



KOUGA MUNICIPALITY

HUMANSDORP GROUNDWATER SUPPLY

CONTRACT NO 155/2021

JULY 2021

SERVICE PROVIDER		
TELEPHONE / FACSIMILE		
CLOSING DATE	26 July 2021	

ISSUED BY:

Kouga Local Municipality

Physical Address:
33 Da Gama Road
Jeffreys Bay

Postal Address:
P O Box 21
Jeffrey Bay
6330

PREPARED BY:

Zutari (Pty) Ltd

Physical Address:
Cnr Heugh Road & 3rd Avenue
Walmer

Postal Address:
P O 5328
Walmer
6065

KOUGA LOCAL MUNICIPALITY

BID No.:155/2021

HUMANSDORP GROUNDWATER SUPPLY

GENERAL TENDER INFORMATION

TENDERS INVITED	:	9 July 2021
ESTIMATED CIDB CONTRACTOR GRADING	:	4CE or higher
CLARIFICATION MEETING	:	A compulsory virtual clarification meeting to be held on 16 July 2021 at 13h30
VENUE FOR SITE VISIT/CLARIFICATION MEETING	:	Virtual on-line clarification meeting
CLOSING DATE	:	26 July 2021
CLOSING TIME	:	12:00:00 PM / 12h00
CLOSING VENUE	:	Tender Box at the Municipal Office, Room 112 16 Woltemade Street (front) / 21 St. Croix Street (back), Jeffreys Bay
VALIDITY PERIOD OF TENDER	:	120 days
TENDER BOX	:	The Tender Documents (which includes the Form of Offer and Acceptance) completed in all respects, plus any additional supporting documentation required, must be submitted in a sealed envelope with the name and address of the tenderer, the tender No. and title and the closing date indicated on the envelope. The sealed envelope must be inserted into the appropriate official tender box before closing time. The onus remains with the tenderer to ensure that the tender is placed in the correct tender box.

KOUGA LOCAL MUNICIPALITY**BID No.: 155/2021****HUMANSDORP GROUNDWATER SUPPLY****PARTICULARS OF BIDDER**

Name of Bidder		
Contact Person:		
Postal Address		
Street Address		
Telephone Number	Code:	Number:
Cell phone Number		
Facsimile Number	Code:	Number:
E-Mail Address		
CSD Supplier Number (National Treasury)		
CIDB CRS Number		
Vat Registration Number		

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TENDER

PART 1 (OF 2): TENDERING PROCEDURES

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T1.1: TENDER NOTICE AND INVITATION TO TENDER

KOUGA LOCAL MUNICIPALITY (EC108)
DIRECTORATE: INFRASTRUCTURE AND ENGINEERING
NOTICE NO: 155/2021
HUMANSDORP GROUNDWATER SUPPLY

Suitably qualified, capable and experienced Contractors are hereby invited to submit tenders for the installation of bulk water supply infrastructure near Humansdorp.

Tenders

An electronic copy of the tender document will be available on E-Tender portal www.etender.gov.za or the municipal website www.kouga.gov.za as from Friday, 09 July 2021. After downloading the tender document from the website each prospective bidder, **MUST** email their contact details to tenders@kouga.gov.za and copied to jdutoit@kouga.gov.za.

A compulsory virtual clarification session will be arranged for those that have shown interest in bidding for this project on the **16 July 2021 @ 13h30**. A request to attend or join the virtual clarification session **MUST** be sent to tenders@kouga.gov.za and copied to jdutoit@kouga.gov.za before **the 15 July 2021**. **Any RSVP or show of interest, received after the 15 July 2021 will not be considered. If you did not RSVP by sending a request to attend or join the virtual clarification meeting before the due date, your bid will not be considered. (Detail of this is in the tender document)**

Please note:

- Telegraphic, telephonic, telex, facsimile, email or late tenders will not be accepted.
- This contract will be evaluated on the 80/20point scoring system.
- **The Guidelines for locally produced goods or locally manufactured goods with a stipulated minimum threshold will be applied (details in document).**
- **An estimated contractor CIDB Grading of 4CE or higher is required.**
- **A minimum functional assessment score of 70% will apply to this contract.**
- A valid SARS Tax compliance Status pin to be submitted.
- Prospective Service Providers must register on Kouga Municipality's Supplier database as per the registration requirements.
- The National Treasury Central Supplier Database Summary report must be submitted.
- In order to claim Preference points a valid originally or certified B-BBEE Status level Verification certificate or a Sworn Affidavit completed on the DTI format must be submitted to validate the claim.
- The Council reserves the right to accept any tender and, or part thereof, appoint more than one contractor, and does not bind itself to accept the lowest or any tender. The Council reserves the right to appoint any contractor.
- The validity period for submission must be 120 days from the closing date.
- Tenders that are deposited in the incorrect box or delivered to any other venue will not be considered.

Enquiries relating to this tender must be submitted in writing via e-mail to tenders@kouga.gov.za and copied to jdutoit@kouga.gov.za.

Completed documents in a sealed envelope endorsed "**NOTICE NO: 155/2021: "HUMANSDORP GROUNDWATER SUPPLY"**", must be placed in the Tender Box 21 St Croix Street (back entrance) or 16 Woltemade Street (front entrance), Jeffrey's Bay, Room 122 on or before **MONDAY, 26 JULY 2021 at 12:00.**

C. DU PLESSIS
MUNICIPAL MANAGER

P.O. Box 21
JEFFREYS BAY
6330

PART A

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF MUNICIPALITY/ MUNICIPAL ENTITY)					
BID NUMBER:	155/2021	CLOSING DATE:	26 July 2021	CLOSING TIME:	12h00
DESCRIPTION	HUMANSDORP GROUNDWATER SUPPLY				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					

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

KOUGA LOCAL MUNICIPALITY, 16 WOLTEMADE STREET, JEFFREYS BAY

SUPPLIER INFORMATION

NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT ☐ Yes ☐ No		

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

1. ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]	2. ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER PART B:3]
3. TOTAL NUMBER OF ITEMS OFFERED		4. TOTAL BID PRICE	R
5. SIGNATURE OF BIDDER		6. DATE	
7. CAPACITY UNDER WHICH THIS BID IS SIGNED			

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:**TECHNICAL INFORMATION MAY BE DIRECTED TO:**

DEPARTMENT	Supply Chain Management	CONTACT PERSON	Mr Jacques du Toit
CONTACT PERSON		TELEPHONE NUMBER	042-200-2200
TELEPHONE NUMBER	042-200-2200	FACSIMILE NUMBER	n/a
FACSIMILE NUMBER		E-MAIL ADDRESS	jdutoit@kouga.gov.za
E-MAIL ADDRESS	tenders@kouga.gov.za		

T1.2: TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in the CIDB Standard for Uniformity in Engineering and Construction Works Contracts as published in Board Notice 423 of 2019 of 08 August 2019 (see www.cidb.org.za).

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.

“Bid” should read “tender”, and vice versa, throughout the document – implying both words have the same meaning.

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

Clause Tender Data Number

F.1 General

F.1.1 Actions

The Employer is **KOUGA LOCAL MUNICIPALITY**.

F.1.2 Tender Documents

Add the following:

The following documents form part of this tender:

VOLUME 2 : The General Conditions of Contract for Construction Works (Third Edition) 2015 as published by the South African Institution of Civil Engineering. This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.

VOLUME 3: The SANS Standard Specifications for Civil Engineering Construction prepared by Standards South Africa (SANS 1200). These publications are obtainable, and tenderers must obtain copies at their own cost from Standards South Africa, Private Bag X191, PRETORIA, 0001.

Volumes 2 and 3 may also be inspected, by appointment, at the offices of the Employer during normal office hours.

The Tender Documents issued by the Employer comprise:

VOLUME 1: The Tender Document (this document), in which are bound:

THE TENDER

Part T1: Tendering Procedures

T1.1 Tender Notice and Invitation to Tender

T1.2 Tender Data

Part T2: Returnable documents

T2.1 List of Returnable Documents

T2.2 Returnable Schedules

THE CONTRACT

Part C1: Agreements and Contract Data

C1.1 Form of Offer and Acceptance

C1.2 Contract Data

C1.3 Form of Guarantee

C1.4 Health and Safety Agreement
C1.5 Disclosure Statement
C1.6 Adjudication Board Member Agreement

Part C2: Pricing data

C2.1 Pricing Instructions
C2.2 Bill of Quantities
C2.3 Summary Page for Bill of Quantities

Part C3: Scope of Work

C3.1 Description of the Works
C3.2 Engineering
C3.3 Procurement
C3.4 Construction
C3.5 Management

Part C4: Site Information

C4.1 Scope
C4.2 Subsoil conditions
C4.3 Finishing-off of the site

Annexure A: Health & Safety Specifications

Annexure B: Tender drawings

F.1.3 Interpretation

F.1.3.2 *Delete the clause and replace with the following:*
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.

F.1.4 Communication and Employer's Agent

Delete the first sentence of the clause and replace with the following:
Verbal or any other form of communication, from the Employer, its employees, agents or advisors during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer, unless communicated by the Employer in writing to suppliers by its Director: Supply Chain Management or his nominee.

The Employer's Agent, for the purposes of any communication between the Employer and Tenderer is:

Name	:	Zutari (Pty) Ltd
Represented By	:	Johan van der Mescht
Address	:	Lion Roars Office Park, Cnr Heugh Road/3 rd Avenue, Walmer, 6070
Telephone	:	(041) 503 3900 & 084 581 9964
Fax	:	(086) 600 4037
E-mail	:	joan.vandermescht@zutari.com

F.1.5 Cancellation and Re-Invitation of Tenders

*Delete the full stop at the end of F.1.5.1 c) and replace with, or
Add the following after F.1.5.1 c):*
d) there is a material irregularity in the tender process.

F.1.6.2 Competitive negotiation procedure

Add the following to F.1.6.2.1:
A competitive negotiation procedure will not be followed.

F.1.6.3 Proposal procedure using the two-stage system

Add the following between F.1.6.3 and F.1.6.3.1:
A two-stage system will not be followed.

Add the following after F.1.6.3.2.2

F.1.6.4 Objections, complaints, queries and disputes/ Appeals in terms of Section 62 of the Systems Act/ Access to court

F.1.6.4.1 Disputes, objections, complaints and queries

In terms of Regulations 49 and 50 of the Local Government: Municipal Finance Management Act, 56 of 2003 – Municipal Supply Chain Management Regulations (Board Notice 868 of 2005):

- a) Persons aggrieved by decisions or actions taken by the Kouga Local Municipality in the implementation of its supply chain management system, may lodge within fourteen (14) days of the decision or action, a written objection or complaint or query or dispute against the decision or action.

F.1.6.4.2 Appeals

- a) In terms of Section 62 of the Local Government: Municipal Systems Act, 32 of 2000 a person whose rights are affected by a decision taken by the Municipality, may appeal against that decision by giving written notice of the appeal and reasons to the Municipal Manager within 21 days of the date of the notification of the decision.
- b) An appeal must contain the following:
 - i) Must be in writing
 - ii) It must set out the reasons for the appeal
 - iii) It must state in which way the Appellant's rights were affected by the decision;
 - iv) It must state the remedy sought; and
 - v) It must be accompanied with a copy of the notification advising the person of the decision

F.1.6.4.3 Right to approach the courts and rights in terms of Promotion of Administrative Justice Act, 3 of 2000 and Promotion of Access to Information Act, 2 of 2000

The sub- clauses above do not influence any affected person's rights to approach the High Court at any time or its rights in terms of the Promotion of Administrative Justice Act and Promotion of Access to Information Act.

F.1.6.4.4 All requests referring to sub clauses F.1.6.4.1 and F.1.6.4.2 must be submitted in writing to:
The Municipal Manager, Kouga Local Municipality, PO Box 21, Jeffreys Bay, 6330.

F.1.6.4.5 All requests referring to clause F.1.6.4.2 3 regarding access to information or reasons must be submitted in writing to:
The Municipal Manager, Kouga Local Municipality, PO Box 21, Jeffreys Bay, 6330.

F.1.7 Kouga Local Municipality Supplier Database Registration

Tenderers are required to be registered on the Kouga Local Municipality's Supplier Database as a service provider. Tenderers must register as such upon being requested to do so in writing and within the period contained in such a request, failing which no orders can be raised or payments processed from the resulting contract. In the case of Joint Venture partnerships this requirement will apply individually to each party of the Joint Venture.

Tenderers who wish to register on the Kouga Local Municipality's Supplier Database may collect registration forms from the Supplier Management Unit located within the Supplier Management / Registration Office, 16 Woltemade Road, Jeffreys Bay.

F.1.8 National Treasury Web Based Central Supplier Database (CSD) Registration

Tenderers are required to be registered on the National Treasury Web Based Central Supplier Database (CSD) as a service provider. Tenderers must register as such upon being requested to do so in writing and within the period contained in such a request, failing which no orders can be raised or payments processed from the resulting contract. In the case of Joint Venture partnerships this requirement will apply individually to each party of the Joint Venture.

Tenderers who wish to register on the National Treasury Web Based Central Supplier Database (CSD) may do so via the web address <https://secure.csd.gov.za>.

It is each tenderer's responsibility to keep all the information on the National Treasury Web Based Central Supplier Database (CSD) updated.

F.2 Tenderer's obligations

F.2.1 Eligibility

*Delete the heading **Eligibility** and Replace with **Responsiveness Criteria***

F.2.1.1 *Delete the clause and replace with the following:*

Tenderers must submit a tender offer that complies in all aspects to the conditions as detailed in this document. Only those tenders that comply in all aspects with the tender conditions, specifications, pricing instructions and contract conditions will be declared responsive.

Add the following after F.2.1.2:

F.2.1.3 Only those tender submissions from which it can be established that a clear and unambiguous offer has been made to Employer, by whom the offer has been made and what the offer constitutes, will be declared responsive.

F.2.1.4 Only those tenders that satisfy the following criteria will be declared responsive:

F.2.1.4.1 Construction Industry Development Board (CIDB) Registration

Only those tenders submitted by tenderers who are registered, or capable of being registered, with an active status with the CIDB, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a CE class of construction work, will be declared responsive. Tenderers must obtain such active status upon being requested to do so in writing and within the period contained in such a request, failing which their tenders will be declared non-responsive.

Joint Ventures are eligible to submit tenders provided that:

- a) every member of the joint venture is registered with an active status with the CIDB;
- b) the lead partner has a contractor grading designation of not lower than one level below the required grading designation in the CE class of construction work; and
- c) the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 4CE class of construction work or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations.

For alpha-numerics associated with the contractor Grading Designations see Annex G attached.

F.2.1.4.2 Compliance with requirements of Kouga Local Municipality's SCM Policy and procedures

Only those tenders that are compliant with the requirements below will be declared responsive:

- a) Full name of entity submitting tender to be provided;
- b) Identification number or company or other registration number to be provided;
- c) Tax reference number to be provided;
- d) VAT registration number to be provided;
- e) A completed **Certificate of Authority for Partnerships/ Joint Ventures/ Consortiums** to be provided authorising the tender to be made and the signatory to sign the tender on the partnership /joint venture/consortium's behalf (applicable schedule to be completed);
- f) A copy of the partnership / joint venture / consortium agreement to be provided;
- g) A completed **Declaration of Interest – State Employees** to be provided and which does not indicate any non-compliance with the legal requirements relating to state employees (applicable schedule to be completed);
- h) A completed **Declaration – Conflict of Interest** and **Declaration of Bidder's past Supply Chain Management Practices** to be provided and which does not indicate any conflict or past practises that renders the tender non-responsive (applicable schedules to be completed);
- i) A completed **Certificate of Independent Bid Determination** to be provided and which does not indicate any non-compliance with the requirements of the schedule (applicable schedule to be completed);
- j) The tenderer (including any of its directors or members), has not been restricted in terms of abuse of the Supply Chain Management Policy;
- k) The tenderer's tax matters with SARS are in order;
- l) The tenderer is not an advisor or consultant contracted with the Employer;
- m) The tenderer is not a person, advisor, corporate entity or a director of such corporate entity, involved with the bid specification committee.

F.2.1.4.3 Minimum score for functionality compliance

In order to be considered for a contract in terms of this tender, tenderers must achieve the minimum score for functionality as stated below. Verifiable proof must be submitted in the applicable Returnable Schedule.

The description of the functionality criteria and the maximum possible score for each is shown in the table below. The score achieved for functionality will be the sum of the scores achieved, in the evaluation process, for the individual criteria.

CRITERIA	APPLICATION OF THE CRITERIA	WEIGHT/100
Company Experience Schedule 1H	Demonstrated experience of the tendering entity with respect to <u>comparable projects</u> by completing each row in the Returnable Schedule of work experience in full. 4 x completed projects > R2m 3 x completed projects > R2m 2 x completed projects > R2m 1 x completed projects > R2m	(Max 40 points) 40 points 30 points 20 points 10 points
Key Personnel Schedule P-1	Contracts Manager Built / Civil Environment Qualification: B Eng / BSc / B Tech National Diploma No Qualification (s) or CV attached Relevant Experience: 10+ years 6 – 10 years 3 – 5 years 0 - 2 years	(Max 10 points) 3 points 2 points 0 points 7 points 6 points 3 points 0 points
Key Personnel Schedule P-2	Construction Manager (Site Agent) Built / Civil Environment Qualification: B Eng / BSc / B Tech National Diploma No Qualification (s) or CV attached Relevant Experience: 10+ years 6 – 10 years 3 – 5 years 0 - 2 years	(Max 10 points) 3 points 2 points 0 points 7 points 6 points 2 points 0 points
Key Personnel Schedule P-3	General Foreman Relevant Experience: 10+ years 6 – 10 years 3 – 5 years 0 - 2 years	(Max 10 points) 10 points 8 points 5 points 0 points
Key Personnel Schedule P-4	OH&S Agent (SACPMP Registered – Proof required) Relevant Experience: 10+ years 6 – 10 years 3 – 5 years 1 - 2 years	(Max 5 points) 5 points 4 points 3 points 1 point
Locality	Locality (Municipal billing clearance certificate/ Lease agreement/ Latest tax invoices for municipal account of address where company operates from in its Business Name): - Kouga Local Municipality Area - Sarah Baartman District & Nelson Mandela Bay Municipal Area - Outside the above areas	(max 25 points) 25 points 20 points 10 points
Maximum possible score for Functionality		100

The minimum score for functionality is **70%**. Tenderers that fail to achieve the minimum score for functionality will be declared as non-responsive.

Where the entity tendering is a Joint Venture the tender must be accompanied by a statement describing exactly what aspects of the work will be undertaken by each party to the joint venture (appended to Schedule 10, Part T2.2: Returnable Schedules).

Where the tenderer intends to sub-contract any of the work components listed above, full details of the intended sub-contractor and portions of work to be undertaken by them shall be provided with the tender. The verifiable experience of the sub-contractor relevant to the component of work to be performed by them will be taken into consideration when allocating scores.

Tenderers shall ensure that all relevant information has been submitted with the tender offer in the prescribed format to ensure optimal scoring of functionality points for each Evaluation Criteria. Failure to provide all information **IN THIS TENDER SUBMISSION** could result in the tenderer not being able to achieve the specified minimum scoring.

F.2.1.4.4 **Local Content**

- a) The supplier shall study the terms and conditions as stated in the **Local Content Declaration / Annexure C** returnable schedule.

F.2.1.4.4.1 The stipulated minimum threshold percentages for local production and content for this bid are as follows:

Description of services, works or goods	Stipulated minimum threshold
PVC Pipes	100%
HDPE Pipes	100%
Borehole pumps	70%
Electrical cables & switchgear	90%

F.2.1.4.4.2 Only tenders with locally produced or locally manufactured raw material or input will be considered. If the raw material or input to be used for a specific item is not available locally, bidders should obtain written authorisation from the Department of Trade and Industry (DTI) (Chief Director: Industrial Procurement, tel. 012 394 3927 and fax 012 394 4927) should there be a need to import such raw material or input.

F.2.1.4.4.3 A copy of the authorisation letter must be submitted together with the bid document at the closing date and time of the bid.

F.2.1.4.4.4 The Employer is obliged and must ensure that contracts for **the designated sector** are awarded at prices that are market related taking into account, among others, benchmark prices designated by the DTI for the sector, value for money and economies of scale. Where appropriate, prices may be negotiated with preferred bidders in accordance with provisions for Negotiation with Preferred Bidders as set out in the Kouga Local Municipality's SCM Policy.

F.2.1.4.4.5 A bid will be declared non-responsive / disqualified if the **Local Content Declaration / Annexure C** returnable schedule as well as the authorisation letter referred to above (if applicable) are not submitted as part of the bid documentation at the closing date and time of the bid.

F.2.1.4.4.6 For further information relating to the local production and content legislation, bidders may refer to website http://www.thedti.gov.za/industrial_development/ip.jsp, or may contact the Chief Director: Industrial Procurement at the DTI at telephone number (012) 394 3927 and fax (012) 394 4927, the Director: Fleet Procurement, at telephone number (012) 394 3927, or the DTI Contact Centre no 0861 843384.

F.2.1.4.5 **Compulsory clarification meeting**

Tenderers are required to attend a compulsory clarification meeting and site visit at which they may familiarise themselves with aspects of the proposed work, services or supply and pose questions.

Details of the meeting(s) are stated in the General Tender Information.

Only those tenders submitted by tenderers who have signed the attendance register will be declared responsive.

F.2.1.4.6 **Good standing with Bargaining Council**

Only those tenders submitted by tenderers who are in good standing with the **Bargaining Council for the Civil Engineering Industry (BCCEI)** at the time of the tender award will be declared responsive. Tenderers must attach such proof to the schedule titled **Declaration in Respect of Compliance with Labour Legislation** or obtain such upon being requested to do so in writing and within the period contained in such a request, failing which their tenders will be declared non-responsive. Refer to Schedule 21 of the Returnable Schedules.

F.2.3 **Check documents**

F.2.3 *Delete the clause and replace with the following:*

The Tenderer should check the tender documents on receipt for completeness, missing or duplicated pages, indistinct figures or writing and any obvious errors. The Tenderer must notify the Employer's Agent at once of any such problems identified

F.2.7 **Clarification meeting**

Add the following after the second sentence:

The arrangements for the compulsory site visit/clarification meeting are as stated on the General Tender Information page and in the Responsiveness Criteria (if applicable).

Tenderers should be represented at the site visit/clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved.

F.2.8 **Seek Clarification**

Add the following after the first sentence:

The tenderer warrants that it has:

- a) inspected the Specifications and read and fully understood the Conditions of Contract.
- b) read and fully understood the whole text of the Specifications and Price Schedule and thoroughly acquainted itself with the nature of the goods proposed and generally of all matters which may influence the Contract.
- c) visited the site(s) where delivery of the proposed works will take place, carefully examined existing conditions, the means of access to the site(s), the conditions under which the delivery is to be made, and acquainted itself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials, plant and equipment to and from the site(s) and made the necessary provisions for any additional costs involved thereby.
- d) requested the Employer to clarify the requirements contained in the Specifications and Price Schedule, the exact meaning or interpretation of which is not clearly intelligible to the tenderer.
- e) received any notices to the tender documents which have been issued in accordance with the Employer's SCM Policy.

