting Month		April
Budget Expenditure		
Cumulative Expenditure Amount	*What is the Overall amount spend on this project?*	
Current Expenditure Amount	*What is the amount spend including all grants for this month?*	
Wages	*How much paid on wages for this month only?*	
UIF	*How much paid on UIF for this month only?*	
COIDA	*How much paid on COIDA for this month only?*	
Stipends for training	*Amount paid to participants whilst on training (this month only)*	
Amount spent on service providers for training	*How much paid to service providers for training for this month only?*	
Training	*Total Cost of training for this month? (number captured on ERS)*	
Administration	*How much paid on administration for this month only?*	
Equipment and materials	*How much paid on equipment and materials for this month only?*	
Other	*How much paid on other?*	
Describe other	*Be specific e.g. Consulting fees, Transport etc.*	
Project output description	*Describe the project output (end product and not the milestone) (e.g. kms of tar road constructed) Start with the unit of measure such as number of, kms, ha, sqms etc*	
Unit of measure of primary output	*Eg. m, m², m³, km, no, ha etc*	
Cumulative primary output achieved	*Since the onset of the project*	
Quantity Achieved	*enter numeric output for this month only*	
Percentage achieved	*How much work done / achieved in percentages?*	
EPWP Branding		
Branding compliant	*Yes / No*	
Date that the branding was provided	*When was the project branded?*	
Has a photo of project branding been provided?	*Yes / No*	
First name of Official Who Branded Project	*Official Name*	
Surname of Official Who Branded Project	*Official Surname*	
Phone number of official who erected branding for the project	*Official contact number*	
Give the public body reference and name, and organisational details of the person that provided branding.	*Public body details (reference & name)*	