The Employer will therefore not be liable for the payment of any extra costs resulting from any claim submitted by the tenderer arising from any alleged ambiguity or uncertainty contained in the tender document.

F.2.12 **Alternative tender offers**

F.2.12.1 *Add the following to F.2.12.1 at the end of the first sentence:*

If a tenderer wishes to submit an alternative tender offer, he shall do so as a separate offer on a separate set of tender documents. The alternative tender offer shall be submitted in a separate sealed envelope on a separate Form of Offer, both clearly marked "Alternative Tender" in order to distinguish it from the main tender offer.

While it is not necessary to duplicate all parts of the main tender offer, the alternative tender offer shall be supported by the following documents as applicable:

- a) the schedule that compares the alternative(s) offered with the requirements of the issued tender documents
- b) preliminary designs, calculations, drawings and all other pertinent technical information and characteristics must be submitted with the alternative tender offer, in order to enable the Employer to evaluate the efficacy of the alternatives proposed
- c) revised Bills of Quantities, or parts thereof, highlighting the changes made, together with a revised Summary, the total of which has been carried to the Form of Offer
- d) details of any proposed amendments to the Pricing Assumptions

F.2.12.3 *Add the following to F.2.12.1 at the end of the first sentence:*

An alternative of the highest ranked acceptable main tender offer that is priced higher than the main tender offer may be recommended for award, provided that the ranking of the alternative tender offer is higher than the ranking of the next ranked acceptable main tender offer.

The Employer's costs in confirming the acceptability of the alternative offer will be, *inter alia*, taken into account in considering the alternative offer.

The Employer will not be bound to consider alternative tenders and shall have sole discretion in this regard.

In the event that the alternative is accepted, the Contractor shall accept full responsibility that the alternative offer complies in all respects with the Employer's standards and requirements.

F.2.13 Submitting a tender offer

Add the following to F.2.13.1 at the end of the first sentence:

F.2.13.1 Where the tendering entity is a joint venture it is recommended that the standard CIDB Joint Venture Agreement be used.

Add the following to F.2.13.3 at the end of the first sentence:

F.2.13.3 Parts of each tender offer communicated on paper shall be submitted as an original, plus 0 (naught) copies.

Add the following to F.2.13.5 at the end of the first sentence:

F.2.13.5 The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:

Employer: Kouga Local Municipality.
Physical address: 16 Woltemade Street, Jeffreys Bay.
Identification details: Bid Number: 155/2021
Title of Contract: HUMANSDORP GROUNDWATER SUPPLY

Sealed tenders with the Tenderer's name and address and the endorsement "**BID NO. 155/2021 : HUMANSDORP GROUNDWATER SUPPLY**" on the envelope, must be placed in the appropriate official tender box at the abovementioned address.

Add the following to F.2.13.6:

F.2.13.6 A two-envelope procedure will **not** be followed (F.3.5).

Add the following after F.2.13.9:

F.2.13.10 By signing the offer part of C1.1 Form of Offer and Acceptance the tenderer declares that all information provided in the tender submission is true and correct.

F.2.13.11 The Employer shall not formally issue tender documents in electronic format and shall only issue tender documents in hardcopy. An electronic version of the issued tender documents may be made available to the tenderer, upon written request in terms of this clause, subject to the following:

- a) Electronic copies of the issued tender documents, or parts thereof, will only be provided to tenderers who have been issued with the tender documents as contemplated in F.1.2 in hardcopy.
- b) The electronic version shall not be regarded as a substitute for the issued tender documents.
- c) The Employer shall not accept tenders submitted in electronic format. Only those tenders that have been completed on the issued hard copy tender document shall be considered, provided that printed Bills of Quantities, in the same format (that is, layout, billed items and quantities) as those issued electronically by the Employer, may be submitted with the tender as stated in F.2.13.2.
- d) Where Addenda have been issued which amend the Bills of Quantities, then the printed Bills of Quantities shall take these into account. The pages of the issued Bills of Quantities should not be removed from the tender document.
- e) The Employer accepts no responsibility or liability arising from any reliance on or use of the electronic version provided in terms of this clause. Tenderers are alerted to the fact that electronic versions of the tender documents may not reflect any notices or addenda that amend the tender document.
- f) Any non-compliance with these provisions, including effecting any unauthorised alterations to the tender documents as contemplated in F.2.11, shall render the tender non-responsive. The Employer reserves the right to take any action against such tenderer allowed in law including, in circumstances where the tender had already been awarded, the right to cancel the contract.
- g) In requesting the electronic version of the tender documents or parts thereof, the tenderer is deemed to have read, understood and accepted all the above conditions.

F.2.15 Closing time

Add the following to F.2.15.1 after the first sentence:

F.2.15.1 The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.

F.2.16 Tender offer validity

- Add the following to F.2.16.1 after the first sentence:*
F.2.16.1 The tender offer validity period is **(120 calendar days)**.
- Delete the clause and replace with the following:*
F.2.16.2 Tender offers shall be deemed to remain valid until formal acceptance by the Employer of an offer at any time after the expiry date of the original tender offer validity period, unless the Employer is notified in writing of anything to the contrary, including any further conditions, by the tenderer.
- Any further conditions introduced by the tenderer will be considered at the sole discretion of the Employer.
- Clarification of tender offer after submission**
F.2.17 *Add the following to F.2.17 at the end of the third sentence:*
A tender will be rejected as non-responsive if the tenderer fails to provide any clarification or supporting documents requested by the Employer within the time for submission stated in the Employer's written request for such clarification or documents.
- Provide other material**
F.2.18 *Delete the following word in F.2.18.1:*
F.2.18.1 notarized
- Add the following to F.2.18.1 at the end of the first paragraph:*
Provide, on written request by the Employer, where the transaction value (tendered amount) inclusive of VAT **exceeds R 10 million:**
- a) audited annual financial statement for the past 3 years, or for the period since establishment if established during the past 3 years, if required by law to prepare annual financial statements for auditing;
 - b) a certificate signed by the tenderer certifying that the tenderer has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days;
 - c) particulars of any contracts awarded to the tenderer by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract;
 - d) a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic.
- Each party to a Consortium/Joint Venture shall submit separate certificates/statements in the above regard.
- Add the following after F.2.18.2:*
F.2.18.3 Tenderers shall fully cooperate with the Employer's external service provider appointed to perform a due diligence review and risk assessment upon receipt of such written instruction from the Employer.
- Failure to fully cooperate could result in a tender being declared as non-responsive.
- Compliance with Occupational Health and Safety Act, 85 of 1993**
F.2.18.4 Tenderers are to note the requirements of the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014 issued in terms of Section 43 of the Act. The Tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.
- In this regard the Tenderer shall submit with his tender or upon request, appended to Schedule 16: Health and Safety Plan in T2.2 : Returnable Schedules, a draft Health and Safety Plan in respect of the Works in sufficient detail to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act, Regulations and Health and Safety Specification in Part C3.7 Health and Safety Specifications for the works detailed in Part C3 Scope of works.
- Certificates**
F.2.23 *Add the following after the first sentence:*
The tenderer is required to submit the following:
- Evidence of tax compliance**
F.2.23.1 Tenderers shall be registered with the South African Revenue Service (SARS) and their tax affairs must be in order and they must be tax compliant. In this regard, it is the responsibility of the Tenderer to submit evidence in the form of a valid Tax Clearance Certificate issued by SARS to the Employer at the Supplier Management Unit located within the Supplier Management / Registration Office, 16 Woltemade

Street, Jeffreys Bay, or included with this tender. The tenderer must also provide its Tax Compliance Status PIN number on the **Compulsory Enterprise Questionnaire**

Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate.

Tenderers are to note that the Employer will not award a contract to a Tenderer whose tax matters are not in order.

F.2.23.2 Broad-Based Black Economic Empowerment Status Level Documentation

In order to qualify for preference points, it is the responsibility of the tenderer to submit documentary proof, either as certificates, sworn affidavits or any other requirement prescribed in terms of the B-BBEE Act, of its B-BBEE status level of contribution in accordance with the applicable Codes of good practise as issued by the Department of Trade and Industry, to the Kouga Local Municipality at the Supplier Management Unit located within the Supplier Management / Registration Office, 16 Woltemade Street, Jeffreys Bay or included with the tender submission.

Consortiums/Joint Ventures will qualify for preference points, provided that the **entity** submits the relevant certificate/scorecard in accordance with the applicable codes of good practise. Note that, in the case of unincorporated entities, a verified consolidated B-BBEE scorecard must be submitted in the form of a certificate with the tender.

Tenderers are further referred to the content of the **Preference Schedule** for the full terms and conditions applicable to the awarding of preference points.

The applicable code for this tender is the **Amended Codes for Measuring Broad-Based Black Economic Empowerment in the Construction Sector)** unless in possession of a valid certificate in terms of the transitional arrangements contained in these Codes.

The tenderer shall indicate in Section 4 of the **Preference Schedule** the Level of Contribution in respect of the enterprise status or structure of the tendering entity (the supplier).

Add the follow new clause after F.2.23.2

F.2.24 Proposed Deviations and Qualifications

Where the tenderer cannot tender in all respects in accordance with the provisions contained in the tender documents, all deviations therefrom shall be clearly and separately listed in the schedule titled **Proposed Deviations and Qualifications by Tenderer** in T2.2 Returnable Schedules, or in a tenderer's covering letter expressly referenced in this schedule.

The tenderer accepts that the Employer will examine such deviations in terms of clause F.3.8.2 and shall not be bound to accept any such deviations or qualifications.

It must be clearly stated by the tenderer whether the sum tendered in the Tender Offer includes for all such deviations or qualifications listed or referred to in the schedule titled **Proposed Deviations and Qualifications by Tenderer** or not.

F.3 The Employer's undertakings

F.3.2 Issue Addenda

Delete the words "three days" from the first sentence and replace with:

"five working days where possible"

Add the following to F.3.2 at the end of the paragraph:

Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.

F3.4 Opening of tender submissions

Add the following to F.3.4.2 at the end of the paragraph:

The location for opening of the tender offers is the Tender Submission Office at the address as stated on the General Tender Information page.

F.3.8 Test for responsiveness

F.3.8.2 Delete par F.3.8.2 (c)

Replace the final sentence of F.3.8.2 with the following:

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

Add the following after clause F.3.8.2

F.3.8.3 The Employer reserves the right to accept a tender offer which does not, in the Employer's opinion, materially and/or substantially deviate from the terms, conditions, and specifications of the tender documents.

F.3.9 Arithmetical errors, omissions and discrepancies

Add the following after clause F.3.9.2

F.3.9.3 In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are not priced, either excessively low or high, or not in proper balance with other rates or lump sums, the Tenderer may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the tenderer to amend these rates and lump sums along the lines indicated by it.

The Tenderer will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the tender offer in accordance with this clause.

Should the Tenderer fail to amend his tender in a manner acceptable to and within the time stated by the Employer, the Employer may declare the tender as non-responsive.

F.3.10 Clarification of a tender offer

Delete the clause and replace with the following:

F3.10 The Employer may, after the closing date, request additional information or clarification from tenderer, in writing on any matter affecting the evaluation of the tender offer or that could give rise to ambiguity in a contract arising from the tender offer.

F.3.11 Evaluation of tender offers

Add the following paragraph below the heading:

The preference point system applicable to this tender is either the 80/20 or 90/10 preference point system and the lowest responsive tender will be used to determine the applicable preference point system.

F.3.11.3(3) Add the following after par F.3.11.3(3):

In addition, the various deemed B-BBEE Status Level of Contributor in accordance with the relevant Codes can be attained and such tenderers must be awarded the appropriate number of points.

It should be noted that such Deemed B-BBEE Status Level of Contribution can be enhanced or discounted in accordance with the relevant clauses in the applicable Codes.

F.3.11.3(4) *Delete the heading and replace with the following:*
The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million

F.3.11.3(4)(a)(i) *Delete the first sentence of par F.3.11.3(4)(a)(i) and replace with the following:*

(4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders (including price tender) with a rand value equal to, or above R 30'000 and up to Rand value of R50'000'000 (all applicable taxes included):

Delete the text under the formula and replace with the following:

Where

Ps = Points scored for price of tender or offer under consideration;

Pt = Price of tender or offer under consideration; and

Pmin = Price of lowest acceptable tender or offer.

F.3.11.3(4)(a) *Amend the number of points for status level 3 as follows:*

B-BBEE status level of contributor	Number of points
3	14

F.3.11.3(5) *Delete the heading and replace with the following:*

The 90/10 preference point system for acquisition of services, works or goods with a Rand value above R50 million

F.3.11.3(5)(a)(i) *Delete the first sentence of par F.3.11.3(5)(a)(i) and replace with the following:*

(5) (a)(i) The following formula must be used to calculate the points for price in respect of tenders (including price tender) with a rand value above R50'000'000 (all applicable taxes included):

Delete the text under the formula and replace with the following:

Where

Ps = Points scored for price of tender or offer under consideration;

Pt = Price of tender or offer under consideration; and

Pmin = Price of lowest acceptable tender or offer.

F.3.11.3(5)(a) *Amend the number of points for status level 3 as follows:*

B-BBEE status level of contributor	Number of points
3	6

F.3.11.7 *Delete the text in the final row of the table and replace with the following:*

^a	<i>P_m is the offer of the most favourable offer.</i>
	<i>P is the offer of the tender offer under consideration.</i>

F.3.11.7 **Scoring Financial Offers**

Add the following:

The financial offer will be scored using **Formula 2 (Option 1)**.

F.3.11.8 **Scoring Preferences**

Add the following:

Points will be awarded to tenderers who are eligible for preferences in terms of the **Preference Schedule** (where preferences are granted in respect of B-BBEE contribution) which is included in T2.2 Returnable Schedules.

The terms and conditions of the **Preference Schedule** shall apply in all respects to the tender evaluation process and any subsequent contract.

Add the following after F.3.11.9:

F.3.11.10 **Risk Analysis**

Notwithstanding compliance with regard to CIDB registration or any other requirements of the tender, the employer will perform a risk analysis in respect of the following:

a) reasonableness of the financial offer

- b) reasonableness of unit rates and prices

The conclusions drawn from this risk analysis will be used by the Employer in determining the acceptability of the tender offer in terms of F.3.13 b).

F3.13 Acceptance of tender offer

Delete F.3.13 and replace with the following):

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

- a) *Delete F.3.13 a) and replace with the following):*
is not under restrictions, has any principals who are under restrictions, or is not currently a supplier to whom notice has been served for abuse of the supply chain management system, preventing participation in the employer's procurement,

If an award cannot be made in terms of anything contained herein, the Employer reserves the right to consider the next ranked tenderer(s).

F.3.16 Notice to unsuccessful tenderers

Replace the heading above with:

Notice to successful and unsuccessful tenderers

F.3.16.1 Delete the clause and replace with the following:

Before accepting the tender of the successful tenderer, the Employer shall notify the successful tenderer in writing of the decision of the Employer's Bid Adjudication Committee to award the tender to the successful tenderer. No rights shall accrue to the successful tenderer in terms of this notice.

F.3.16.2 Delete clause F.3.16.2 and replace with the following:

The Employer shall, at the same time as notifying the successful tenderer of the Bid Adjudication Committee's decision to award the tender to the successful tenderer, also give written notice to the other tenderers informing them that they have been unsuccessful.

F.3.17 Provide copies of the contract

Add the following after the first sentence:

The number of paper copies of the signed contract to be provided by the Employer is one.

F.3.19 Add the following after F.3.19

F.3.20 Negotiations with preferred tenderers

The Employer may negotiate the final terms of a contract with tenderers identified through a competitive tendering process as preferred tenderers provided that such negotiation:

- a) does not allow any preferred tenderer a second or unfair opportunity;
- b) is not to the detriment of any other tenderer; and
- c) does not lead to a higher price than the tender as submitted.

If negotiations fail to result in acceptable contract terms, the Municipal Manager (or his delegated authority) may terminate the negotiations and cancel the tender or invite the next ranked tenderer for negotiations. The original preferred tenderer should be informed of the reasons for termination of the negotiations. If the decision is to invite the next highest ranked tenderer for negotiations, the failed earlier negotiations may not be reopened by the Kouga Municipality.

Minutes of any such negotiations shall be kept for record purposes.

The provisions of this clause will be equally applicable to any invitation to negotiate with any other tenderers.

In terms of the PPPFA Regulations, 2017, tenders must be cancelled in the event that negotiations fail to achieve a market related price with any of the three highest scoring tenderers.

Annex F
(normative)
Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in the CIDB Standard for Uniformity in Engineering and Construction Works Contracts as published in Board Notice 423 of 2019 of 08 August 2019 (see www.cidb.org.za).

F.1 General

F.1.1 Actions

F.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 F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.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.

F.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.

F.1.2 Tender Documents

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

F.1.3 Interpretation

F.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.

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

F.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 organisation 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 organisation which employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be 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;
- e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body;
- f) **functionality** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

F.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.

F.1.5 Cancellation and Re-Invitation of Tenders

F1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if-

- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure; or
- (c) no acceptable tenders are received.
- (d) there is a material irregularity in the tender process.

F1.5.2 The decision to cancel a tender must be published in the CIDB website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

F1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

F.1.6 Procurement procedures

F.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.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.

F.1.6.2 Competitive negotiation procedure

F.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 F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

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

F.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to make a fresh 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.

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

F.1.6.3 Proposal procedure using the two stage-system

F.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.

F.1.6.3.2 Option 2

F.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.

F.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.

F.2 Tenderer's obligations

F.2.1 Eligibility

F.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.

F.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.

F.2.2 Cost of tendering

F.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.

F.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.

F.2.3 Check documents

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

F.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.

F.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.

F.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.

F.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.

F.2.8 Seek clarification

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

F.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.

F.2.10 Pricing the tender offer

F.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 14 days before the closing time stated in the tender data.

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

F.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.

F.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.

F.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.

F.2.12 Alternative tender offers

F.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.

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

F.2.12.3 An alternative tender offer may only be considered in the event that the main tender offer is the winning tender.

F.2.13 Submitting a tender offer

F.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, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.2.15 Closing time

F.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.

F.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.

F.2.16 Tender offer validity

F.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.

F.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.

F.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.

F.2.16.4 Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as "SUBSTITUTE".

F.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 F.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.*

F.2.18 Provide other material

F.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.

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

F.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.

F.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.

F.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.

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings

F.3.1 Respond to requests from the tenderer

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

F.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, 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.

F.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 days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who drew documents.

F.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.

F.3.4 Opening of tender submissions

F.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.

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

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

F.3.5 Two-envelope system

F.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.

F.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.

F.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.

F.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.

F.3.8 Test for responsiveness

F.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.

F.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.

F.3.9 Arithmetical errors, omissions and discrepancies

F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.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.

F3.9.2 The employer must correct the arithmetical errors in the following manner:

- a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.
- b) 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.
- c) 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.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

F.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.

F.3.11 Evaluation of tender offers

F.3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Price and Preference

In the case of a price and preference:

- 1) Score tender evaluation points for price
- 2) Score points for BBBEE contribution
- 3) Add the points scored for price and BBBEE.

F.3.11.3 Method 2: Functionality, Price and Preference

In the case of a functionality, price and preference:

- 1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.
- 2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.
- 3) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 4 and 5 below.

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million

- 4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders (including price

tender) with a rand value equal to, or above R 30 000 and up to Rand value of R 50 000 000 (all applicable taxes included):

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

Where

P_s = Points scored for comparative price of tender or offer under consideration;

P_t = Comparative price of tender or offer under consideration; and

$P_{\min}$ = Comparative price of lowest acceptable tender or offer.

- (4) (a)(ii) An employer of state may apply the formula in paragraph (i) for price tenders with a value less than R30 000, if and when appropriate:
- (4) (b) Subject to subparagraph(4)(c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:

B-BBEE status level of	Number of points
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant	0

- (4) (c) A maximum of 20 points may be allocated in accordance with subparagraph (4)(b)
- (4) (d) The points scored by tender in respect of B-BBEE contribution contemplated in contemplated in subparagraph (4) (b) must be added to the points scored for price as calculated in accordance with subparagraph (4)(a).
- (4) (e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

The 90/ 10 preference points system for acquisition of services, works or goods with a Rand value above R 50 million

- (5)(a) The following formula must be used to calculate the points for price in respect of tenders with a Rand value above R50 000 000 (all applicable taxes included):

90/10

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

Where

P_s = Points scored for comparative price of tender or offer under consideration;

P_t = Comparative price of tender or offer under consideration; and

P_{min} = Comparative price of lowest acceptable tender or offer.

(5)(b) Subject to subparagraph(5)(c), points must be awarded to a tender for attaining the B- BBEE status level of contributor in accordance with the table below:

B-BBEE status level of contributor	Number of points
1	10
2	9
3	6
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

(5)(c) A maximum of 10 points may be allocated in accordance with subparagraph (5)(b).

(5)(d) The points scored by tender in respect of B-BBEE contribution contemplated in contemplated in subparagraph (5) (b) must be added to the points scored for price as calculated in accordance with subparagraph (5)(a).

(5)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

F.3.11.6 Decimal places

Score price, preference and functionality, as relevant, to two decimal places.

F.3.11.7 Scoring Price

Score price of remaining responsive tender offers using the following formula:

$$NFO = W_1 \times A$$

where: NFO is the number of tender evaluation points awarded for price.

W_1 is the maximum possible number of tender evaluation points awarded for price as stated in the Tender Data.

A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

Table F.1: Formulae for calculating the value of A

Formul	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a
1	Highest price or discount	$A = (1 + \frac{P - P_m}{P_m})$	$A = P / P_m$
2	Lowest price or percentage	$A = (1 - \frac{P - P_m}{P_m})$	$A = P_m / P$
^a P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.			

F.3.11.8 Scoring preferences

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences.

Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the

tender data.

F.3.11.9 Scoring functionality

Score each of the criteria and sub criteria for quality in accordance with the provisions of the Tender Data.

Calculate the total number of tender evaluation points for quality using the following formula:

$$N_Q = W_2 \times S_O / M_S$$

where: *S_O* is the score for quality allocated to the submission under consideration; *M_S* is the maximum possible score for quality in respect of a submission; and
W₂ is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.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.

F.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, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his 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.

F.3.14 Prepare contract documents

F.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.

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

F.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.

F.3.16 Notice to unsuccessful tenderers

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.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.

F.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.

F3.19 Transparency in the procurement process

F3.19.1 The CIBD prescripts require that tenders must be advertised and be registered on the CIBD Tender system.

F3.19.2 The employer must adopt a transparency model that incorporates the disclosure and accountability as transparency requirements in the procurement process.

F3.19.3 The transparency model must identify the criteria for selection of projects, project information template and the threshold value of the projects to be disclosed in the public domain at various intervals of delivery of infrastructure projects.

F3.19.4 The client must publish the information on a quarterly basis which contains the following information:

- Procurement planning process
- Procurement method and evaluation process
- Contract type
- Contract status
- Number of firms tendering
- Cost estimate
- Contract title
- Contract firm(s)
- Contract price
- Contract scope of work
- Contract start date and duration
- Contract evaluation reports

F3.19.5 The employer must establish a Consultative Forum which will conduct a random audit in the implementation of the transparency requirements in the procurement process.

F3.19.6 Consultative Forum must be an independent structure from the bid committees.

F3.19.7 The information must be published on the employer's website.

F 3.19.8 Records of such disclosed information must be retained for audit purposes.

Annex G
(normative)

Alpha-numerics associated with the Contractor Grading Designations

Table G1: Contractor grading designations and associated parameters, as per Government Notice 357 of 2019 [Notice No.42561], dated 23 May 2019.

Contractor Grading Designation	Tender Value Range designation	Maximum value of contract that a contractor is considered capable of performing (R)
1 (class of construction works)	1	500 000
2 (class of construction works)	2	1 000 000
3 (class of construction works)	3	3 000 000
4 (class of construction works)	4	6 000 000
5 (class of construction works)	5	10 000 000
6 (class of construction works)	6	20 000 000
7 (class of construction works)	7	60 000 000
8 (class of construction works)	8	200 000 000
9 (class of construction works)	9	No Limit

TENDER

PART 2 (OF 2): RETURNABLE DOCUMENTS

T2.1	List of Returnable Documents	37
T2.2	Returnable Documents	38

T2.1: LIST OF RETURNABLE DOCUMENTS

The original completed tender document (refer clauses 3.2 and 4.13 of the Tender Data), excluding Drawings, shall be returned with all the required information supplied, duly completed in non-erasable ink in all aspects.

The following documents and schedules are to be completed and returned, as they constitute the tender. Whilst many of the returnables are required for the purpose of evaluating the tenders, some will form part of the subsequent contract, as they form the basis of the tender offer. For this reason, it is very important that tenderers submit, return, complete and sign **all the information, documents and schedules, as requested.**

1. RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES (Included hereafter for completion)

- 1A Status of Concern Submitting Tender
- 1B Authority for Signatory
- 1C Certificate of Attendance at Clarification Meeting
- 1D Declaration of Interest in Tender of Persons in Service of the State
- 1E Compulsory Enterprise Questionnaire
- 1F Declaration of Tenderer's Past Supply Chain Management Practises
- 1G Form MBD6: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2001
- 1H Schedule of Work Satisfactorily carried out by the Tenderer for Private Clients or Organs of State
- 1I Schedule of Contracts Awarded to Tenderer by Organs of State
- 1J Company Information Required for Tenders greater than R 5 million
- 1K Certificate of Independent Bid Determination
- 1L Proposed Amendments
- 1M Proof or Registration and good standing with the Civil Engineering Bargaining Council (BCCEI)
- 1N Proof or Registration and good standing with the Construction Industry Development Board (CIDB)
- 1O Proof of Registration with the Supplier Database
- 1P Available personnel for this project:
Details of Experience and Qualifications for Contracts Manager, Construction Manager, General Foreman and OH&S Agent

2. RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES (To be attached with submission)

- 2A Original Valid Tax Clearance Certificate
- 2B Municipal Billing Clearance Certificate
- 2C B-BBEE Status Level Certificates / Consolidated Scorecard
- 2D Declaration certificate for local production and content for designated sectors

3. RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT (included hereafter for completion)

- 3A Record of Addenda to Tender Documents
- 3B Personnel Schedule
- 3C Declaration Concerning Fulfilment of the Construction Regulations
- 3D Schedule of Construction Equipment
- 3E Schedule of Proposed Subcontractors

4. OTHER SCHEDULES AND DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT (included hereafter for completion)

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data
- C2.2 Bill of Quantities

T2.2: RETURNABLE DOCUMENTS

1A: STATUS OF CONCERN SUBMITTING TENDER
--

1. General

State whether the tenderer is a company, a closed corporation, a partnership, a sole practitioner or a joint venture:

(Mark the appropriate option below)

Public Company

Private Company

Closed Corporation

Partnership

Sole Proprietary

Joint Venture

Co-operative

2. Information to be provided (Attached to the tender)

If the Tendering Entity is a:		Documentation to be submitted with the tender
1	Closed Corporation, incorporated under the Close Corporation Act, 1984, Act 69 of 1984	CIPRO CK1 or CK2 (Copies of the founding statement) and list of members
2	Private Company incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 (Including Companies incorporated under Art 53 (b))	Copies of: a) CIPRO CM 1 – Certificate of Incorporation b) CIPRO CM 29 – Contents of Register of Directors, Auditors and Officers c) CIPRO CM 39 – Notice of Change of Directors for private companies d) Shareholders Certificates of all Members of the Company.
3	Private Company incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 in which any, or all, shares are held by another Closed Corporation or company with, or without, share capital	Copies of documents referred to in 1 and/or 2 above in respect of all such Closed Corporations and/or Companies.
4	Public Company incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 (Including Companies incorporated under Art 21)	A signed statement by the Company's Secretary confirming that the Company is a Public Company. Copy of CM 29
5	Sole Proprietary or a Partnership	Certified Copy of the Identity Document of: a) Such Sole Proprietary, or

If the Tendering Entity is a:		Documentation to be submitted with the tender
		b) Each of the Partners in the Partnership Copy of the Partnership agreement
6	Co-operative	CIPRO CR 2 – Copies of Company registration document. (The percentage of work to be done by each partner must clearly be indicated on Form RDB 1 (or RDB 2 as applicable) of the tender document: MBD 6.1 Preference Points Claim Form in terms of the Preferential Procurement Regulations 2001).
7	Joint Venture	All the documents (as described above) as applicable to each partner in the JV as well as a copy of the Joint Venture agreement. (The percentage of work to be done by each partner of the joint venture must clearly be indicated in the Joint Venture Agreement).

Note:

- (i) If the shares are held in trust provide a copy of the Deed of Trust (only the front page and pages listing the trustees and beneficiaries are required) as well as the Letter of Authority as issued by the Master of the Supreme Court, wherein trustees have been duly appointed and authorised, must be provided.
- (ii) Include a copy of the Certificate of Change of Name (CM 9) if applicable. No. CM 9: name change certificate will be accepted as proof alone, for registration.

3. Bidders Must Register for VAT or be Registered for VAT Purposes in Terms of the Value-Added Tax Act, (Act No. 89 of 1991)

(Make an X in the appropriate space below)

Yes

☐

No

☐

REGISTRATION NO:

1B: AUTHORITY FOR SIGNATORY

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

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

A Certificate for Company

I,, chairperson of the board of directors of
, hereby confirm that by resolution of the board (copy
 attached) taken on 20....., * Mr / Ms
 acting in the capacity of
, and who will sign as follows:
 be, and is hereby authorized to sign the tender and all
 documents and correspondences in connection with this tender as well as any contract resulting from it on behalf of
 the company.

As witnesses:

1. Chairman:
2. Date:

NAME	CAPACITY	SIGNATURE

Note:

* Delete which is not applicable.

This resolution must be signed by all the Directors / Members / Partners of the Bidding Enterprise.

Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

B Certificate for Partnership

We, the undersigned, being the key partners in the business trading as, hereby authorize * Mr / Ms, acting in the capacity of, and who will sign as follows: be, and is hereby authorized to sign the tender and all documents and correspondences in connection with this tender as well as any contract resulting from it on behalf of the company.

NAME	ADDRESS	SIGNATURE	DATE

Note:

* Delete which is not applicable.

This resolution must be signed by all the Directors / Members / Partners of the Bidding Enterprise.

Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

C Certificate for Joint Venture or Consortia

We, the undersigned, are submitting this tender offer in a * Joint Venture / Consortium and hereby authorise * Mr / Ms, acting in the capacity of lead partner, and who will sign as follows: be, and is hereby authorized to sign the tender and all documents and correspondences in connection with this tender as well as any contract resulting from it on behalf of the company.

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

NAME OF FIRM	ADDRESS	% OF CONTRACT VALUE	AUTHORISING SIGNATURE, NAME AND CAPACITY
(Lead Partner):			

Note:

* Delete which is not applicable.

This resolution must be signed by all the Members / Partners of the Bidding Enterprise.

Should the number of Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

D Certificate for Sole Proprietor

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

As witnesses:

1. Signature:
2. Date:

E. Certificate for Close Corporation

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

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

NAME	ADDRESS	SIGNATURE	DATE

Note:

* Delete which is not applicable.

This resolution must be signed by all the Directors / Members / Partners of the Bidding Enterprise.

Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

1C: CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING
--

This is to certify that

..... (Tenderer)

of

.....
..... (address)

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

..... (location) on

..... (date), starting at (time).

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

Particulars of person(s) attending the meeting on behalf of **the tenderer**:

Name Signature

Capacity

Name Signature

Capacity

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

Name Signature

Capacity Date & Time

1D: DECLARATION OF INTEREST IN TENDER OF PERSONS IN SERVICE OF THE STATE

1. Where the tenderer is a natural person, state / declare whether the tenderer or an employee is in the service of the state, or has been in the service of the state during the past twelve months.

YES / NO (INDICATE)

If so, state particulars:

.....

If so and where applicable, state the date of resignation:

.....

2. Where the tenderer is not a natural person, state / declare whether any of its directors, managers, principal shareholders or stakeholders is in the service of the state, or have been in the service of the state during the past twelve months.

YES / NO (INDICATE)

If so, state particulars:

.....

3. State / declare whether a spouse, child or parent of the tenderer or any of its directors, managers, shareholders or stakeholders referred to in subparagraph 2 is in the service of the state, or have been in the service of the state during the past twelve months.

YES / NO (INDICATE)

If so, state particulars:

.....

4. State / declare whether the tenderer or any of its directors, managers, shareholders, stakeholders or employees referred to in subparagraph 2 is a person who is an advisor or consultant contracted with the municipality or municipal entity.

YES / NO (INDICATE)

If so, state particulars:

.....

5. State / declare whether the tenderer or any of its directors, managers, shareholders or stakeholders referred to in subparagraph 2 is involved in another entity for this particular tender.

YES / NO (INDICATE)

If so, state particulars:

.....

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

1E: COMPULSORY ENTERPRISE QUESTIONNAIRE

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

SECTION 1: NAME OF ENTERPRISE:

SECTION 2: VAT REGISTRATION NUMBER, IF ANY

SECTION 3: CIDB REGISTRATION NUMBER, IF ANY:

SECTION 4: 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 5: PARTICULARS OF COMPANIES AND CLOSE CORPORATIONS

Company registration number

Close corporation number

Tax reference number

SECTION 6: RECORD OF SERVICE OF THE STATE

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

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

If any of the above boxes are marked, disclose the following: (insert separate page if necessary)

Name of Sole Proprietor, Partner, Director, Manager, Principal Shareholder or Stakeholder	Name of Institution, Public Office, Board or Organ of State and Position held	Status of Service (tick appropriate column)	
		Current	Within last 12 months

*Insert separate page if necessary

SECTION 7: RECORD OF SPOUSES, CHILDREN AND PARENTS IN THE SERVICE OF THE STATE

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

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

Name of Spouse, Child or Parent	Name of Institution, Public Office, Board or Organ of State and Position held	Status of Service (tick appropriate column)	
		Current	Within last 12 months

*Insert separate page if necessary

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

- (i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- (ii) confirms that 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;
- (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.

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Enterprise name

1F: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTISES

1. This form serves as a declaration to be used by the Employer 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.
2. 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 been guilty of 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, 2004 (Act 12 of 2004).
3. In order to give effect to the above, this form and the questionnaire must be completed in full and signed. Failure to comply will result in the tender being declared non-responsive.

ITEM	QUESTION	RESPONSE	
4.1	Is the Tenderer or any of its directors listed on the National Treasurer's database as a company or persons prohibited from doing business with the public sector? (Companies for persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteram partem</i> rule was applied) The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za)	Yes	No
	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, 2004 (Act 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 012-326-5445)	Yes	No
	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?	Yes	No

ITEM	QUESTION	RESPONSE	
	If so, furnish particulars:		
	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?	Yes	No
4.4	If so, furnish particulars:		
	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?	Yes	No
4.5	If so, furnish particulars:		

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

1G: FORM MDB 6.1 – PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017
--

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

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

1. GENERAL CONDITIONS

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

- (a) The 80/20 system for requirements with a Rand value of up to R50 000 000.00 (all applicable taxes included); and
- (b) The 90/10 system for requirements with a Rand value above R50 000 000.00 (all applicable taxes included).

1.2 The value of this bid is estimated no to exceed R50 000 000.00 and therefore the 80/20 system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.

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

1.3.1.1 PRICE	80 POINTS
----------------------	------------------

1.3.1.2 B-BBEE STATUS LEVEL OF CONTRIBUTION	20 POINTS
--	------------------

Total points for Price and B-BBEE must not exceed	100 POINTS
--	-------------------

1.4 Failure on the part of a bidder to fill in and/or to sign this form and 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 an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 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 concerning preferences, in any manner required by the purchaser.

2. DEFINITIONS

- 2.1 **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.2 **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad -Based Black Economic Empowerment Act;
- 2.3 **“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;
- 2.4 **“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;
- 2.5 **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- 2.6 **“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;
- 2.7 **“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;
- 2.8 **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.9 **“EME”** means any enterprise with annual total revenue of R5 million or less;
- 2.10 **“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;
- 2.11 **“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;
- 2.12 **“non-firm prices”** means all prices other than “firm” prices;
- 2.13 **“person”** includes a juristic person;
- 2.14 **“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;
- 2.15 **“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;

- 2.16 “**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;
- 2.17 “**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
- 2.18 “**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 A 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:

Score the financial offers using the following formula:

$$N_{FO} = W_1 \times A$$

Where

N_{FO} is the number of tender evaluation points awarded for the financial offer;
 W_1 is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the tender data;
 A is the number calculated using the relevant formula as stated in the tender data

For 80/20
$$A = 80 \left(1 - \frac{P}{P_m} \right)$$

or

For 90/10
$$A = 90 \left(1 - \frac{P}{P_m} \right)$$

Where

P_m = is the comparative offer of the most favourable comparative offer
 P = is the comparative offer of the tender offer under consideration

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 (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant Contributor	0	0

- 5.2 Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.
- 5.3 Bidders other than EMEs 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.
- 5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
- 5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the 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.
- 5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

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 1.3.1.2 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 an Accounting Officer as contemplated in the CCA).

8 SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted? **YES / NO**
(delete which is not applicable)

8.1.1 If yes, indicate:

- (i) what percentage of the contract will be subcontracted?%
- (ii) the name of the sub-contractor?
- (iii) the B-BBEE status level of the sub-contractor?
- (iv) whether the sub-contractor is an EME? **YES / NO**
(delete which is not applicable)

9 DECLARATION WITH REGARD TO COMPANY / FIRM

9.1 Name of firm:

9.2 VAT registration number:

9.3 Company registration number:

9.4 TYPE OF COMPANY/ FIRM [Tick applicable box]

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....
.....
.....

9.6 COMPANY CLASSIFICATION

[Tick applicable box]

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional service provider
- ☐ Other service providers, e.g. transporter, etc.

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-BBEE 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:

- (i) The information furnished is true and correct;
- (ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.
- (iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- (iv) If the B-BBEE status level of 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:

1.

2.

.....
SIGNATURE(S) OF BIDDER(S)

DATE

ADDRESS

.....

.....

.....

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

1H: SCHEDULE OF WORK SATISFACTORILY CARRIED OUT BY THE TENDERER FOR PRIVATE CLIENTS OR ORGANS OF STATE

(Organs of State include any Local, Provincial or National Government Authority)

The following is a statement of **similar work** successfully executed by myself/ourselves:

Employer, Contact Person and Telephone Number	Description of Contract	Value of Work Inclusive of VAT (Rand)	Date Completed (State current if not yet complete)

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

11: SCHEDULE OF CONTRACTS AWARDED TO THE TENDERER BY ORGANS OF THE STATE

(Organs of State include any Local, Provincial or National Government Authority)

In terms of Clause 21(d)(iii) of the Supply Chain Management Policy, the tenderer shall list hereunder, particulars of contracts awarded to him by any Organ of State, during the past 5 years. **Any material non-compliance or dispute concerning the execution of any of these contracts must be mentioned.**

Include only those contracts where the tenderer identified in the signature block below was directly contracted by the Employer. Tenderers must not include services provided in terms of a sub-contract agreement. Where contracts were awarded in the name of a joint venture and the tenderer formed part of that joint venture, indicate in the column entitled "Title of the contract for the service" that the contract was in joint venture and provide the name of the joint venture that contracted with the employer. In the column for the value of the contract for the service, record the value of the portion of the contract performed (or to be performed) by the tender.

Organ of state, i.e. national or provincial department, public entity, municipality or municipal entity	Title of contract for the service	Value of Work Inclusive of VAT (Rand)	Date Completed (State current if not yet complete)

1J: COMPANY INFORMATION REQUIRED FOR TENDERS GREATER THAN R 5 MILLION

1. Is the tenderer is required by law to prepare audited annual financial statements? YES / NO

2. If so, provide audited annual financial statements:

- for the past three years; or
- since their establishment if established during the past three years.

Indicate whether these have been included in the tender. YES / NO

3. If answer for Question No.1 is NO, does the tenderer have annual financial statements? YES / NO

4. If so, provide audited annual financial statements:

- for the past three years; or
- since their establishment if established during the past three years.

Indicate whether the annual financial statements have been included in the tender. YES / NO

5. If answer for Question No.1 is NO, the tenderer shall attach to this form a letter from the tenderer's bank; in which the bank declares how the tenderer conducts its account. The contents of the bank's letter must state the credit rating that it accords to the tenderer for the business envisaged by this tender. The minimum acceptable credit rating applicable to tenderers for this tender is a C credit rating. The value of the bank rating must be calculated and checked with R2.5 million. Failure to provide the required letter with the tender submission may render the tenderer's offer unresponsive in terms of Clause 5.8 of the tender condition.

Indicate whether a credit rating letter from the bank has been included in the tender. YES / NO

6. Does the tenderer have any undisputed commitments for Municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days?

YES / NO

If so, state particulars:

.....
.....
.....

7. Has any contracts been awarded to the tenderer by an organ of state during the past five years?

YES / NO

If so, state particulars:

.....
.....
.....

8. Has there been any material non-compliance or dispute concerning the execution of such contract?

YES / NO

If so, state particulars:

.....

.....

.....

9. Is any portion of the goods or services expected to be sourced out from outside the Republic?

YES / NO

If so, state what portion and whether any portion of payment from the Municipality is expected to be transferred out of the Republic.

.....

.....

.....

.....

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

1K: CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

.....
(Bid Number and Description)

in response to the invitation for the bid made by:

.....
(Name of Municipality / Municipal Entity)

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

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

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

this bid invitation relates.

*** 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.**

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

Signed

Date

Name

Position

Tenderer

1L: PROPOSED AMENDMENTS

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

Page Number	Clause / Item	Proposal

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

1M :

PROOF OF REGISTRATION WITH THE BARGAINING COUNCIL

Tenderers must attach to this page, proof of registration and good standing with the Bargaining Council. (In the case of Joint Ventures, proof must be provided for each partner).

1N :

PROOF OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

Tenderers must attach to this page, proof of registration and good standing with the CIDB. (In the case of Joint Ventures, proof must be provided for each partner).

All existing and prospective service providers/creditors to the Kouga Municipality's supplier database should note that registration with the electronic Central Suppliers Database (CSD www.csd.gov.za for self-registering), developed by National Treasury, is a requirement.

Prospective tenderers are to attach the ***Certificate of Registration with CSD*** to this page.

1P :	DETAILS OF EXPERIENCE AND QUALIFICATIONS FOR CONTRACTS MANAGER, CONSTRUCTION MANAGER (SITE AGENT), GENERAL FOREMAN AND OH&S AGENT
-------------	--

Tenderers shall set out in the Schedules hereunder details of the Experience and Qualifications for the Contract Manager, the Construction Manager (Site Agent), General Foreman and the OHS Safety Officer Experience in work of a similar nature to that for which their Tender is submitted.

The tenderer is reminded that the information provided with this Schedule shall be used in terms of Clauses F.2.1.4.3 in Part T.1.2 Tender Data to confirm the tendering entity's eligibility to tender, and the responsiveness of the Tender submitted. The tenderer is therefore required to supply detailed information relating to previous projects, and projects to date, to clearly illustrate that the tendering entity meets key staff experience requirements stipulated in Clause F.2.1.4.3.

Note: Only the information provided on this Schedule, or attached hereto, will be considered. Failure to complete this Schedule may result in the tender being non-responsive.

RETURNABLE SCHEDULE P-1 CONTRACTS MANAGER	NAME & SURNAME : YEARS ACCRUED RELEVANT EXPERIENCE : QUALIFICATIONS :				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED	EMPLOYER AND CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)

NOTE : Attached CV and Proof of Qualifications as per Tender's Obligations clause F2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

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

RETURNABLE SCHEDULE P-2 CONSTRUCTION MANAGER (SITE AGENT)	NAME & SURNAME : YEARS ACCRUED RELEVANT EXPERIENCE : QUALIFICATIONS :				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED	EMPLOYER AND CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)

NOTE : Attached CV and Proof of Qualifications as per Tender's Obligations clause F2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

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

RETURNABLE SCHEDULE P-3 GENERAL FOREMAN	NAME & SURNAME : YEARS ACCRUED RELEVANT EXPERIENCE : QUALIFICATIONS :				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED	EMPLOYER AND CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)

NOTE : Attached CV and Proof of Qualifications as per Tender's Obligations clause F2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

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

RETURNABLE SCHEDULE P-4 OHS SAFETY OFFICER	NAME & SURNAME : YEARS ACCRUED EXPERIENCE AS OHS SAFETY OFFICER : QUALIFICATIONS : SACPMP REGISTRATION NO :				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK R(m)	DATE COMPLETED	EMPLOYER AND CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)

NOTE : Attached CV and Proof of Qualifications as per Tender's Obligations clause F2.1.4.3, in order to score ANY Functionality Points.

Also add this person to the Company's Organogram structure.

2A: ORIGINAL VALID TAX CLEARANCE CERTIFICATE

In terms of Clause 43 of the Municipal Supply Chain Management Policy, tenderers must ensure that they are up-to-date with their payments of taxes.

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

The tenderer must attach to this page an **original(s)** of a **valid** Tax Clearance Certificate(s) and the Tax compliance Status pin must be submitted.

Note:

1. In order to meet this requirement bidders are required to complete in full the form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
2. SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
4. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za
6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za

2B: MUNICIPAL BILLING CLEARANCE CERTIFICATE
--

In terms of Clause 38 of the Municipal Supply Chain Management Policy, tenderers must ensure that they are up-to-date with their payments of municipal accounts.

The tenderer shall attach to this page a Municipal Billing Clearance Certificate, which provides proof that his payment of Municipal accounts is up-to-date.

These certificates are obtainable from:

Kouga Local Municipality
33 Da Gama Road
Jeffreys Bay.

Should the tenderer not be based in the Kouga Local Municipality, he shall submit a Municipal Billing Clearance Certificate issued by the municipality in which he is based.

2C: B-BBEE STATUS LEVEL CERTIFICATES / CONSOLIDATED B-BBEE SCORECARD

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

Bidders other than EMEs shall submit and attach to this page 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.

A trust, consortium or joint venture acting as a legal entity shall submit and attach to this page their B-BBEE status level certificate.

A trust, consortium or joint venture acting as an unincorporated entity shall submit and attach to this page their consolidated B-BBEE scorecard as if they were a group structure and such a consolidated B-BBEE scorecard shall be prepared for every separate bid.

Tertiary institutions and public entities shall submit and attach to this page their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

All EME / B-BBEE certificates must reflect the B-BBEE status level of the bidder and must be certified.

2D: MBD 6.2 - DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

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

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2011 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, 2011 (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 bids 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 bids referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

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

Where

x is the imported content in Rand

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

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by 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](http://www.thedti.gov.za/industrial%20development/ip.jsp) at no cost.

- 1.6. A bid may be disqualified if –

- (a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and
- (b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.

2. Definitions

- 2.1. **“bid”** includes written price quotations, advertised competitive bids or proposals;
- 2.2. **“bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3. **“contract”** means the agreement that results from the acceptance of a bid 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 bid 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 bid 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 bid is:

<u>Description of services, works or goods:</u>	<u>Stipulated minimum threshold:</u>
uPVC & HDPE Pipes	100 %
Pumps, Medium Voltage (MV) Motor and Associated Accessories	70%
Electrical cables	90%

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 bid 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 bid.

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

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

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

5. Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?
(**Tick applicable box**)

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

- 5.1. If yes, provide the following particulars:

- (a) Full name of auditor:
- (b) Practice number:
- (c) Telephone and cell number:
- (d) Email address:

(Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)

6. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the 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 BID NO.

ISSUED BY: (Procurement Authority / Name of Municipality / Municipal Entity):
.....

NB

1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thedti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

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

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that

- (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (ii) the declaration templates have been audited and certified to be correct.

(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 (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / 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 bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

Annex C

Local Content Declaration - Summary Schedule

(C1) Tender No.
 (C2) Tender description:
 (C3) Designated product(s)
 (C4) Tender Authority:
 (C5) Tendering Entity name:
 (C6) Tender Exchange Rate:
 (C7) Specified local content %

Note: VAT to be excluded from all calculations

Pula EU GBP

Calculation of local content							
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)
2.4.1	HDPE pipes 200 mm PN12.5						
2.4.2	uPVC pipes 110 mm Class 12						
2.4.3	uPVC pipes 200 mm Class 12						
Section 5	Submersible borehole pumps						
Section 6	Electrical cables, etc.						

Tender summary			
Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C16)	(C17)	(C18)	(C19)

Signature of tenderer from Annex B

Date: _____

(C20) Total tender value R 0

(C21) Total Exempt imported content R 0

(C22) Total Tender value net of exempt imported content R 0

(C23) Total Imported content R 0

(C24) Total local content R 0

(C25) Average local content % of tender

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 _____ GBP _____

Note: VAT to be excluded from all calculations

A. Exempted imported content

Calculation of imported content										Summary	
Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)
(D19) Total exempt imported value										R 0	
										This total must correspond with Annex C - C 21	

B. Imported directly by the Tenderer

Calculation of imported content										Summary	
Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)
(D32) Total imported value by tenderer										R 0	

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

Calculation of imported content										Summary	
Description of imported content	Unit of measure	Local supplier	Overseas Supplier	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	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

Calculation of foreign currency payments					Summary of payments	
Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	Local value of payments	
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)	
(D52) Total of foreign currency payments declared by tenderer and/or 3rd party						
(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above					R 0	

Signature of tenderer from Annex B

Date: _____

This total must correspond with Annex C - C 23

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: _____

3A: RECORD OF ADDENDA TO TENDER DOCUMENTS
--

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

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

Attach additional pages if more space is required.

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

3B: PERSONNEL SCHEDULE

The tenderer shall insert the number of personnel he proposes to employ on this tender/Contract:

JOB DESCRIPTION	NON-LOCAL (Key Personnel) (Permanently employed by Contractor)	LOCAL			
		Women	Men	Youth	SMME
Contract Manager**					
Site Agent**					
Quantity Surveyor					
Surveyors					
General Foreman					
Foremen					
Operators					
Bricklayers					
Carpenters					
Mechanics					
Electricians					
Watchmen					
Gang Bosses					
Pipe Layers					
Labourers					
* Other					
Total					

* To be filled in / completed by tenderer.

The CV's of the Contracts Manager and Site Agent must be attached, in which they highlight their previous experience. The Company Profile of the proposed Sub Contractor is also to be submitted.

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

3C: DECLARATION CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS

In terms of Regulation 4(3) of the Construction Regulations (2014), hereinafter referred to as the Regulations, promulgated on 7 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), the Employer shall not appoint a Contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

Tenderers shall answer the questions below:

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

(Tick)

Yes	
No	

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

(Tick)

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

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

.....

.....

.....

.....

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

.....

.....

.....

.....

.....

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

.....

.....

.....

.....

.....

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

(Tick)	
Yes	
No	

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

1. ID NO:
(Name in Print):

2. ID NO:
(Name in Print):

3D: SCHEDULE OF CONSTRUCTION EQUIPMENT

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

- (a) Details of major equipment that is owned by and immediately available for use on this Contract should my / our tender be accepted.

Quantity	Description, Size, Capacity, etc.

- (b) Details of major equipment that will be **hired in**, or acquired, for use on the Contract should my / our tender be accepted.

Quantity	Description, Size, Capacity, etc.

Attach additional pages if more space is required.

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

3E: SCHEDULE OF PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors to work on this Contract.

If we are awarded a Contract we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the Contract for such appointments. If there are no such requirements in the Contract, then your written acceptance of this list shall be binding between us.

Name and Address of Proposed Subcontractor	Nature and Extent of Work	Previous Experience with Subcontractor

I, the undersigned, warrant that I am duly authorised to do so on behalf of the enterprise and confirm that the contents of this schedule are, to my personal knowledge and best belief, both true and correct.

Signed

Date

Name

Position

Tenderer

CONTRACT

PART 1 (OF 4): AGREEMENT AND CONTRACT DATA

C1.1	Form of Offer and Acceptance	94
C1.2	Contract Data	100
C1.3	Form of Guarantee	114
C1.4	Health and Safety Agreement	117
C1.5	Disclosure Statement	120
C1.6	Adjudication Board Member Agreement	121

C1.1: FORM OF OFFER AND ACCEPTANCE

(Agreement)

1. OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following Works:

HUMANSDORP GROUNDWATER SUPPLY

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

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

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

.....
.....
.....

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

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

For the **Tenderer**:

.....
Signature

.....
Name

.....
Capacity

Name and Address of Organisation:

.....

.....

.....

.....

.....

Signature and Name of Witness:

.....

Signature

.....

Name

Date:

2. ACCEPTANCE

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

The terms of the contract are contained in

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

Part C2: Pricing Data

Part C3: Scope of Work

Part C4: Site Information

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

Deviations from and amendments to the documents listed in the Tender Data and any Addenda thereto listed in the 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 authorised representative(s) of both parties.

The tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviation (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. Failure to fulfil any of the obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five (5) days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

For the **Employer**:

.....
Signature

.....
Name

.....
Capacity

Name and Address of Organisation:

.....
.....
.....
.....

Signature and Name of Witness:

.....
Signature

.....
Name

Date:

3. SCHEDULE OF DEVIATIONS

Notes:

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

1. Subject:
Details:
2. Subject:
Details:
3. Subject:
Details:
4. Subject:
Details:
5. Subject:
Details:
6. Subject:
Details:
7. Subject:
Details:

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and Addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

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

For the Tenderer:

.....

Signature

.....

Name

.....

Capacity

Name and Address of Organisation

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Witness Signature

.....

Witness Name

.....

Date

For the Employer:

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Name and Address of Organisation

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4. CONFIRMATION OR RECEIPT

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

the (day)

of (month)

20 (year)

at (place)

For the **Contractor**:

.....
Signature

.....
Name

.....
Capacity

Signature and Name of Witness:

.....
Signature

.....
Name

C1.2: CONTRACT DATA

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

Copies of these Conditions of Contract may be obtained on the tenderer's own cost from the SAICE.
(Tel: 011 – 055 947).

PART 1: DATA PROVIDED BY THE EMPLOYER

The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition, 2015, are applicable to this Contract:

Clause	Description / Wording
1.1.1.13	The Defects Liability Period is 12 months, measured from the date of the Certificate of Completion.
1.1.1.14	The time for achieving Practical Completion is 4 months , calculated from the Commencement Date.
1.1.1.15	The Employer is the Kouga Local Municipality.
1.1.1.16	The Employer's Agent is represented by an employee duly authorised thereto in writing.
1.1.1.26	The Pricing Strategy is: Re-measurable Contract
1.2.1.2	The Employer's address for receipt of communications is: 33 Da Gama Road Jeffreys Bay Postal Address: P O Box 21 Jeffrey Bay 6330 Telephone: 042 200 2200 Facsimile: 086 529 7827
1.2.1.2	The Employer's Agent's address for receipt of communications and notices is: Zutari (Pty) Ltd Lion Roars Office Park Corner Heugh Road & 3 rd Avenue Walmer Port Elizabeth 6070 Telephone: 041 503 3900 & 084 581 9964

Clause	Description / Wording
	Email: johan.vandermescht@zutari.com
3.2.3	The Employer's Agent shall obtain specific approval from the Employer before executing any of his functions or duties according to the following Clauses of the General Condition of Contract: 1. New Clause 3.2.3.1 "For expenditure on the Contract to exceed the Contract Sum"; 2. Existing Clauses: 3.3.1 - Nomination of person as Employer's Agent's Representative. 5.7.2 - Work at night as well as by day 5.8 – Non-working times 5.12 - Granting of extension of time excluding Clause 5.12.2.2 (Abnormal climatic conditions) 5.13 - Reduction of penalty for delay. 5.14.2 - The issue of a Certificate of Practical Completion. 5.14.4 - The issue of a Certificate of Completion. 5.16.1 - The issue of a Final Approval Certificate. 6.3 – Variation Orders which may exceed R 20 000 6.6 - Instruction to expend on Provisional and Prime Cost Sums 6.11 - Adjustment of General Items & Approval of Claims 8.2.2.2 - Order to repair and make good damage arising from any "excepted" risk.
3.2.4	The Employer's Agent has been appointed as Agent on this contract, in terms of Clause 5 of the Construction Regulations, 2014 as promulgated in terms of Section 43 of the Occupational Health and Safety Act, 1993. The duly appointed H&S Officials has been appointed as Client Agents on this contract, in terms of Clause 5 of the Construction Regulations, 2014 as promulgated in terms of Section 43 of the Occupational Health and Safety Act, 1993. The Principal Contractor shall perform a preliminary assessment of the project generated H&S plan and submit such to the employers agent for legal compliance reassessment & verification / approval prior to any works commencing. The duly appointed H&S Officials will be responsible for further monitoring and the auditing of the approved H&S plan for legal compliance.
4.3.1	<u>Add the following</u> to the clause: "For conventional construction works the Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) shall apply and the minimum employment conditions which will apply shall be guided by the latest Sectorial Determination: Civil Employers Agenting Sector published from time to time. Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) as per Government Notice R63 of 25 January 2002, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers." "The Contractor shall comply with the Occupational Health and Safety Specification prepared by the Employer in terms of the Construction Regulations, 2014 promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993). Without limiting the Contractor's obligations in terms of the Contract, the Contractor shall before commencement of the Works or any part thereof, be in the possession of an approved Health

Clause	Description / Wording
	and Safety Plan."
4.3	Add the following at the end of Clause 4.3: "4.3.3 The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as 'the Act', that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act: (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act. (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with. The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations. (iii) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor. (iv) The Contractor shall be obliged to report forthwith to the Employer and Employer's Agent any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Employer's Agent, of such investigation, complaint or criminal charge. 4.3.4 The Contractor shall furthermore, in compliance with Constructional Regulations 2014 to the Act: (i) Acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 5(1)(b) of the Construction Regulation 2014, and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 7(1)(b) of the Construction Regulation 2014 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted to the Employer for approval within fourteen (14) days after the Commencement Date and shall be implemented and maintained from the Commencement of the Works. (ii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to ensure that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Employer's Agent, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified."

Clause	Description / Wording
5.3.1	The documentation required before the commencement of the Works is: (i) Health and Safety Plan (Refer Clause 4.3) The Contractor shall deliver his health and safety plan, complete with Risk Assessment, in terms of Regulation 5(1) of the Construction Regulations (2014). (ii) Initial Programme (Refer Clause 5.6) The Contractor shall deliver his Initial Programme of carrying out the Works. (iii) Security (Refer Clause 6.2) The Contractor shall submit a Performance Guarantee from an Insurance Company or Bank to be jointly and severally bound with the Contractor, in accordance with the provisions of the Form of Guarantee, in a sum equal to ten per cent (10%) of the Contract Sum. The wording of the Guarantee shall be identical to the pro-forma provided under Clause C1.3: Form of Guarantee of the Contract Data. (iv) Insurance (Refer Clause 8.6) The Contractor shall submit a "Letter of Confirmation" from the approved Insurance Company certifying that: - that the applicable Contractor complies in full with all the requirements and stipulations of Clause 8.6 of the Conditions of Contract, as amended in the Contract Data and, - the Insurance Company will immediately notify the Employers Agent of any changes or amendments to the policy / policies and, - the Insurance Company will immediately notify the Employers Agent of any non-payment or default relating to the premiums and or policy / policies and, - the Insurance Company will immediately notify the Employers Agent should any of the applicable insurances expire or be cancelled before the issue of the "Certificate of Completion" or the "Final Approval Certificate", as the case may be."
5.3.2	The documentation shall be submitted within 14 days from the Commencement Date.
5.3.3	Add the following to Clause 5.3.3 after the last sentence: "The Contractor shall not commence working until they have an approved project specific health and safety plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2014 and complied with the initial requirements thereof."
5.4.1	Between the wording "... Site," and "the location" In the third line, add the following: "subject to the Contractor having an approved project specific health and safety plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2014 and complied with the initial requirements thereof,"
5.4.2	Access to and possession of Site shall not be exclusive to the Contractor but as set out in the Scope of Work and Site Information.
5.6.1	The Contractor shall deliver his Works programme within fourteen (14) days after the Commencement Date.
5.8.1	Delete the words "between sunset and sunrise" in the first line and replace with "outside normal working hours".

Clause	Description / Wording
	Non-working days are Saturdays and Sundays. Special non-working days are all applicable gazetted public holidays, election day of the local government elections and national elections (when applicable) and the year-end break. For the purposes of this Contract the year-end break shall be as declared by SAFCEC. The work done by the contractor should be done at hours of the day so as not to influence the normal operation of the existing infrastructure in any manner.
5.8.3	Add the following new Clause: “5.8.3 The additional cost of supervision and monitoring by the Employers Agent or his representatives, outside non-working times, in accordance with Clause 5.8.1 shall be for the Contractor's account.”
5.12.2.2	Add the following to Clause 5.12.2.2: The time period specified as the time for completion includes allowances for delays and days on which it is expected that work, on the critical path items of the Works, would be prevented due to normal weather conditions such as wind, rainfall or the subsequent waterlogged condition. Based on average weather conditions of wind, rain and sunshine the allowances are actual and consequential delays shall be as follows: • 3 working days per month for the months of May to October • 2 working days per month for the months of November to April If the Contractor has been prevented by these weather conditions from working on the critical path items of the works, then he must notify the Employer's Agent in writing. The submission shall be made within five calendar days of the resumption of work. The Employer's Agent shall upon considering all the relevant factors determine the extension of time to be granted on the basis that an extension of time to the contract will only be granted if the total number of days upon which work on the critical items was prevented, exceeds the total number of days calculated in terms of the above allowance and considering the official contract period as a whole. The tendered sums of the appropriate time-related items shall be increased to take account of the extensions of time granted.
5.12.2.4	In the event of any disruption which is entirely beyond the Contractor's control, the only compensation will be under the rates tendered for under items 1.2.8 through to 1.2.11.
5.12.3	Delete the entire subclause 5.12.3.
5.12.5	<u>Add the following</u> to Clause 5.12 5.12.5 Critical Path Provision A delay in so far as extension of time is concerned, will be regarded as a delay only if, on a claim by the Contractor in accordance with the General Conditions of Contract, the Employer's Agent rules that all progress on an item or items of work on the critical path of the approved programme for the execution of the Works by the Contractor, has been brought to a halt. Delays on normal working days only, based on a working week, of five normal working days, will be taken in account for the extension of time.

Clause	Description / Wording
5.13.1	The penalty for failing to complete the Works is R10 000 per day.
5.14.1	The requirements for Practical Completion are that the Works reach a state of readiness, fit for the intended purpose and occupation without danger or undue inconvenience to the Employer.
5.14.2	Issue of Certificate of Practical Completion Replace "the Employer's Agent" in the second line with the following: ", the Contractor shall notify the Employer's Agent, who shall inspect the works and the Employer's Agent"
5.14.4	Add the following to Clause 5.14.4: "The work listed in terms of Clause 5.14.2 shall however be completed within 21 days from the date of issue of the Certificate of Practical Completion. Should the Contractor fail to complete all the work so listed within the stated period of 21 days, the date of issue of the Certificate of Practical Completion shall be amended and extended in respect of the outstanding work by the amount of additional time taken by the Contractor to complete all such work."
5.14.5.5	Delete the contents of Clause 5.14.5.5 and replace with: "Insurance of the Works shall continue until the expiration of the Defects Liability Period, in terms of the new Clause 8.6 contained in this Contract Data".
5.16.3	The latent defect period is 10 years.
6.2.1	Replace the wording "as selected" in Clause 6.2.1 with "as stated". The security to be provided by the Contractor shall be: • a Performance Guarantee of ten per cent (10%) of the Contract Sum, plus • Retention Money amounting to five per cent (5%) of the Contract Price. Retention monies due shall be subjected to Clauses 6.10.1.3 and 6.10.3. The Performance Guarantee shall be from an approved Insurance Company or Bank to be jointly and severally bound with the Contractor, in accordance with the provisions of the Performance Guarantee. A Retention Money Guarantee is permitted. The wording of the Performance Guarantee shall be identical to the pro-forma provided under Clause C1.3: Performance Guarantee of the Contract Data The time to deliver the Performance Guarantee is within fourteen (14) days after the Commencement Date.
6.2.2	Replace the entire contents of Clause 6.2.2 with the following: "If the Contractor fails in his obligations to provide the stated security within the period stated in Clause 5.3.2, or if the Performance Guarantee shall differ from the pro-forma provided under Clause C1.3: Performance Guarantee of the Contract Data, the Employer may terminate the Contract in terms of Clause 9.2."
6.2.3	Replace the entire contents of Clause 6.2.3 with the following: "The Contractor shall ensure that the Performance Guarantee remains valid and enforceable

Clause	Description / Wording
	until the issue of the Certificate of Completion."
6.5.1.2.3	The percentage allowance shall be seven percent (7%).
6.8.2	Contract Price adjustment will not be applicable to this contract.
6.8.3	Price adjustments for variations in the costs of special materials are not allowed.
6.10.1	In subclause 6.10.1 delete "monthly".
6.10.1.5	The percentage advance on materials on site not yet built into the Permanent Works is 80%.
6.10.1.9	<u>Add the following new clause:</u> "The Contractor is required to submit completed, accurate and signed monthly Expanded Public Works Programme (EPWP) reports, attached to this tender document as Appendix B, together with all monthly payment certificates. Payment to the Contractor will not be processed until the EPWP reporting for a specific month is provided. In addition, a penalty for late submission of R1500.00 per day will be applicable for every day after the 5 th working day of the subsequent month to the reporting month."
6.10.3	Replace the entire contents of Clause 6.10.3 with the following: "Payment of the amounts referred to in Clauses 6.10.1.1, 6.10.1.2, 6.10.1.3 and 6.10.1.4 shall be subject to a retention by the Employer of an amount (called the "retention money"), being the percentage retention stated in the Contract Data, of the said amounts due to the Contractor, until the retention money reaches the "Limit of retention money" stated in the Contract Data." The percentage retention shall be ten per cent (10%) and the "Limit of retention money" shall be five per cent (5%) of the Contract Price, excluding Value Added Tax.
6.10.4	Replace the wordings "within 7 days" and "within 28 days" in Clause 6.10.4 with the wording "within 5 working days: and "within 30 days".
6.10.6.2	Replace the contents of Clause 6.10.6.2 with the following: "No interest shall be payable to the Contractor upon any moneys retained or overdue in terms of the Contract."
6.11.1	Delete this clause.
7.8	The Defects Liability Period shall be twelve (12) months, measured from the date of Certificate of Completion.
7.2.1	Add the following at the end of Clause 7.2.1: "Unless otherwise directed in writing by the Employers Agent, all materials for the Permanent Works shall be new and unused."
7.8.1	In subclause 7.8.1 delete the following: "(fair wear and tear excepted)"
7.8.2.2	In sub-subclause 7.8.2.2 add the following: ", subject to such work being done on a written instruction by the Employer's Agent."

Clause	Description / Wording
8.6 8.6.1	<u>Delete Clause 8.6. and replace with the following:</u> Notwithstanding the provisions contained in the General Conditions of Contract regarding insurance, and without limiting the obligations, liabilities and responsibilities of the Contractor in any way whatsoever and on the understanding that the Contractor is not relieved from his obligations towards the Employer regarding the provision (by the Contractor) of any other insurances, the Employer shall effect and maintain for the duration of the Contract until the expiry of the Defects Liability Period, including initial transit to the Contract site ⇒ Contract Works Insurance (including SASRIA Insurance) and ⇒ Public Liability (Third Party) Insurance both in the joint names of the Employer and the Contractor (including all Sub-Contractors whether nominated or otherwise), and those on whose behalf the Employer has authority to arrange insurance. The Contractor shall pay for all deductibles incurred as a result of claims made under the Contract. The Policy will be subject to the normal Terms, Exceptions and Conditions applicable to such insurance and will provide the following cover: <u>Section 1 – The Contract Works</u> (a) The Contract Works to be undertaken in terms of the Insured Contract, including all temporary works erected or in the course of erection and all materials for incorporation therein. “Temporary Works” shall mean all constructional aids, equipment or structures (not being part of the permanent works) used or intended for use on the Insured Contract and which (i) do not comprise mobile plant, (ii) the Insured does not intend to remove from the Contract Site on completion of the Contract, and/or (iii) have no residual value at the completion of the Contract (other than scrap value) solely due to their specialized nature, to the extent that the value has been included in the Contract price. (b) Surrounding property (as defined in the Policy) not included in nor forming part of the property insured under Item 1 above. <u>Section 2 – Contract Liability</u> Indemnity against the insured parties legal liability in the event of accidental death of or injury to third party persons and/or accidental loss of or damage to third party property arising directly from the execution of the contract. THE SUMS INSURED/LIMIT OF LIABILITY <u>Section 1 – CONTRACT WORKS</u> (a) Property insured under Section 1(a) The Contract Works The Agreed and Accepted Contract Value (subject to a maximum of R100M) in respect of any one Contract plus a maximum of 25% escalation, unless the Insurers’ agreement to amend these limits is obtained in writing.

Clause	Description / Wording																												
	(b) Property insured under Section 1(b) Surrounding Property R2,500,000 each and every loss SECTION 2 - CONTRACT LIABILITY Limit of Indemnity R10 000 000 (Ten Million Rand) for any one occurrence or series of occurrences arising out of one event. (1) EXCLUDED CONTRACTS The following Contracts are specifically excluded from the “blanket” cover arranged by the Employer, and insurance cover will not be arranged by the Employer. The Employer shall arrange with the Insurer for specific insurance cover for these contracts, and shall confirm such arrangement and all specific Terms & Conditions of such policy with the Contractor in writing. - Any Contract with a Contract Price at award of over R100,000,000 - Any Contract with a construction period at award exceeding 24 months - Any Contract with a Maintenance or Defects Liability Period exceeding 12 months - Any Contract involving - Underground Mine or Colliery Working’ - Tunnelling - Foul Berthing - Stevedoring Work “Wet” work at or about or connected with dams, docks, harbours, piers, breakwaters or otherwise involving construction in water THE DEDUCTIBLES The first amount payable by the Insured in respect of each and every occurrence giving rise to a claim under the Policy shall be as follows: (A) <u>STANDARD BUILDING CONTRACTS</u> <table><tr><th rowspan="2"></th><th rowspan="2">Description</th><th colspan="2">Existing</th><th colspan="2">Renewal</th></tr><tr><th>Gross rate</th><th>Excess</th><th>Gross rate</th><th>Excess</th></tr><tr><td>A1</td><td>Contract Value up to R10M</td><td>0.205%</td><td>R 10,000</td><td>0.205%</td><td>R 10,000</td></tr><tr><td>2</td><td>Contract Value above R10M up to R25M</td><td>0.255%</td><td>R15,000</td><td>0.255%</td><td>R15,000</td></tr><tr><td>3</td><td>Contract Value above R25M</td><td>0.255%</td><td>R25,000</td><td>0.255%</td><td>R25,000</td></tr></table>		Description	Existing		Renewal		Gross rate	Excess	Gross rate	Excess	A1	Contract Value up to R10M	0.205%	R 10,000	0.205%	R 10,000	2	Contract Value above R10M up to R25M	0.255%	R15,000	0.255%	R15,000	3	Contract Value above R25M	0.255%	R25,000	0.255%	R25,000
	Description			Existing		Renewal																							
		Gross rate	Excess	Gross rate	Excess																								
A1	Contract Value up to R10M	0.205%	R 10,000	0.205%	R 10,000																								
2	Contract Value above R10M up to R25M	0.255%	R15,000	0.255%	R15,000																								
3	Contract Value above R25M	0.255%	R25,000	0.255%	R25,000																								

Clause	Description / Wording					
	(B) <u>CIVIL & ALL OTHER CONTRACTS</u>					
		Description	Existing		Renewal	
			Gross rate	Excess	Gross rate	Excess
	B1	Contract Value up to R1M	0.350%	0.25% of claim minimum R10 000	0.350%	R 10,000
		Canals/water channels & bridges		R35,000		
	2	Contract Value above R1M up to R5M	0.350%	0.25% of claim minimum R20 000	0.350%	0.25% of claim minimum R15,000
		Canals/water channels & bridges		R35,000		Minimum R35,000
	3	Contract Value above R5M	0.350%	0.25% of claim minimum R50 000	0.350%	0.25% of claim minimum R50,000
		Canals/water channels & bridges		R50,000		
	(C) <u>LIABILITY RISKS</u>					
Liability limit: R10,000,000						
	Description	Existing		Renewal		
		Gross rate	Excess	Gross rate	Excess	
	All Contracts	0.10%	R25,000 in respect of loss or damage caused by Fire and damage to Underground Services. R20,000 in respect of all	0.15%	R25,000 in respect of loss or damage caused by Fire and damage to Underground Services. R10,000 in respect of all	

Clause	Description / Wording					
	<table><tr><td></td><td></td><td>other losses.</td><td></td><td>other losses.</td></tr></table> (D) SASRIA Rate : 1.00%			other losses.		other losses.
		other losses.		other losses.		
8.6.2	The Employer will pay all premiums in connection with the insurance affected by the Employer.					
8.6.3	In the event of any occurrence which is likely to give rise to a claim under the insurance arranged by the Employer, the Contractor or sub-Contractor shall (a) in addition to any statutory requirement or other requirements contained in the Conditions of Contract, immediately notify the Employer's Insurance Brokers by telephone or in writing giving the circumstances, nature and an estimate of the loss or damage; (b) complete a Claims Advice Form available from the Insurance Brokers to whom the form shall be returned without delay – a copy shall be sent to the Employer's Agent; (c) negotiate the settlement of claims with the Insurers through the Employer's Insurance Brokers, subject to the settlement being approved by the Employer. The Employer and Insurers shall have the right to make all and any enquiries, either on the site or elsewhere, as to the cause and results of any such occurrence and the Contractor shall give full facilities for carrying out such enquiries.					
8.6.4	Any amount which becomes payable as a result of a claim by the Contractor under the insurance effected by the Employer shall be paid net of the deductibles to the Employer, who shall pay the said amount to the Contractor upon rectification, repair or reinstatement of the loss or damage, but this provision shall not in any way affect the Contractor's obligations, liabilities and responsibilities in terms of the Contract.					
8.6.5	Submission of a Tender shall be deemed as acceptance by the Contractor that he is satisfied with the scope of the insurances effected by the Employer.					
8.6.6	The Contractor and/or Sub-Contractor shall provide, as a minimum, the following: (a) Proof of registration with the Department of Labour as an employer, in terms of the Compensation for Occupational Injuries and Diseases Act 1993, as amended (b) Common Law Liability Insurance for the duration of the Contract Period and with a minimum Limit of Indemnity of not less than R1 000 000 for any one accident; (c) Insurance on an All Risks basis for construction plant, equipment and other things (except those intended to incorporation into the works) brought onto the site to the full value of such construction plant, equipment and other things; (d) Motor Vehicle Liability Insurance, comprising a minimum of Balance of Third Party motor risks, including Passenger Liability, subject to a minimum limit of R2,5 million; (e) Where the Contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the 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					

Clause	Description / Wording
	endorsement to the Contractor's Policies of Insurance. (f) Imported equipment or component parts or materials to be supplied in terms of this Contract which require any process of assembly or finishing in South Africa prior to delivery to the site are to be insured by the Contractor up to the commencement of transit to site of the assembled or finished equipment, component parts or materials, unless special arrangements are made with the Employer.
8.6.7	These insurances shall be maintained in force for the duration of the Contract, including any Defects Liability Period and in respect of Sub-Contractors, the Contractor shall be deemed to have complied with the provisions of the requirements relating to insurance by ensuring that the Sub-Contractors have affected such insurance.
8.6.8	The Contractor may affect, at his own cost, any insurance additional to that affected by the Employer which he deems necessary in his own interests. The Employer reserves the right to call for full information regarding such insurances.
8.6.9	The insurances to be provided by the Contractor and Sub-Contractor shall be affected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and the Contractor shall, if required by the employer, produce to the employer the Policy or Policies of insurance and the receipts for payment of the current premiums.
8.6.10	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 insurance and pay such premium or 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.
8.6.11	Where the Contractor is responsible for the appointment of Sub-Contractors, then the Contractor shall (a) ensure that potential and appointed Sub-Contractors are aware of the whole content of this Special Conditions of Contract Clause; and (b) Ensure the compliance of Sub-Contractors with this Special Conditions of Contract clause, where applicable. The Contractor warrants that he shall give all notices and shall observe all the Terms and Conditions and requirements of all insurances applicable to this Contract.
9.1.4	Replace the contents of Clause 9.1.4 with the following: "Up to the time of termination of the Contract by either party in terms of this Clause, or until the Contractor gives notice in terms of this Clause to terminate the Contract and the Contractor is precluded from exercising his right to terminate the Contract because the Employer agrees to bear any resultant additional costs provided for in Clause 9.1.2.2 hereof, the Contractor: a) will be entitled to an extension of calendar time for working days lost as may be approved by the Employer's Agent, and b) will be reimbursed the cost of delays per working day, where the number of working days will be determined pro rata the effect the delays have on the progress of the work as agreed with the Employer's Agent. Payment in full and final settlement will be made at the rates tendered for the payment items specially provided in the Bill of Quantities Where the circumstances described in Clauses 9.1.1 and 9.1.2 are applicable only to a certain portion of the contract, the Employer's Agent will decide after consulting the Contractor, to what

Clause	Description / Wording
	extent the contract as a whole is affected and whether or not a claim in terms of this Clause can be submitted. No payment will be made in terms of this Clause after the expiry of the Due Completion Date.
10.3.2	Dispute resolution shall be by amicable settlement.
10.5.1	Dispute resolution shall be by ad-hoc adjudication.
10.5.3	The number of Adjudication Board Members to be appointed is one (1).
10.7.1	The determination of disputes which are unresolved in terms of Clause 10.5.3 shall be by arbitration.
10.11	Add the following additional clause: "Details to be confidential The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without the prior written consent of the Employer's Agent."

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause	Description / Wording
1.1.1.9	The Contractor is:
1.2.1.2	The Contractor's address for receipt of communications and notices is: Address (Postal): Address (Physical): Telephone Number (Work): Telephone Number (After Hours): Facsimile Number: Electronic Mail Address (E-mail):

C1.3: FORM OF GUARANTEE

PRO FORMA PERFORMANCE GUARANTEE

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address:

"Employer" means:

"Contractor" means:

"Employers Agent" means:

"Works" means:

"Site" means:

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

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

Amount in words:

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

Amount in words:

"Expiry Date": This Performance Guarantee shall remain in full force and effect **until the issue of the Certificate of Completion of the Works** in terms of the Contract. (Refer Clause 2 hereunder).

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the date of issue by the Employers Agent of the **Certificate of Completion of the Works** or the date of payment in full of the Guaranteed Sum, whichever occurs first unless the Guarantor is advised in writing by the Employer 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. The Employers Agent and / or the Employer shall inform the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
 - 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employers Agent in an Interim or Final Payment Certificate has not been made in term of the Contract and failing such payment within (7) seven calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
 - 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
 - 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and / or the provisional / final sequestration and / or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the **Final Payment Certificate** submit an **expense account** to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear zero percent (0%) interest.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

C1.4: HEALTH AND SAFETY AGREEMENT

ARTICLE OF AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL SAFETY ACT (1993)

BETWEEN

THE KOUGA LOCAL MUNICIPALITY
(Hereinafter referred to as the "EMPLOYER")

AND

.....
.....
.....

Herein represented by in his/her capacity as
....., duly authorised by virtue of a resolution dated
....., attached hereto as Annexure A, of the said
(Herein after referred to as the "CONTRACTOR")

WHEREAS the CONTRACTOR is the mandatory of the EMPLOYER as contemplated in an agreement in respect of:

.....
.....
.....

Contract number:

AND WHEREAS section 37 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993, hereinafter referred to as the "ACT"), imposes certain powers and duties upon the EMPLOYER.

AND WHEREAS the parties have agreed to enter into an agreement in terms of section 37(2) of the ACT.

NOW THEREFORE the parties agree as follows:

- (a) The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
- (b) The CONTRACTOR undertakes that all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations will be fully complied with. Provided that should the EMPLOYER prescribe certain arrangements and procedures, that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
- (c) The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedure, if any, imposed by the ACT and Regulations and the EMPLOYER expressly absolves the EMPLOYER from itself being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedure as the case may be.

- (d) The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with the undertakings as more fully set out in paragraphs (a) and (b) above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to inspect any appropriate records held by the CONTRACTOR or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.
- (e) The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigations, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such an investigation, complaint or criminal charge as the case may be.

Signature(s) of authorised agents:

.....

Name(s) (in block letters):

.....

Capacity of authorized agents:

.....

for and on behalf of the Contractor:

.....

.....

.....

(Name and address of organization)

Witness:

.....

(Full name in block letters as well as signature)

.....

(Signature)

Date:

for and on behalf of the Employer:

Signature of authorized agent:

Name of authorized agent:

Capacity of authorized agent:

for the **Employer:**

**KOUGA LOCAL MUNICIPALITY
P O Box 21
Jeffreys Bay
6330**

Witness:

.....

(Full name in block letters as well as signature)

.....

(Signature)

Date:

C1.5: DISCLOSURE STATEMENT

**PRO FORMA
DISCLOSURE STATEMENT**

Date:

Contract:
(Name)

Contractor:
(Name)

Employer:
(Name)

Employers Agent:
(Name)

Dear Sirs

I am willing and available to serve as (ad-hoc / standing) Adjudication Board Member in the above-mentioned Contract.

In accordance with the General Conditions of Contract for Construction Works Adjudication Board Rules relating to the disclosure statements by selected or nominated persons to the adjudication, I hereby state that:

- I shall act with complete impartiality and know of nothing at this time, which could affect my impartiality.
- I have had no previous involvement in this project.
- I do not have any financial interest in this project.
- I am not currently employed by the Contractor, Employer or Employers Agent.
- I do not have any financial connections with the Contractor, Employer or Employers Agent.
- I do not have or have not had a personal relationship with any authoritative member of the Contractor, Employer or the Employers Agent which could affect my impartiality.
- I undertake to immediately disclose to the parties any changes in the above position which could affect my impartiality or be perceived to affect same.

Should there be any deviation from the foregoing statements, details shall be given.

I further declare that I am experienced in the work which is carried out under the Contract and in interpreting the contract documentation.

Name in full:

Signature:

C1.6: ADJUDICATION BOARD MEMBER AGREEMENT

PRO FORMA
ADJUDICATION BOARD MEMBER AGREEMENT

This Agreement is entered into between:

Adjudication Board Member:

Name:

Physical Address:

Postal Address:

E-mail Address:

Facsimile Number:

Telephone Number:

Mobile Number:

Contractor:

Name:

Physical Address:

Postal Address:

E-mail Address:

Facsimile Number:

Telephone Number:

Mobile Number:

Employer:

Name:

Physical Address:

Postal Address:

E-mail Address:

Facsimile Number:

Telephone Number:

Mobile Number:

The Contractor and the Employer will hereinafter be collectively referred to as the Parties.

The Parties entered into a Contract for

..... (Name of project) which provides that a dispute under
or in connection with the General Conditions of Contract for Construction Works, Second Edition 2015 (GCC), must be
referred to **ad-hoc / standing adjudication**.

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

1. The Adjudication Board Member accepts to perform his duties in accordance with the terms of the Contract, the General Conditions of Contract for Construction Works Adjudication Board Rules and this Agreement.
2. The Adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Employers Agent for the duration of the Adjudication Board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties under the Contract. No Party may call the Adjudication Board Member as a witness in any such subsequent proceedings.
6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.
7. The Adjudication Board Member shall be paid in respect of time spent upon or in connection with the adjudication including time spent travelling:
 - a. A monthly retainer of (amount) for (number) of months, and/or
 - b. A daily fee of (amount) based on a (number) hour day, and/or
 - c. An hourly fee of (amount), and/or
 - d. A non-recurrent appointment fee of (amount) which shall be accounted for in the final sums payable
8. The Adjudication Board Member's expense incurred in adjudication work shall be reimbursed at cost.

Upon submission of an invoice for fees and expenses to the Parties, the **(Contractor / Employer)** * shall pay the full amount within 28 days of receipt of the invoice and shall be reimbursed by the other party by half the amount so that fees and expenses are borne equally by the Parties. Late payment of such invoice shall attract interest at prime plus 3% points compounded monthly at a prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature:

Contractor's name:

Place:

Date:

Employer's signature:

Employer's name:
Place:
Date:

Adjudication Board Member's signature:
Adjudication Board Member's name:
Place:
Date:

*** Delete the inapplicable party**

CONTRACT

PART 2 (OF 4): PRICING DATA

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C2.1: PRICING INSTRUCTIONS

C2.1.1 PREAMBLE TO THE BILL OF QUANTITIES

- C2.1.1.1 The method of measurement published by the South African Bureau of Standards in Clause 8 of the Standardized Specifications for Civil Employers Agenting Construction is applicable, subject to the variations and amendments contained in the section “Applicable SABS 1200 Standardized Specifications”.
- C2.1.1.2 Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardized Specifications. Clause 8 of each Standardized Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardized Specification, or the Scope of Work, conflict with the terms of the Bill, the requirements of the Standardized or Scope of Work, as applicable, shall prevail.
- C2.1.1.3 The reference clauses in a specification in which further information regarding the bill item can be obtained appear under the “Reference Clause” or “Payment Refers” column in the Bill. The reference clauses indicated are not necessarily the only sources of information in respect of schedule/billed items. Further information and set specifications may be found elsewhere in the contract documents. Standardized Specifications are identified by the letter or letters which follow SABS in the SABS 1200 series of specifications, e.g. G for SABS 1200 G.
- C2.1.1.4 Work reserved for Labour Intensive construction methods will be numbered with a prefix “LI” in the Bill to distinguish them from the conventional construction works. Such work shall be constructed using local labour who is temporarily employed in terms of the Scope of Work.
- C2.1.1.5 Unless otherwise stated, items are measured nett in accordance with the Drawings, and no allowance is made for waste. The Bill has to be completed in black non-erasable ink and the tenderer is referred to the Conditions of Tender as well as the Tender Data with regard to the correction of errors.
- C2.1.1.6 The quantities set out in the Bill of Quantities are the estimated quantities of the work. The tenderers attention is directed to Clause 6.7 of the Conditions of Contract and the Contractor will be required to determine the actual and final quantities of the Works to be executed and the Contractor shall undertake whatever quantities may be directed by the Employers Agent from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.
- C2.1.1.7 The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.
- C2.1.1.8 A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price / rate is entered will be considered to be covered by the other prices or rates in the Bill.

- C2.1.1.9 Except where rates only are required, the tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.
- C2.1.1.10 All prices or rates inserted in the Bill of Quantities shall be EXCLUDING VAT. Provision has been made on the Summary Page of the Bill of Quantities, for the addition of VAT.
- C2.1.1.11 Arithmetical errors of responsive tenders shall be corrected in the manner specified under the Conditions of Tender as well as the Tender Data. **(Refer also CIDB Practice Note No. 2 dated February 2008)**
- C2.1.1.12 The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:
- | | |
|--|----------------------------|
| mm = Millimetre | h = hour |
| m = Metre | kg = kilogram |
| km = kilometre | t = ton (1 000kg) |
| m ² = square metre | No = Number |
| m ² .pass = square metre-pass | Sum = Lump Sum |
| ha = hectare | MN = MegaNewton |
| m ³ = cubic metre | MN.m = MegaNewton-metre |
| m ³ .km = cubic metre-kilometre | PC Sum = Prime Cost Sum |
| □ = Litre | Prov Sum = Provisional Sum |
| k□ = kilolitre | Lab.month = Labourer.Month |
| MPa = Mega Pascal | % = per cent (percentage) |
| Mℓ = Mega litre | kW = kilowatt |
- C2.1.1.13 The quantities set out in the Bill are the estimated quantities of the Works but the Contractor will be required to undertake whatever quantities as may be directed by the Employers Agent from time to time. The Contract Price for the completed Contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.
- C2.1.1.14 An item against which no price / rate is entered or where a word or phrase such as "included" or "provided elsewhere" will be accepted as a rate of nil (R 0,00) having been entered against such items and covered by the other prices or rates in the Bill. Any work executed to which such a payment item applies, shall be measured under the appropriate items in the Priced Bill and valued at a rate of nil (R 0,00). The rate of nil shall be valid irrespective of any change in the quantities during the execution of the Contract.

NOTE: CORRECTION OF ENTRIES MADE BY TENDERER

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

C2.2: BILL OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
1	SANS 1200 A	SECTION 1: PRELIMINARY AND GENERAL				
		GENERAL as specified in SANS 1200 A and in the Scope of Work				
1.1	8.3	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS:				
1.1.1	8.3.1 PSA 8.3.1	Contractual requirements	Sum	-	-	
	8.3.2	Establishment of facilities on the site:				
	8.3.2.1 PSA 8.3.2.1	(a) Facilities for Employer's Agent :				
1.1.2		(i) One Contract nameboard	Prov Sum	-	-	R 12,000.00
1.1.3	8.3.2.2 PSA 8.3.2.2	(b) Facilities for Contractor	Sum	-	-	
1.1.4	8.3.3	Other fixed-charge obligations	Sum	-	-	
1.1.5	8.3.4	Removal of site establishment	Sum	-	-	
1.2	8.4	SCHEDULED TIME RELATED ITEMS : (Refer PSA 8.1.2.1 and PSA 8.2.2)				
1.2.1	8.4.1 PSA 8.4.1	Contractual requirements	Sum	-	-	
	8.4.2	Operation and maintenance of facilities on site for duration of construction :				
	8.4.2.2 PSA 8.4.2.2	(b) Facilities for Contractor				
1.2.2	8.4.3	Supervision for duration of construction	Sum	-	-	
1.2.3	8.4.4	Company and head office overhead costs for the duration of the contract	Sum	-	-	
1.2.4	8.4.5	Other time related obligations	Sum	-	-	
	8.4.6 PSA 8.4.6	Compensation in terms of clauses 5.12.2.4 and 9.1.4 of the Conditions of Contract for delays incurred:				
1.2.5		(a) Plant	Sum/day	8		
1.2.6		(b) Labour	Sum/day	8		
1.2.7		(c) Supervision	Sum/day	8		
1.2.8		(d) Other services, facilities etc. not covered by 1.2.5 through to 1.2.7	Sum/day	8		
1.3	PSA 8.5	SUMS STATED PROVISIONALLY BY THE ENGINEER:				
	PSA 8.5.1	(a) Works Executed by the Contractor				
1.3.1		Allowance for electrical connection by Kouga Municipality	Prov Sum	-	-	R 95,000.00
1.3.2		Allowance for connection at WTW	Prov Sum	-	-	R 50,000.00
1.3.3		Allowance for electronic flow meter at WTW	Prov Sum	-	-	R 200,000.00
TOTAL CARRIED FORWARD						

SECTION 1: PRELIMINARY AND GENERAL						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
	PSA 8.5.2	(b) Works Executed and performed by the Selected Subcontractors in Consultation with the Employer				
1.3.4		Telemetry installation	Prov Sum	-	-	R 150,000.00
1.3.5		Overheads, charges and profits on 1.3.4	%	R 150,000.00		
1.4	PSA 8.6	PRIME COST SUMS:				
1.4.1	PSA 8.6.1 (a)	Allowance for acceptance control testing by Employer's Agent (not for process control testing to be carried out by the Contractor)	PC Sum	-	-	R 10,000.00
1.4.2	PSA 8.6.1 (b)	Overheads, charges and profit on 1.3.1 above	%	R 10,000		
1.4.3	PSA 8.6.1 (a)	Allowance for payment of a Community Liaison Officer employed by Contractor	PC Sum	-	-	R 50,000.00
1.4.4	PSA 8.6.1 (b)	Overheads, charges and profit on 1.3.3 above	%	R 50,000		
1.5	8.7 PSA 8.7	DAYWORK				
		(a) Labour: (rates shall include for on costs)				
1.5.1		(i) Unskilled	hour	90		
1.5.2		(ii) Semi-skilled	hour	36		
1.5.3		(iii) Ganger	hour	18		
1.5.4		(iv) Artisan	hour	45		
		(b) Materials:				
1.5.5		Allow Provisional sum for materials based on their nett cost	Prov Sum	-	-	R 30,000.00
1.5.6		Charge required by Contractor on 1.5.5 above	%	R 30,000		
		(c) Plant: (Rates shall include for on costs)				
1.5.7		(i) Rubber tyred front-end loader minimum 90 kW (Caterpillar 908 or equivalent) State make and model	hour	24		
1.5.8		(ii) Backhoe Loader minimum 60 kW (Caterpillar 416D or equivalent) State make and model	hour	40		
1.5.9		(iii) Motor grader minimum 123 kW (Caterpillar 140H or equivalent) State make and model	hour	4		
1.5.10		(iv) Bull dozer minimum 108 kW (Caterpillar D6 or equivalent) State make and model	hour	24		
1.5.11		(vi) Excavator minimum 20 tons 103 kW (Caterpillar 302C or equivalent) State make and model	hour	24		
1.5.12		(vi) Excavator minimum 40 tons 103 kW (Caterpillar 302C or equivalent) State make and model	hour	4		
1.5.13		(vii) Water Tanker Truck minimum 15 m ³ capacity State make and model	hour	4		
TOTAL CARRIED FORWARD						

SECTION 1: PRELIMINARY AND GENERAL						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
1.5.14		(viii) Compressor complete with hand tools and attachments - minimum 250 cfm State make and model	hour	8		
1.5.15		(ix) Tip Truck - minimum truck capacity of 5m³ State make and model	hour	4		
1.5.16		(x) Revolving drum type concrete mixer - minimum capacity 0,3 m³ State make and model	hour	8		
1.5.17		(xi) Pedestrian type vibrating roller (Bomag BW65H or equivalent) State make and model	hour	4		
1.5.18		(xii) Compaction vibrating roller - Single Drum Smooth - Self Propelled - minimum 12 tons State make and model	hour	4		
1.5.19		(xiii) Compaction vibrating roller - Single Drum Padded or Grid - Self Propelled - minimum 12 tons State make and model	hour	4		
1.6	8.8 PSA 8.8	TEMPORARY WORKS				
	8.8.4 PSA 8.8.4 (c)	Existing services				
1.6.1		(a) Excavate by hand in soft material to expose existing services	m³	50		
	8.8.5 PSA 8.8.5	Cost of survey in terms of Land Survey Act:				
1.6.2		(a) Locate, record and protect erf boundaries and survey pegs	Sum	-	-	
1.6.3		(b) Replace pegs recorded as missing at commencement of Contract as well as pegs removed in terms of PSA 5.1.2 (a), (b) and (c)	No	-		Rate Only
1.6.4		Setting out of the works as per coordinates shown on construction drawings	Sum	1		
1.6.5	PSA 8.8.6	Dealing with water	Sum	-		Rate Only
1.7	PSA 8.8.7 PD	Compliance with the Occupational Health and Safety Act (Act 85 of 1993) and all relevant and applicable Regulations, especially the Construction Regulations, 2014 as promulgated on 7 February 2014 under Section 43 of the Occupational Health and Safety Act (Act 85 of 1993), as amended from time to time, for the duration of the Contract				
1.7.1		- Contractor	Sum	-	-	
1.7.2		- Subcontractors (own)	Sum	-	-	
1.8	PSA 8.9	Installation of Benchmarks by Registered Surveyor	No	-		Rate Only
1.9	PA	ENVIRONMENTAL MANAGEMENT as specified in Particular Specification PA				
1.9.1	PA 8.2.1	Method Statements: Additional work	No	4		
1.9.2	PA 8.2.2	All requirements of the environmental management specification (All work not measured elsewhere, associated with complying with any requirements of the environmental management specification)	Sum	-	-	
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 2: BULK WATER RETICULATION						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
2		SECTION 2: BULK WATER RETICULATION				
2.1	SANS 1200C	SITE CLEARANCE: as specified in SANS 1200 C and in the Scope of Work				
	8.2.1	Clear and grub:				
2.1.1		- Clear 5m width along route of bulk water pipeline	m ²	20,550		
	8.2.2	Remove and grub large trees and tree stumps of girth:				
2.1.2		- Up to and including 1.0 m	No	50		
2.1.3		- Over 1.0 m and up to and including 2.0 m	No	-		Rate Only
2.1.4	8.2.5 PSC 8.2.5	Take down and re-erect existing fences where ordered	m	200		
2.1.5	8.2.10 PSC 8.2.10	Remove topsoil, stockpile and maintain on site to depths indicated:				
2.1.6		- Depth up to 150mm	m ³	3,083		
2.1.7	PSC 8.2.11	Final finishing and cleaning up of site	Sum	-	-	
2.2	SANS 1200DB	EARTHWORKS (PIPE TRENCHES): as specified in SANS 1200 DB and in the Scope of Work				
	8.3.2	Excavation:				
	8.3.2a PSDB 8.3.2(a)	(a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
		(i) Trenches of width 800 mm to accommodate pipe diameters up to and including 250 mm:				
2.2.1		- Depth up to 1.0m	m	2,000		
2.2.2		- Depth exceeding 1.0m up to 1.5m	m	2,000		
2.2.3		- Depth exceeding 1.5m up to 2.0m	m	100		
	8.3.2b PSDB 8.3.2 (b)	(b) Extra over Items 2.2.1 through to 2.2.3 for:				
2.2.4	PSDB8.3.2(b)2	(i) Hard rock excavation	m ³	480		
2.2.5	PSDB8.3.2(b)3	(ii) Hand excavation where ordered	m ³	150		
2.2.6	PSDB8.3.2(b)4	(iii) Hand backfilling machine trenches where ordered	m ³	-		Rate only
2.2.7	PSDB8.3.2(b)5	(iv) Selective stockpiling of topsoil where ordered	m ³	500		
2.2.8	PSDB8.3.2(b)6	(v) Disposing of spoil material on a site provided by the Contractor	m ³	1,920		
2.2.9	PSDB8.3.2(b)7	(vi) Backfill stabilised with 5% cement where ordered	m ³	-		Rate only
2.2.10	PSDB8.3.2(b)8	(vii) Soilcrete backfill where ordered	m ³	-		Rate only
TOTAL CARRIED FORWARD						

SECTION 2: BULK WATER RETICULATION						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
2.2.11	8.3.2 (c)	(c) Excavate and dispose of unsuitable material from trench bottom	m ³	900		
2.2.12	8.3.2 (d)	(c) Excavate in all materials for valve chambers and the like, irrespective of depth and backfill around structures	m ³	75		
	8.3.3	Excavation ancillaries				
	8.3.3.1 PSDB 8.3.3.1	Make up deficiency in backfill material:				
2.2.13		(a) From other necessary excavations on Site	m ³	-		Rate Only
		(b) By importation from commercial or off-site sources selected by the Contractor				
2.2.14		(i) Subbase quality material complying with subclause 3.5 of SABS 1200 DB and PSDB 3.5	m ³	480		
2.2.15	8.3.3.3 PSDB 8.3.3.3	Compaction in road crossings (25% of modified AASHTO maximum density)	m ³	75		
	8.3.6	Finishing:				
	8.3.6.1 PSDB 8.3.6.1	Reinstate road surfaces				
2.2.16		(a) Backfill using Trenchfill	m ³	30		
2.2.17		(b) Hot asphalt type IVA (min thickness 40mm)	m ²	50		
2.3	SANS 1200LB	BEDDING (PIPES) as specified in SANS 1200LB and Scope of Work				
		(a) From trench excavation:				
2.3.1		- Selected granular material	m ³	-		Rate Only
2.3.2		- Selected fill material	m ³	-		Rate Only
	8.2.2	(b) Supply only of bedding by importation:				
	8.2.2.1	(i) From other necessary excavations (Provisional)				
2.3.3		- Selected granular material	m ³	-		Rate Only
2.3.4		- Selected fill material	m ³	-		Rate Only
	8.2.2.3	(ii) From commercial sources:				
2.3.5		- Selected granular material	m ³	1,804		
2.3.6		- Selected fill material	m ³	-		Rate Only
2.3.7	PSLB 8.2.2.3c	- 6.7mm concrete stone to SABS 1083	m ³	150		
2.3.8	8.2.3	Concrete bedding cradle	m ³	-		Rate Only
2.3.9	8.2.4	Encasing of pipes in concrete	m ³	-		Rate Only
2.3.10	PSLB 8.2.6	Supply and install geofabric material (Kaytech A2 or similar approved)	m ²	100		
TOTAL CARRIED FORWARD						

SECTION 2: BULK WATER RETICULATION						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
2.4	SANS 1200L	MEDIUM PRESSURE PIPELINES as specified in SANS 1200 L and Scope of Work				
		Supply, lay, joint, bed and test complete with couplings:				
	8.2.1 PSL 8.2.1	(a) PE100 PN12,5 black HDPE pipes in bedding for flexible pipes of outside diameters stated:				
2.4.1		- 200 mm dia (OD)	m	210		
	8.2.1 PSL 8.2.1	Supply, lay, joint, bed and test complete with couplings:				
		(b) uPVC class 12 pipes in bedding for flexible pipes of sizes stated:				
2.4.2		- 110 mm dia (OD)	m	753		
2.4.3		- 200 mm dia (OD)	m	3325		
	8.2.2 PSL 8.2.2	Extra over Item 2.4.1 through to 2.4.2 for the supplying, laying, jointing, bedding and testing of specials (complete with ancillaries and couplings):				
		(a) uPVC fittings:				
		(i) Socket ended uPVC bends of diameter, degrees and class stated:				
2.4.3		- 200mm x 22.5° bend, class 16	No	30		
2.4.4		- 200mm x 45° bend, class 16	No	25		
2.4.5		- 200mm x 90° bend, class 16	No	12		
		(ii) Repair couplings of diameters stated:				
2.4.6		- 200mm dia (OD)	No	4		
		(b) Cast iron fittings:				
		(i) Socket ended reducing tees for uPVC pipes of outside diameters stated:				
2.4.7		- 160mm x 110mm x 160mm	No	-		Rate Only
2.4.8		- 200mm x 160mm x 200mm	No	-		Rate Only
		(ii) Socket ended equal tees for uPVC pipes of outside				
2.4.9		- 200mm dia (OD)	No	-		Rate Only
		(iii) Socket ended end caps for uPVC pipes of outside diameters stated:				
2.4.10		- 200mm dia (OD)	No	-		Rate Only
TOTAL CARRIED FORWARD						

SECTION 2: BULK WATER RETICULATION						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
		(c) Steel fittings:				
		(i) Valve spindle extension pieces:				
2.4.11		- 600mm long	No	-		Rate Only
		(d) Specials and fittings for assembly in air valve chamber				
2.4.12		- 200mm diam Class 16 doubly lymg socket	No	20		
2.4.13		- 200mm Cast Iron Flanged Adaptors for uPVC pipes	No	20		
2.4.14		- 200mm NB x 150mm NB grade B steel reducing Tee, Flanged all ends, 481.8 mm from face to face and 157.7 mm from centre to face	No	10		
2.4.15		- 150mm NB x 50mm NB medium duty steel reducer, flanged both ends, 169.7 mm face to face	No	10		
2.4.16		- 50mm class 16 flanged gate valve	No	10		
2.4.17		- 50mm combination air valve, flanged (ARI D-070 or similar approved)	No	10		
2.4.18		- 200mm x 900mm long class 12 uPVC plain ended pipe	No	16		
		(e) Specials and fittings for assembly in scour valve chamber complete as detailed on drawings:				
2.4.19		- 200mm Viking Johnson coupling for uPVC pipes	No	12		
2.4.20		- 200mm cast iron flanged adaptor for uPVC pipes	No	12		
2.4.21		- 200mm NB x 100mm NB grade B steel scour tee, flanged both ends, 188mm face to face and 94mm from center to branch complete as indicated on the drawing	No	6		
2.4.22		- 100mm class 16 flanged gate valve	No	6		
2.4.23		- 100mm NB x 1400mm long, medium duty steel pipe, flanged both ends	No	6		
2.4.24		- 45° x 100mm NB flanged medium duty steel bend	No	6		
2.4.25		- 100mm NB x approximately 2000mm long medium duty steel pipe, flanged both ends	No	6		
2.4.26		- 200mm x 900mm long class 9 uPVC plain ended pipe	No	12		
2.4.27		- 100mm NB medium duty steel blank flange	No	6		
		(e) Specials and fittings for connection at Reservoirs:				
2.4.28		- 200mm Cast Iron Flanged Adaptors for uPVC pipes	No	-		Rate Only
2.4.29		- 200mm NB x approximately 1 000mm long Grade B steel pipe, flanged both ends	No	-		Rate Only
2.4.30		- 45° x 200mm NB flanged short radius steel bend	No	-		Rate Only
2.4.31		- 200mm NB puddle pipe, approximately 1 000mm long, flanged both ends with 150mm puddle flange in the centre of wall	No	-		Rate Only
TOTAL CARRIED FORWARD						

SECTION 2: BULK WATER RETICULATION						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
	8.2.3 PSL	Extra over item 2.4.17 through to 2.4.32 for supplying, fixing and bedding of valves, complete with all appurtenant pipework as per drawings:				
	8.2.3					
		(a) Class 16 socket ended gate valves for uPVC pipes of				
2.4.32		- 160mm dia (OD)	No	-		Rate Only
2.4.33		- 200mm dia (OD)	No	4		
		(b) Class 16 socket ended non-return valves for uPVC pipes of outside diameters stated:				
2.4.34		- 160mm dia (OD)	No	-		Rate Only
2.4.35		- 200mm dia (OD)	No	2		
	8.2.11	Anchor/thrust blocks and pedestals:				
2.4.36		(a) Concrete (15MPa/19)	m ³	90		
2.4.37		(b) Formwork (rough)	m ²	180		
	8.2.13 PSL 8.2.13	Chambers:				
	PSL 8.2.13a	(a) Valve chambers, etc.:				
2.4.38		- Valve chambers outside carriageways to details shown on drawings	No	2		
2.4.39		- Air valve chambers to details shown on drawings	No	10		
2.4.40		- Scour valve chambers to details shown on drawings	No	6		
	PSL 8.2.13b	(b) Extra over for chambers of depth exceeding 1.5m				
		(i) Air valve chamber				
2.4.41		- Depth 1.5m up to 2.0m	No	-		Rate only
		(ii) Scour valve chamber				
2.4.42		- Depth 1.5m up to 2.0m	No	-		Rate only
	PSL 8.2.16	Supply and install valve, hydrant and pipeline markers				
2.4.43		- Valve markers to details on drawings	No	24		
2.4.44		- Pipeline markers to details on drawings	No	50		
TOTAL CARRIED FORWARD TO SUMMARY						

			SECTION 3: BOREHOLE CHAMBERS			
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
3		SECTION 3: BOREHOLE CHAMBERS				
3.1	SANS 1200C	SITE CLEARANCE as specified in SANS 1200C and in the Scope of Work				
3.1.1	8.2.1	Clear and Grub	m ²	80		
3.1.2	8.2.10	Remove topsoil to nominal depth of 150mm and stockpile	m ³	32		
3.2	SANS 1200D	EARTHWORKS (SMALL WORKS) as specified in SABS 1200 D and in the Scope of Work				
	8.3.3 PSD 8.3.3	Restricted Excavation				
	PSD 8.3.3 (a)	(a) Excavate for restricted foundations in all materials, and use for fill or backfill or berm or dispose, as ordered				
3.2.1		- Depth up to 0.5m	m ³	10		
	PSD 8.3.3(c)	(b) Extra Over item 7.1.1 for:				
3.2.2		(i) Hard rock excavation	m ³	4		
3.3	SABS 1200DM	EARTHWORKS (SUBGRADE FOR CONSTRUCTION PLATFORMS) as specified in SABS 1200 DM and in the Scope of Work				
		Preparation of site:				
	8.3.3 a PSDM 8.3.3 a	Treatment of subgrade:				
		(a) subgrade preparation and compaction of material to:				
3.3.1		(i) Minimum 93% of modified AASHTO maximum density	m ³			
	8.3.3 b PSDM 8.3.3 b	(b) In-place treatment of subgrade in hard rock material by:				
3.3.2		(i) Ripping	m ³			
3.4	SABS 1200ME	SUBBASE as specified in SABS 1200 ME and in the Scope of Work				
	8.3.3 PSME 8.3.3	Construct the subbase course with material from commercial sources:				
3.4.1		(i) 150mm natural gravel sub-base, crushed (G5), Subbase compacted to 95% of modified AASHTO maximum density	m ³	6.40		
3.5	SABS 1200GA	CONCRETE (SMALL WORKS) as specified in SANS 1200GA and in the Scope of Work				
	8.2	SCHEDULED FORMWORK ITEMS				
	8.2.2	(a) Smooth Vertical to:				
3.5.1		- Sides of reinforced concrete floor (up to 200 mm high)	m ²	12.0		
	8.2.4	Box Out Circular Holes/Form Voids				
3.5.2		(a) provide for encasement of existing borehole sleeve protruding above ground level	No	4		
3.5.3		(b) build-in 1 x 63mmØ Class 6 uPVC socket ended bend (measured in Section 2) for electrical cable duct installation purpose. Upper end to be flush with floor surface and inner face of wall. Install 100mm long 63mmØ Class 6 uPVC extension piece.	No	4		
			TOTAL CARRIED FORWARD			

			SECTION 3: BOREHOLE CHAMBERS			
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
3.5.4		(c) build-in 100 mm Ø corrosion protected to specification galvanised steel delivery/rising main outlet puddle flange pipe with UG long radius bend and 1,000 mm flanged extension piece.	No	4		
3.5.5		(d) box out at either end to allow the construction of 300 mm x 300 mm sumps and provide 13 mm stone chips to fill - inclusive in rate for this item.	No	8		
	8.3	SCHEDULED REINFORCEMENT ITEMS				
	8.3.1	(a) Steel bars:				
3.5.6		(i) High tensile steel bars of all diameters:	t	0.5		
	8.3.2	(b) High tensile welded mesh:				
3.5.7		(i) Ref 245	m ²	10.0		
	8.4	SCHEDULED CONCRETE ITEMS				
	8.4.2	Blinding layer:				
3.5.8		(a) 50mm minimum thickness grade 15/19 concrete	m ³	1.5		
	8.4.3	Strength Concrete, Grade 25/19				
3.5.9		(i) Floor Slab with top mesh reinforcing (50mm cover)	m ³	6.12		
	8.4.4	Uniformed Surface Finishes				
3.5.10		a) Steel Floated Finish to Floor slab	m ²	30.60		
	3.6	BUILDING WORK & MISCELLANEOUS ITEMS				
3.6.1		Construct borehole chamber (masonry construction) as indicated on the design drawing, complete with lockable steel covers as shown	No	4		
3.6.2		Clear Vu 'Invisible' Fencing as per drawing, or similar approved	m	90.00		
3.6.3		Clear Vu Sliding Gate 3,000 mm wide, or similar approved	No	4		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 4: PIPE JACKING						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
4.1	SABS 1200LG	SECTION 4: PIPE JACKING PIPE JACKING: as specified in SABS 1200 LG and in the Scope of Work				
	8.2.1	Jacking/drilling establishment:				
4.1.1		(a) Fixed charges	Sum	-		
4.1.2		(b) Time-related charges	Sum	-		
	8.2.2	Supply of pipes to be jacked:				
		(a) HDPE PE100 PN10				
4.1.3		(i) 315 mm dia	m	150		
	8.2.3	Insertion of pipes by pipe augering / horizontal drilling method:				
		(a) HDPE PE100 PN10				
4.1.4		(i) 315 mm dia	m	150		
	8.2.4	Excavation for jacking/drilling: (entry & exit pits)				
4.1.5		(a) Excavate in all materials for pipe (including removal and disposal of surplus excavated material)	m³	180		
4.1.6	8.2.5	Extra-over and for unforeseen rock or boulders (Provisional)	-	-		Rate only
	8.2.9	Stabilization of unstable areas or grouting of voids where ordered:				
4.1.7		(a) Provision and establishment of equipment on site and removal on completion of operation	Sum	-		
4.1.8		(b) Operation of equipment	Days	10		
4.1.9		(c) Materials used	m³	10		
4.1.10	8.2.10	Standing time for pipe jacking gang and jacking equipment covered by 8.2.1 (where approved)	hour	16		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 5: MECHANICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
5	PB	SECTION 5: MECHANICAL WORKS				
		Works to be executed and performed by Pump Supplier and/or Mechanical Subcontractor				
5.1		Submersible borehole pumps, complete with motor, seals, coupling, etc: Supply, Install & Commission				
		Borehole HD2C (Pump installation depth - 100 m)				
5.1.1		Centrifugal borehole pump with integrated submersible motor, with sleeve (if required), with duty-point 15.31 m ³ /h at a differential head of 86.1m (Grundfos SP17-10 or similar approved). Duty head calculated based on borehole riser pipe being HDPE PE100 PN12.5, if different riser pipe to be used, duty head to be adjusted.	No	1		
5.1.2		Stainless Steel Bottom Adaptor (for specific pump and selected borehole riser pipe material supplied)	No	1		
5.1.3		Cast Iron Top Adaptor (for specific borehole riser pipe material supplied)	No	1		
5.1.4		Baseplate	No	1		
5.1.5		Borehole Riser Pipe: PE100 PN12.5 STR13.6 HDPE 63 mm (OD)	m	100		
5.1.6		Borehole Riser Pipe: Boreline (as an alternative to 5.1.5 above)	m	100		Rate only
5.1.7		Submersible borehole motor electrical cable (to match motor size)	m	110		
5.1.8		Submersible Electrical Cable Joint	No	1		
5.1.9		Duct for sensor cables: PE100 PN6 HDPE 32 mm (OD)	m	100		
5.1.10		Stainless Steel rope (to secure pump)	m	100		Rate only
		Borehole HD3 (Pump installation depth - 53 m)				
5.1.11		Centrifugal borehole pump with integrated submersible motor, with sleeve (if required), with duty-point 10.94 m ³ /h at a differential head of 62.2 m (Grundfos SP14-13 or similar approved). Duty head calculated based on borehole riser pipe being HDPE PE100 PN12.5, if different riser pipe to be used, duty head to be adjusted.	No	1		
5.1.12		Stainless Steel Bottom Adaptor (for specific pump and selected borehole riser pipe material supplied)	No	1		
5.1.13		Cast Iron Top Adaptor (for specific borehole riser pipe material supplied)	No	1		
5.1.14		Baseplate	No	1		
5.1.15		Borehole Riser Pipe: PE100 PN12.5 STR13.6 HDPE 50 mm (OD)	m	53		
TOTAL CARRIED FORWARD						

SECTION 5: MECHANICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
5.1.16		Borehole Riser Pipe: Boreline (as an alternative to 5.1.15 above)	m	53		Rate only
5.1.17		Submersible borehole motor electrical cable (to match motor size)	m	60		
5.1.18		Submersible Electrical Cable Joint	No	1		
5.1.19		Duct for sensor cables: PE100 PN6 HDPE 32 mm (OD)	m	53		
5.1.20		Stainless Steel rope (to secure pump)	m	53		Rate only
Borehole HD1 (Pump installation depth - 100 m)						
5.1.21		Centrifugal borehole pump with integrated submersible motor, with sleeve (if required), with duty-point 23.69 m ³ /h at a differential head of 89.5m (Grundfos SP30-10 or similar approved). Duty head calculated based on borehole riser pipe being HDPE PE100 PN12.5, if different riser pipe to be used, duty head to be adjusted.	No	1		
5.1.22		Stainless Steel Bottom Adaptor (for specific pump and selected borehole riser pipe material supplied)	No	1		
5.1.23		Cast Iron Top Adaptor (for specific borehole riser pipe material supplied)	No	1		
5.1.24		Baseplate	No	1		
5.1.25		Borehole Riser Pipe: PE100 PN12.5 STR13.6 HDPE 75 mm (OD)	m	100		
5.1.26		Borehole Riser Pipe: Boreline (as an alternative to 5.1.5 above)	m	100		Rate only
5.1.27		Submersible borehole motor electrical cable (to match motor size)	m	110		
5.1.28		Submersible Electrical Cable Joint	No	1		
5.1.29		Duct for sensor cables: PE100 PN6 HDPE 32 mm (OD)	m	100		
5.1.30		Stainless Steel rope (to secure pump)	m	100		Rate only
Borehole HD4 (Pump installation depth - 100 m)						
5.1.31		Centrifugal borehole pump with integrated submersible motor, with sleeve (if required), with duty-point 25.75 m ³ /h at a differential head of 102.8m (Grundfos SP30-12 or similar approved). Duty head calculated based on borehole riser pipe being HDPE PE100 PN12.5, if different riser pipe to be used, duty head to be adjusted.	No	1		
5.1.32		Stainless Steel Bottom Adaptor (for specific pump and selected borehole riser pipe material supplied)	No	1		
5.1.33		Cast Iron Top Adaptor (for specific borehole riser pipe material supplied)	No	1		
5.1.34		Baseplate	No	1		
TOTAL CARRIED FORWARD						

SECTION 5: MECHANICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
5.1.35		Borehole Riser Pipe: PE100 PN12.5 STR13.6 HDPE 75 mm (OD)	m	100		
5.1.36		Borehole Riser Pipe: Boreline (as an alternative to 5.1.5 above)	m	100		Rate only
5.1.37		Submersible borehole motor electrical cable (to match motor size)	m	110		
5.1.38		Submersible Electrical Cable Joint	No	1		
5.1.39		Duct for sensor cables: PE100 PN6 HDPE 32 mm (OD)	m	100		
5.1.40		Stainless Steel rope (to secure pump)	m	100		Rate only
5.2		Pipes and fittings to be supplied and installed in Borehole Chambers				
		Valves, instrumentation and pipework all as specified, depicted and listed on drawings.				
5.2.1		- At BH HD2C	sum	1		
5.2.2		- At BH HD3	sum	1		
5.2.3		- At BH HD1	sum	1		
5.2.4		- At BH HD4	sum	1		
5.3		Miscellaneous work				
5.3.1		Install water depth monitoring probes in all boreholes	sum	1		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 6: ELECTRICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
6		SECTION 6: ELECTRICAL WORKS				
6.1	PC	PARTICULAR SPECIFICATION PC: ELECTRICAL LV SWITCHGEAR AND CONTROL ASSEMBLIES				
		Switchgear Assemblies				
		Pole Mounted Main Transformer Distribution Boxes MAIN-EK-01 and MAIN-EK-02 complete. Factory acceptance testing for two persons included.				
6.1.1		Supply	Sum	2		
6.1.2		Install	Sum	2		
6.1.3		Testing and Commissioning	Sum	2		
		Motor Control Kiosks, HD4-EK, HD1-EK, HD3-EK and HD2C-EK complete. Factory acceptance testing for two persons included.				
6.1.4		Supply	Sum	4		
6.1.5		Install	Sum	4		
6.1.6		Testing and Commissioning	Sum	4		
6.1.7		Allow for all costs and expenses in connection with the Site Delivery of items in this section	Sum	1		
6.1.8		Pre-Commisioning Tests	Sum	1		
6.2		LV CABLES				
		Allow for all the costs and expenses in connection with the design, manufacture, routine testing, factory acceptance testing (if indicated) and supply of the following materials and equipment:				
		Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore cable with stranded conductors.				
6.2.1		2.5mm ² x 3 core	m	10		
6.2.2		2.5mm ² x 4 core	m	70		
6.2.3		4mm ² x 4 core	m	-		Rate only
TOTAL CARRIED FORWARD						

SECTION 6: ELECTRICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
6.2.4		6mm ² x 4 core	m	130		
6.2.5		10mm ² x 4 core	m	350		
6.2.6		16mm ² x 4 core	m	130		
6.2.7		25mm ² x 4 core	m	-		Rate only
6.2.8		35mm ² x 4 core	m	220		
6.2.9		50mm ² x 4 core	m	200		
6.2.10		70mm ² x 4 core	m	200		
		Cable terminations for Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore cables, complete, including gland shroud, lugs, number tags, etc and connection.				
6.2.11		2.5mm ² x 3 core	No	10		
6.2.12		2.5mm ² x 4 core	No	4		
6.2.13		4mm ² x 4 core	No	-		Rate only
6.2.14		6mm ² x 4 core	No	10		
6.2.15		10mm ² x 4 core	No	6		
6.2.16		16mm ² x 4 core	No	8		
6.2.17		25mm ² x 4 core	No	-		Rate only
6.2.18		35mm ² x 4 core	No	4		
6.2.19		50mm ² x 4 core	No	4		
6.2.20		70mm ² x 4 core	No	4		
		Bare Copper Earth cable with stranded conductors.				
6.2.21		2.5mm ²	m	-		Rate Only
6.2.22		4mm ²	m	-		Rate Only
TOTAL CARRIED FORWARD						

SECTION 6: ELECTRICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
6.2.23		6mm ²	m	10		
6.2.24		10mm ²	m	220		
6.2.25		16mm ²	m	220		
6.2.26		25mm ²	m	200		
6.2.27		35mm ²	m	200		
		Cable terminations for bare copper earth cables, complete, including gland shroud, lugs, number tags, etc and connection.				
6.2.28		2.5mm ²	No	-		Rate Only
6.2.29		4mm ²	No	-		Rate Only
6.2.30		6mm ²	No	10		
6.2.31		10mm ²	No	4		
6.2.32		16mm ²	No	8		
6.2.33		25mm ²	No	4		
6.2.34		35mm ²	No	4		
		Allow for all costs and expenses in connection with the Site installation of the following:				
		Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore cable with stranded conductors.				
6.2.35		2.5mm ² x 3 core	m	10		
6.2.36		2.5mm ² x 4 core	m	70		
6.2.37		4mm ² x 4 core	m	-		Rate Only
6.2.38		6mm ² x 4 core	m	130		
6.2.39		10mm ² x 4 core	m	350		
6.2.40		16mm ² x 4 core	m	130		
6.2.41		25mm ² x 4 core	m	-		Rate Only
6.2.42		35mm ² x 4 core	m	220		
6.2.43		50mm ² x 4 core	m	200		
6.2.44		70mm ² x 4 core	m	200		
TOTAL CARRIED FORWARD						

SECTION 6: ELECTRICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
		Cable terminations for Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore cables, complete, including gland shroud, lugs, number tags, etc and connection.				
6.2.45		2.5mm ² x 3 core	No	10		
6.2.46		2.5mm ² x 4 core	No	4		
6.2.47		4mm ² x 4 core	No	-		Rate Only
6.2.48		6mm ² x 4 core	No	10		
6.2.49		10mm ² x 4 core	No	6		
6.2.50		16mm ² x 4 core	No	8		
6.2.51		25mm ² x 4 core	No	-		Rate Only
6.2.52		35mm ² x 4 core	No	4		
6.2.53		50mm ² x 4 core	No	4		
6.2.54		70mm ² x 4 core	No	4		
		Bare Copper Earth cable with stranded conductors.				
6.2.55		2.5mm ²	m	-		Rate Only
6.2.56		4mm ²	m	-		Rate Only
6.2.57		6mm ²	m	10		
6.2.58		10mm ²	m	220		
6.2.59		16mm ²	m	220		
6.2.60		25mm ²	m	200		
6.2.61		35mm ²	m	200		
		Cable terminations for bare copper earth cables, complete, including gland shroud, lugs, number tags, etc and connection.				
6.2.62		2.5mm ²	No	-		Rate Only
6.2.63		4mm ²	No	-		Rate Only
6.2.64		6mm ²	No	10		
6.2.65		10mm ²	No	4		
6.2.66		16mm ²	No	8		
6.2.67		25mm ²	No	4		
6.2.68		35mm ²	No	4		
6.2.69		Allow for all costs and expenses in connection with the Storage and Site Delivery of items in this section	Sum	1		
TOTAL CARRIED FORWARD						

SECTION 6: ELECTRICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
6.3		EARTHWORKS (CABLE AND DUCT TRENCHES)				
		Excavate and set excavated material aside for re-use as filling for cable or sleeve trench not exceeding 1m deep				
6.3.1		In earth	m ³	100		
6.3.2		In soft rock	m ³	100		
6.3.3		In rock	m ³	140		
6.3.4		Bedding material imported from off-site source (provisional)	m ³	300		
6.3.5		Danger tape - 400 mm wide overlapping	m	1000		
6.3.6		Allow for all costs and expenses in connection with the Storage and Site Delivery of items in this section	Sum	1		
6.4		INSTRUMENTATION, CONTROL AND DATA CABLES				
		Allow for all the costs and expenses in connection with the design, manufacture, routine testing, factory acceptance testing (if indicated) and supply of the following materials and equipment:				
		Instrumentation Power cable Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore with stranded conductors. Cable fixed to cable tray, drawn into sleeves or laid into trenches.				
6.4.1		2.5mm ² x 3 core	m	400		
		Terminations for Instrumentation Power cable Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore with stranded conductors.				
6.4.2		2.5mm ² x 3 core	No	10		
		Extra low voltage instrumentation cable fixed to cable tray, drawn into sleeves or power skirting.				
6.4.3		1.5mm ² 1-pair	m	450		
		Terminations for Extra low voltage instrumentation cable				
6.4.4		1.5mm ² 1-pair	No	20		
		Allow for all costs and expenses in connection with the Site installation of the following:				
		Instrumentation Power cable Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore with stranded conductors. Cable fixed to cable tray, drawn into sleeves or laid into trenches.				
6.4.5		2.5mm ² x 3 core	m	400		
		Terminations for Instrumentation Power cable Cu/PVC Insulated/PVC Bedded/SWA/PVC Sheathed 600/1000V multicore with stranded conductors.				
6.4.6		2.5mm ² x 3 core	No	10		
TOTAL CARRIED FORWARD						

SECTION 6: ELECTRICAL WORKS						
Item	Payment Refers	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
6.4.7		Extra low voltage instrumentation cable fixed to cable tray, drawn into sleeves or power skirting. 1.5mm ² 1-pair	m	450		
6.4.8		Terminations for Extra low voltage instrumentation cable 1.5mm ² 1-pair	No	20		
6.4.9		Allow for all costs and expenses in connection with the Storage and Site Delivery of items in this section	Sum	1		
6.5		INSTRUMENTATION Allow for all the costs and expenses in connection with the design, manufacture, painting, supplying and installation of the following materials and equipment: Hydrostatic Level Transmitter complete including sensors, transmitters, mounting materials and stands as required.				
6.5.1		Supply	No	4		
6.5.2		Install	No	4		
6.5.3		Flow Switch complete including mounting materials and stands as required. Supply	No	4		
6.5.4		Install	No	4		
6.5.5		Pre-Commissioning Tests	Sum	1		
6.5.6		Allow for all costs and expenses in connection with the Storage and Site Delivery of items in this section	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY						

C2.3 SUMMARY OF THE BILL OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL	R
SECTION 2: BULK WATER RETICULATION	R
SECTION 3: MECHANICAL AND ELECTRICAL WORKS	R
SECTION 4: PIPE JACKING	R
SECTION 5: MECHANICAL WORKS	R
SECTION 6: ELECTRICAL WORKS	R

<i>SUBTOTAL A</i> : NETT TOTAL OF PRICED ITEMS	R
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<i>SUBTOTAL B</i> : VALUE ADDED TAX AS 15% OF SUBTOTAL A	R
--	---------

OFFER AMOUNT CARRIED FORWARD TO FORM OF OFFER (A+B)	R
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Notes:

1. Contract Price is not subject to Contract Price Adjustment (Clause 6.8.2 of the Conditions of Contract).
2. The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

Tenderer

CONTRACT

PART 3 (OF 4): SCOPE OF WORK

C3.1	Description of the Works	150
C3.2	Engineering	152
C3.3	Procurement	153
C3.4	Construction	155
C3.5	Management	271

C3.1: DESCRIPTION OF THE WORKS

STATUS

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

C3.1.1 EMPLOYER'S OBJECTIVES

The objective of the Employer (Kouga Local Municipality) is to install the required bulk water supply infrastructure to convey water from four production boreholes situated on municipal property to the Humansdorp Water Treatment Works.

C3.1.2 OVERVIEW OF THE WORKS

This contract forms part of the Kouga Local Municipality's current drought relief initiative where the intention is to reduce the dependency on existing surface water sources.

C3.1.3 EXTENT OF THE WORKS

The works will take place near Humansdorp. The Scope of this Contract includes:

(a) Site Clearance

- Clear and grub $\pm 20,550 \text{ m}^2$ along route of bulk water pipeline, including removal of vegetation.
- Stripping of topsoil up to 150 mm and stockpiling for later rehabilitation of disturbed areas, $\pm 3,083 \text{ m}^3$.

(b) Bulk Water Reticulation

- Construction (excavation, bedding, testing and backfilling) of $\pm 3,550 \text{ m}$ of 200 mm diameter uPVC Class 12 pipes and $\pm 760 \text{ m}$ of 110 mm diameter uPVC Class 12 pipes, including fittings, valves and concrete thrust blocks.
- Construction of 4 x borehole chambers (masonry construction).
- $\pm 160 \text{ m}$ of horizontal drilling under a national road.

(c) Mechanical and Electrical installations

The four boreholes are to be equipped with centrifugal submersible pumps. The installation of the pumps and the associated electrical switchgear as well as the laying of the required medium voltage electrical cables form part of this Contract.

This description of the Works is not necessarily complete. The above list shall not limit the work to be carried out under this Contract.

C3.1.4 LOCATION OF THE WORKS

Access to the site is from the R330 which links Humansdorp and Hankey. The site is located directly north of Humansdorp on municipal owned land. Works will be executed on municipal land in close proximity to existing electrical services (buried cables and overhead transmission lines).

The Contractor must note that no additional payment will be made for the construction of temporary access roads to the construction sites, borrow-areas or to the spoil sites, except for payment made under payment item 8.3.2.2 of SANS 1200 A.

The Contractor shall clear any spillage caused by his activities on or near any roads, by whatever means necessary, within 24 hours after such spillage has occurred. No additional payment will be made for the clearance of spillage and all related costs will be deemed to be covered under the relevant items.

C3.1.5 TEMPORARY WORKS

Normal temporary work such as supports for formwork and shoring of trenches, etc. will be required to facilitate construction.

The Contractor shall be responsible for designing and providing any temporary works required. Such temporary works shall be removed upon completion of the Works and the site of such temporary works re-instated to a pristine condition acceptable to the Environmental requirements.

C3.2: ENGINEERING

C3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX

Works designed by, per design stage:

Concept, feasibility and overall process	Employer's Agent
Basic engineering and detail layout to tender stage	Employer's Agent
Final design to approved for construction stage	Employer's Agent
Temporary works	Contractor
Preparation of as-built drawings & GIS information	Contractor/Employer's Agent

C3.2.2 DESIGN PROCEDURES

The Contractor shall take all statutory requirements, as well as the Site-Specific Health and Safety Specification and Basic Risk Assessment (refer to particular specification PB) into consideration when designing the Temporary Works.

C3.2.3 DRAWINGS

The drawings are listed under **Appendix B**, which are bound at the back of the document.

C3.3: PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT**C3.3.1.1 Requirements**

Refer to Clause F.2.23.2 of the Tender Data and Form 1G: Form MBD 6: Preference Points Claim form in terms of the Preferential Procurement Regulations 2011 (80/20 version) of the Tender Data.

C3.3.1.2 Resources Standards pertaining to targeted procurement

Tenders will be evaluated in terms of the Employer's Procurement Points system. The criteria for allocation of procurement points are stated in Clause F.3.11 of the Tender Data.

C3.3.2 SUBCONTRACTING**C3.3.2.1 Scope of mandatory subcontract works**

The Contractor shall note that there will be no mandatory subcontract work allocated to local Emerging Enterprises due to the emergency nature of this project.

C3.3.2.2 Preferred subcontractors / suppliers

Not applicable.

C3.3.2.3 Subcontracting procedures

All matters pertaining to subcontractors and the work executed by them shall be dealt with directly between the Employer's Agent and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

Subcontractors shall comply in full to all aspects of the Contract.

The Employer's Agent will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.

The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.

Subcontractors shall comply in full, to all aspects of the Contract.

C3.3.2.4 Attendance on subcontractors

Not applicable.

C3.3.3 SANCTIONS

Not applicable.

C3.3.4 MONITORING / REPORTING

Not applicable.

C3.3.5 CONTRACTOR'S OBLIGATIONS TO SUBCONTRACTED EEs

Not applicable.

C3.3.6 ISSUING OF COMPLETION CERTIFICATE

Not applicable.

C3.3.7 MEASUREMENT AND PAYMENT

Not applicable.

C3.4: CONSTRUCTION

C3.4.1 WORKS SPECIFICATION

C3.4.1.1 Applicable SANS standards

The applicable SABS 1200 Standardised Specifications for Civil Engineering Construction read in conjunction with the SABS 0120 Code of Practice for use with standardised specifications for Civil Engineering Construction and Contract Documents will apply until such time as the SANS standards for civil engineering are finalised.

C3.4.1.2 Other standards

Not applicable.

C3.4.1.3 Applicable national and international standards

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

SANS 1200 A	-	General
SANS 1200 C	-	Site Clearance
SANS 1200 DB	-	Earthworks (Pipe trenches)
SANS 1200 DM	-	Subgrade
SANS 1200 GA	-	Concrete (Small Works)
SANS 1200 L	-	Medium-Pressure Pipelines
SANS 1200 LB	-	Bedding (Pipes)
SANS 1200 LG	-	Pipe Jacking
SANS 1200 LK	-	Valve Installations
SANS 1200 ME	-	Subbase

Notes to tenderer:

1. Should any variation and/or addition conflict with the requirements of the standardized specification, the variation or addition will prevail.
2. The term "project specifications" appearing in any of the SANS1200 standardised specifications must be replaced with the term "scope of work".
3. The General Conditions of Contract applicable to this contract are the "Conditions of Contract for Construction Works (3rd Edition) 2015" published by the South African Institute of Civil Engineering, together with the Special Conditions of Contract form part of the contract.
4. The terms "Schedule of Quantities", (used throughout the Standard Specifications) and "Bill of Quantities", (used in all other documents forming part of this contract), and "Pricing Schedule" are synonymous.

The variations and additions to the specifications are listed in C3.4.11.

In addition, the following Particular Specifications for work not covered by the SABS 1200 Standardized Specifications are also bound in the Scope of Work.

C3.4.1.4 Particular/Generic Specifications

The particular and/or generic specifications listed below are applicable to this contract. These specifications are also bound into this document.

PA

Environmental Management

PB
PC
PD

Borehole Pump Specifications
Electrical Specifications
Health and Safety Specifications

C3.4.1.5 Certification by recognised bodies

Not applicable

C3.4.1.6 Agrément certificates

Not applicable.

C3.4.2 PLANT AND MATERIALS

C3.4.2.1 Plant and materials supplied by the employer

The Employer will not supply any plant or materials on this contract. The Contractor shall provide all plant and materials.

C3.4.2.2 Materials, samples and shop drawings

Materials or work, which does not conform to the approved samples submitted in terms of Clause 7.4 of the Conditions of Contract, will be rejected. The Employer's Agent reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such test conducted by or on behalf of the Employer's Agent, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Clause 7.1 of the Conditions of Contract, be for the Contractor's account.

C3.4.3 CONSTRUCTION EQUIPMENT

C3.4.3.1 Requirements for equipment

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

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

C3.4.3.2 Equipment provided by the Employer

The Employer shall not supply any equipment.

C3.4.4 EXISTING SERVICES

The Contractor shall familiarize himself with all existing services and liaise with all relevant authorities for the location and detection of existing services. The Contractor shall also use all necessary means to locate and expose services without damage to such services. The Contractor shall protect any services which are visible or can be reasonably expected to be in certain positions. If the Employer's Agent rules that the Contractor has negligently damaged services, the Contractor shall pay the amount certified by the Employer's Agent to the Employer. The Employer's Agent ruling shall be final.

If the Employer's Agent rules that the damage was not due to the Contractor's negligence, the Employer shall pay for the repair of the services so damaged. The responsibility shall remain with the Contractor to establish the position of existing services prior to commencing any excavation.

C3.4.5 SITE ESTABLISHMENT

C3.4.5.1 Location of site camp and materials storage area

The Contractor shall establish his Site camp and materials storage area at a mutually acceptable location. Written confirmation of the owner's permission to occupy the chosen location shall also be issued to the Employer's Agent if it falls outside the bounds of the site.

The site of the camp must be kept clean and tidy, and on completion of the works the Contractor shall remove all temporary offices, sheds, etc. and shall reinstate the area to the Employer's Agent and/or the owner's satisfaction.

The Employer shall not provide any services to the site during construction.

The conditions of the EIA RoD will apply to Site Establishment as much as to any other aspect(s) of the Project. The Contractor shall adhere to the conditions as stipulated in the environmental management specification (PA).

C3.4.5.2 Water Supply

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

The Contractor shall, at his own expense, be responsible for obtaining and distributing all water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use as well as for making all arrangements in connection therewith. The Contractor shall further, at his own expense, be responsible for providing all necessities for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith.

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

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

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

The Contractor shall, whenever reasonably required by the Employer's Agent, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

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

The Contractor shall take note that no separate or direct payment of any kind whatsoever will be made for any cost incurred to obtain, distribute, consume and use water or for the provision of a water supply point or for the cost of water drawn. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

C3.4.5.3 Power / Electricity Supply

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

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

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations. No separate payment will be made to the Contractor for the obtainment, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's tendered rates and prices.

C3.4.5.4 Sanitary facilities

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, all to the satisfaction of the responsible health authorities in the area of the Site as well as the Employer's Agent.

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

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

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

C3.4.5.5 Accommodation of employees

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

C3.4.6 SITE USAGE

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

C3.4.7 PERMITS AND WAY LEAVES

The Employer's Agent is responsible for obtaining all necessary permits and way leaves from all relevant authorities.

C3.4.8 FACILITIES PROVIDED BY THE CONTRACTOR

C3.4.8.1 Office for the Employer's Agent

A separate office for the Employer's Agent is not required. The Contractor shall provide a table or desk and chair in his own office for use by the Employer's Agent.

Site meetings will be held in the Contractor's office or any other agreed upon venue, which must be big enough and have sufficient seating for this purpose.

C3.4.8.2 Sanitary facilities

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

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

C3.4.8.3 Security on site

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

C3.4.9 FEATURES REQUIRING SPECIAL ATTENTION

C3.4.9.1 Site maintenance

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

C3.4.9.2 Access to properties (where relevant)

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 8.1.1 of the Conditions of Contract.

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

Notwithstanding the above, the Contractor may, with the prior approval of the Employer's Agent (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

C3.4.9.3 Monthly statements and payment certificates

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

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

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Employer's Agent within three (3) normal workings days from the date on which the Employer's Agent

communicated to the Contractor the adjustments required. The Contractor shall submit to the Employer's Agent five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

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

C3.4.9.4 Notices, signs, barricades and advertisements

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

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

C3.4.9.5 Workmanship and quality control

The Employer, the Contractor and the Employer's Agent shall operate and maintain their own individual contract administration and quality assurance systems.

The Contractor shall implement his own Quality Assurance plan for executing the works for compliance with the aforementioned standards and specifications.

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

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

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

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

i. Contractor to engage services of an independent laboratory.

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

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

such testing carried out by the independent laboratory.

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

ii. Additional testing required by the Employer's Agent

In addition to the provisions of subclause C3.4.9.5 (i): Contractor to engage services of an independent laboratory, the Employer's Agent shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in subclause C3.4.9.5 (i), at such times and at such locations in the Works as the Employer's Agent shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Employer's Agent, and copies of the test results shall be promptly submitted to the Employer's Agent.

iii. Costs of testing

(a) Tests in terms of subclause C3.4.9.5 (i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of subclause C3.4.9.5 (i), above shall be borne by the Contractor and shall be deemed to be included in the tendered rates and prices for the respective items of work as listed in the Bill of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of subclause C3.4.9.5 (i).

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

(b) Additional tests required by the Employer's Agent

The costs of any additional tests required by the Employer's Agent in terms of subclause C3.4.9.5 (i) Additional testing required by the Employer's Agent, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Bill of Quantities; provided always that the costs of any such additional tests ordered by the Employer's Agent, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

C3.4.9.6 Public Safety

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

As the area is adjacent to a residential area the Contractor shall take special precautions to prevent public access to any danger areas on the Works, e.g. by temporary barricades and/or fencing.

C3.4.9.7 Sand and Dust Control

The Contractor shall, for the duration of the contract, take appropriate measures to control the dust and soil movement which may arise due to his operations.

C3.4.9.8 Employment of local labour

It is the intention that this Contract should make maximum use of the local labour force that is presently under-employed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The Contractor shall fill in the form entitled Key Personnel in the Forms to be completed by the Tenderer. The data stated on the above-mentioned form will be strictly monitored during the Contract period and any deviations therefrom shall be subject to the prior approval of the Employer's Agent, which approval shall not be unreasonably withheld.

C3.4.10 EXTENSION OF TIME DUE TO ABNORMAL RAINFALL

A claim for extension of time in respect of delays suffered by the Contractor in consequence of abnormal wet climatic conditions will be considered by the Employer's Agent in terms of Clause 5.12 of the Conditions of Contract and in accordance with provisions set out hereunder.

For the purposes of extension of time, a delay caused by abnormal wet climatic conditions will be regarded as a delay only if, in the opinion of the Employer's Agent, all progress on an item or items of work on the critical path of the Contractor's working programme as approved in terms of Clause 5.6 of the Conditions of Contract has been brought to a halt.

Unless it is customary to carry out the work, in respect of which a delay was suffered, by rotary shifts or by day and by night, only delays to critical path items experienced as a result of wet climatic conditions during normal working hours (as defined in Clause 5.8 of the Conditions of Contract) will be taken into account for extension of time. This will apply notwithstanding the fact that a delay may have occurred on a portion of the Works on the critical path due to wet climatic conditions, which work was being executed outside the said normal hours with the permission of the Employer's Agent, granted in terms of Clause 5.8 of the Conditions of Contract.

The Contractor shall make due allowance within his programme submitted in terms of Clause 5.6 of the Conditions of Contract, for the total delay to work items on the critical path resulting from normal wet climatic conditions. The specified allowances for this Contract are defined in Clauses 24-26 of the Contract Data.

Extension of time, if granted by the Employer's Agent, will be determined as the aggregate number of normal working hours for which all progress on the item or items on the critical path was brought to a halt as a result of wet climatic conditions, less the number of normal working days specified in Clause 5.12 of the Contract Data.

In determining the revised Due Completion Date of the Contract, the Employer's Agent shall add the equivalent number of normal working days delay determined in accordance with this Clause and all intervening normal non-working days to the prevailing Due Completion Date.

C3.4.11 VARIATIONS AND ADDITIONS TO SABS 1200 STANDARDIZED SPECIFICATIONS AND PARTICULAR SPECIFICATIONS

The following variations and additions to the SABS 1200 Standardized Specifications referred to shall apply to this Contract (full specifications added below):

- PSA - GENERAL
- PSC - SITE CLEARANCE
- PSDB - EARTHWORKS (PIPE TRENCHES)
- PSDM - SUBGRADE
- PSGA – CONCRETE (SMALL WORKS)
- PSL - MEDIUM PRESSURE PIPELINES
- PSLB - BEDDING (PIPES)
- PSLG – PIPE JACKING

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- PSLK - VALVE INSTALLATIONS. (SPEC LK)
- PSME - SUBBASE

The prefix "PS" indicates an amendment to SABS 1200. The prefix "PSA" indicates an amendment to SABS 1200 A, "PSDB" to SABS 1200 DB and so on. The letters and numbers following these prefixes respectively indicate the relevant Standardized Specification and clause numbers in SABS 1200 to which the variation or addition thereto applies.

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

The term "project specifications" appearing in any of the SABS 1200 Standardized specifications must be replaced with the term "Scope of Work".

Further to the above it should be noted that where in a specific Standardized Specification reference is made to a Subclause in another Standardized Specification, any amendment or addition to the Subclause referred to, as provided for in the Specification, shall apply. The aforementioned shall also apply with respect to Clauses referred to in a Particular Specification.

PSA GENERAL

PSA 1 SCOPE

Replace the contents of Clause 1.1, including the notes, with the following:

"1.1 This specification covers requirements, principles and responsibilities of a general nature which are generally applicable to civil engineering construction and building works contracts, as well as the requirements for the Contractor's establishment on the Site."

PSA 2 INTERPRETATIONS

PSA 2.3 DEFINITIONS

In the opening phrase, insert the words: "the definitions given in the Conditions of Contract and" between the words "specification" and "the following".

a) General

Add the following definitions:

"General Conditions and Conditions of Contract. The General Conditions of Contract specified for use with this Contract as amended in the Contract Data.

Specified As specified in the Standardized Specifications, the Drawings or the Scope of Work. "Specifications" shall have the corresponding meaning."

c) Measurement and payment

Replace the definitions for "Fixed charge", "Time-related charge" and "Value-related charge" with the following:

"Fixed charge. A charge that is not subject to adjustment on account of variations in the value of the Contract Price or the time allowed in the Contract for the completion of the work.

Time-related charge. A charge, the amount of which varies in accordance with the Time for Completion of the Works, adjusted in accordance with the provisions of the Contract.

Value-related charge. A charge, the amount of which varies pro rata with the final value of the measured work executed and valued in accordance with the provisions of the Contract."

PSA 2.4 ABBREVIATIONS

a) Abbreviations relating to standard documents

Add the following abbreviation:

"CKS: SABS Co-ordinating Specification."

PSA 3 MATERIALS

PSA 3.1 QUALITY

Where applicable, materials shall bear an official standardization mark.

Add the following:

"Where proprietary materials are specified it is to indicate the quality or type of materials or articles required, and where the terms "or similar approved" or "or approved equivalent" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Employer's Agent."

"PSA 3.3* ORDERING OF MATERIALS

The quantities set out in the Bill of Quantities have been carefully determined from calculations based on data available at the time of its compilation, but are to be considered as approximate quantities only. Before ordering materials of any kind the Contractor shall be solely responsible for determining, from the Drawings issued or approved by the Employer's Agent for construction purposes, the actual quantities of materials required for the execution of the Works. No liability or responsibility whatsoever shall be attached to the Employer or the Employer's Agent in respect of materials ordered by the Contractor except when ordered in accordance with the Drawings issued or approved by the Employer's Agent for construction purposes."

PSA 4 PLANT

PSA 4.1 SILENCING OF PLANT

Replace the contents of Clause 4.1 with the following:

"The Contractor's attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act (Act No. 85 of 1993) as amended.

The Contractor shall at all times and at its own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other Plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations."

PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

Add the following new paragraph before the existing paragraph in Clause 4.2:

"The Contractor's buildings, sheds and other facilities erected or utilised on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only night-watchmen may be on the Site after hours."

Delete "and first-aid services" in the second paragraph of Clause 4.2 and add the following:

"The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 15 workmen, which toilets shall be effectively screened from public view and their use enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

The Contractor shall, where applicable, make all necessary arrangements and pay for the removal of night soil."

PSA 5 CONSTRUCTION

PSA 5.1 SURVEY

PSA 5.1.1 Setting out of the Works

The installed benchmarks shown on the Drawings shall be used by the Contractor for setting out the works.

Add the following paragraph:

"The Contractor shall be required to check and verify, prior to commencement of any construction work, all benchmarks and boundary reference pegs, as shown and detailed on the Drawings. Reference and benchmark

pegs disturbed and/or removed during the construction period shall be replaced by a Professional Land Surveyor and the Contractor shall bear the cost of such replacement. Payment to check and verify the reference and benchmark pegs will be made in terms of PSA 8.8.5."

PSA 5.1.2 Preservation and replacement of survey beacons and pegs subject to the Land Survey Act

Delete from the second sentence "Before the commencement "to" apparently in their correct positions" and replace with the following:

"Immediately on taking over the site, the Contractor, in consultation and liaison with the Employer's Agent, shall search for all pegs and the Contractor shall compile a list of pegs that are apparently in their correct position."

Replace the third sentence of Clause 5.1.2 with the following:

"At completion of the Contract, the Contractor shall expose and mark all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor the replacement of pegs that have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Employer's Agent, a certificate from the Registered Land Surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions of this Clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

The costs of replacement and certification as aforesaid shall be entirely for the Contractor's account, provided always that the Contractor shall not be held liable for the cost of replacement of pegs which:

- (a) cannot reasonably be re-established in their original positions by reason of the finished dimensions of the Permanent Works ; and
- (b) the Contractor can prove beyond reasonable doubt and to the satisfaction of the Employer's Agent, were disturbed, damaged or destroyed by others beyond its control, and
- (c) were in close proximity to the work and which would unavoidably be removed, subject to the Employer's Agent approval being given to remove such pegs."

PSA 5.2 WATCHING, BARRICADING AND LIGHTING AND TRAFFIC CROSSINGS

Add the following:

"The Contractor shall comply in all aspects with the requirements of the Occupational Health and Safety Act (Act 85 of 1993), refer also PSA 5.7, PSA 5.9 and PSA 5.10."

PSA 5.3 PROTECTION OF STRUCTURES

Replace: "Machinery and Occupational Safety Act, 1983, (Act No. 6 of 1983)" with: "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended," and insert the following after "(Act No. 27 of 1956)": "as amended".

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

Replace the heading and the contents of Clause 5.4 with the following:

"PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES

PSA 5.4.1 Location of existing services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent Contractor to be present on, under, over or within the Site.

Without in any way limiting its liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Employer's Agent, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where it intends to work.

Neither the Employer nor the Employer's Agent offer any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site. No excavation may commence until the position of the service at the crossing point has been marked out and verified by an official of the responsible authority.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Employer's Agent, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the requirements of Clauses 4.4 and 5.1.2.2 of SABS 1200 D (as amended) shall also apply.

The aforesaid procedure shall also be followed in respect of services not shown on the plans but which may reasonably be anticipated by an experienced Contractor to be present or potentially present on the Site.

All services, the positions of which have been determined as aforesaid at critical points, shall henceforth be designated as "Known Services" and their positions shall be indicated by the Contractor on a separate set of Drawings, a copy of which shall be furnished to the Employer's Agent without delay.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the Site, it shall henceforth be deemed to be a "Known Service" and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the Site shall apply. The Contractor shall notify the Employer's Agent immediately should any such service be encountered or discovered on the Site.

Whilst it is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to:

- (a) Known Services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognisance being taken of such deviations in line and level which may reasonably be anticipated; and
- (b) any other service which ought reasonably to have been a Known Service in accordance with the provisions of this Clause ;

as well as for consequential damage, whether caused directly by the Contractor's operations or by the lack of proper protection ; provided always that the Contractor will not be held liable in respect of damages occurring to services not being Known Services.

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

Payment to the Contractor's in respect of exposing services at the positions agreed by the Employer's Agent and as described above will be made under the payment items (if any) as may be provided therefore in the respective sections of the Specifications pertaining to the type of work involved.

PSA 5.4.2 Protection during construction

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all known services during the period which the Contractor has occupation and/or possession of the Site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising there from to the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

PSA 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly specified in the Contract or ordered by the Employer's Agent, the Contractor shall not carry out alterations to existing services. When any such alterations become necessary, the Contractor shall promptly inform the Employer's Agent, who will either make arrangements for such work to be executed by the owner of the service, or instruct the Contractor to make such arrangements himself.

Should damage occur to any existing services, the Contractor shall immediately inform the Employer's Agent, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases, the Contractor shall take appropriate steps to minimise damage to and interruption of the service.

No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor, unless approved by the Employer's Agent.

The Employer will accept no liability for damages due to a delay in having alterations or repairs effected by the respective service owners. The Contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services."

PSA 5.7 SAFETY

Replace the contents of subclause 5.7 with the following:

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

- (a) Provide to its Employees on the site of the works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational Health and Safety Act (Act No 85 of 1993) and associated Regulations as amended (hereinafter referred to as the Act) at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times; and
- (b) Provide, install and maintain all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public; and
- (c) Implement on the site of the works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times; and
- (d) Implement all necessary measures so as to ensure compliance with the Act by all subcontractors engaged by the Contractor and their employees engaged on the works; and
- (e) Full compliance with all other requirements pertaining to safety as may be specified in the Contract.

The Employer shall in terms of the Regulations make such inspections on the site, as they shall deem appropriate, for the purpose of verifying the Contractor's compliance with the requirements of the Act. For this purpose, the Contractor shall grant full access to the site of all parts of the site and shall co-operate fully in such inspections and shall make available for inspection all such documents and records as the Employer's representative may reasonably require.

Where any such investigations reveal, or where it comes to the Employer's attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this clause, the Employer's Agent shall, in accordance with the provisions of Clause 5.11.2 of the Conditions of Contract, be entitled to suspend progress on the works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Employer, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the works or any part thereof is suspended by the Employer's Agent in terms of this clause, and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of Clause 5.13 of the Conditions of Contract should the Contractor fail to complete the Works on or before the specified due completion date in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute grounds for the Employer's Agent to act in terms of Clause 9.2 of the Conditions of Contract and for the Employer to terminate the Contract in accordance with the further provisions of the said Clause 9.2."

"PSA 5.9* MAINTAINING SERVICES IN USE

The Contractor shall take note that he shall not cut off any service in use without the prior approval of the Employer's Agent.

Failure on the part of the Contractor to comply with any of the above provisions will constitute sufficient reason for the Employer's Agent to stop the works until the situation has been remedied, or should he deem it necessary, arrange for the situation to be remedied at the Contractor's cost.

No direct payment will be made for the cost of maintaining services in use. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract."

"PSA 5.10* DEALING WITH AND ACCOMMODATING TRAFFIC

The Contractor shall take note that the existing roads and tracks within and to the Sites, shall remain operational throughout the contract period. To this end the Contractor shall provide and maintain all temporary fences, security, barriers, kerb ramps, signs, markings, flagmen, drums, lighting, personnel and all other incidentals necessary to ensure safe and easy passage of all traffic.

Temporary traffic signs etc. as well as all necessary markings shall be erected and maintained by the Contractor and the number and layout of the traffic signs shall comply with the Site Manual entitled "Safety at Roadworks in Urban Areas", as published by the Department of Transport.

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

No direct payment will be made for the cost of dealing with and accommodating traffic. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the contract. Further, the provision of PSA 5.2 shall apply."

"PSA 5.11* SITE MEETINGS

The Contractor or its authorised agent will be required to attend regular site meetings, which shall normally be held once a month on dates and at times determined by the Employer's Agent, but in any case whenever reasonably required by the Employer's Agent. Unless otherwise indicated in the Contract or instructed by the Employer's Agent, such meetings shall be held at the Contractor's offices on the Site. At such monthly meetings, matters such as general progress on the Works, quality of work, problems, claims, payments, and safety etc., shall be discussed, but not matters concerning the day-to-day running of the Contract.

"PSA 5.12* PROVIDING ACCESS TO ERVEN AND PROPERTIES

Access to erven and properties along the route of trenches and roads shall be provided by the Contractor at all times. To this end suitable crossings shall be constructed where required.

Temporary crossings shall be in the form of portable bridges, temporary backfill or other approved means and shall be capable of permitting the safe passage of all vehicles and pedestrians. The Contractor shall also be responsible for maintaining crossings and for removing same when they are no longer required.

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

The Contractor may, with the approval of the Employer's Agent, arrange with the occupiers of the affected properties to temporarily close off a portion of a road, footpath entrance, property access road or other access, provided that the Contractor shall give due notice of the intended closure and its probable duration to the occupiers and shall as punctually as possible re-open the route at the prescribed time. Where possible, roads shall be made safe and re-opened to traffic overnight. Any such closure shall be an arrangement between the Contractor and the occupiers and shall not absolve the Contractor from his obligations under the Contract to

provide access at all times. Barricades, traffic signs and drums shall be provided by the Contractor to suit the specific conditions.

No direct payment will be made for the cost of providing access. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract.”

“PSA 5.14* PROTECTION OF LIVESTOCK

From the time of the occupancy of the Site until the date of the Completion Certificate the Contractor shall take all measures necessary for the protection and control of livestock on the sections of the properties affected by his operations. He shall provide gates in existing fences cut by him for the purpose of access and control, and where necessary, to store materials and plant and the Contractor shall ensure that all gates are kept closed during such time as they are not actually in use by his traffic.

Where the Contractor cannot make alternative arrangements, the Contractor shall erect temporary fencing where necessary to protect livestock exposed to straying through his operations. The fencing shall be maintained in good order during construction operations and on completion of the work it shall be removed from the Site and all surfaces restored to the satisfaction of the property owner.

Payment for the protection of livestock, including the erection of temporary fences and gates where required, shall be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract.

Claims by property owners for loss of or injury to livestock due to negligence on the part of the Contractor, shall be settled by the Contractor.”

“PSA 5.15* ENVIRONMENTAL MANAGEMENT PLAN, RECORD OF DECISION AND SPECIFICATIONS

The Contractor shall be required to comply with the Environmental Management Plan (EMP), Record of Decision (ROD) and Specifications during the Contract period.

Non-compliance with the specifications, ROD and EMP, in any way whatsoever, will be adequate reason for suspension of the Works.

The Contractor shall at all times be responsible for full compliance with the specifications, ROD and EMP and no extension of time will be considered for delays due to non-compliance with the abovementioned.

The applicable environmental documents are bound as Particular Specification PA.

No direct payment will be made for the cost of complying with the EMP or disruption experienced in attending to the aforementioned. Payment shall be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract.”

“PSA 5.16* ATTENDANCE ON EE's

The Contractor shall closely manage and supervise all EE's and shall manage, guide and assist each EE in all aspects of management, execution and completion of his subcontract. This shall typically include assistance with planning his works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures, etc. The extent and level of such management, guidance and assistance, to be provided by the Contractor shall be commensurate with the expertise of relevant EE and shall be directed at enabling the EE's to achieve the successful execution and completion of the subcontract.

No direct payment will be made for the cost of attendance on EE's. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the contract.”

PSA 6 TOLERANCES

"PSA 6.4* USE OF TOLERANCES

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorized' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Employer's Agent, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorized' dimensions.

If the work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorised' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Employer's Agent may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed."

PSA 7 TESTING

PSA 7.1 PRINCIPLES

PSA 7.1.2 Standard of Finished Work Not to Specification

Insert the words "or checks by an approved laboratory ..." after the words "Where the Employer's Agent checks ..." in the first line of Clause 7.1.2.

PSA 7.2 APPROVED LABORATORIES

Replace the contents of Clause 7.2 with the following:

"Unless otherwise specified in the relevant specification or elsewhere in the Scope of Work, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Employer's Agent of the quality of materials used and/or workmanship achieved, may be carried out:

- (a) any testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;
- (b) any testing laboratory owned, managed or operated by the Employer or the Employer's Agent;
- (c) any testing laboratory established and operated on the Site by or on behalf of the Employer or the Employer's Agent;
- (d) any testing laboratory designated by the Employer's Agent."

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.1 Method of measurement, all sections of the Schedule

Delete the words "and South West Africa".

PSA 8.1.2 Preliminary and General item or section

PSA 8.1.2.1 Contents

Replace the contents of item (c) with the following:

"The 'duration of construction' applicable to a time-related item shall be the tendered contract period for the total works assignment, plus as applicable, the Civil Engineering Industry Holiday (Dec / Jan) and all gazetted public holidays for the Civil Engineering Industry."

PSA 8.1.2.2 Tendered sums

Replace the contents of this Subclause with the following:

"Except only where specific provision is made in the Specifications and/or the Bill of Quantities for separate compensation for any of these items, the Contractor's tendered sums under items PSA 8.3 and PSA 8.4 shall collectively cover all charges for:

- risks, costs and obligations in terms of the Conditions of Contract and of this standardized specification; and
- head-office and site overheads and supervision; and
- profit and financing costs; and
- expenses of a general nature not specifically related to any item or items of the permanent or temporary work; and
- providing such facilities on site as may be required by the Contractor for the proper performance of the Contract and for its personnel, including, but without limitation, providing offices, storage facilities, workshops, ablutions, services such as water, electricity, sewage and rubbish disposal, access roads and all other facilities required, as well as for the maintenance and removal on completion of the works of these facilities and cleaning-up of the site of the Contractor's establishment and reinstatement to not less than its original condition, and
- providing the facilities for the Employer's Agent and his staff as specified in the Contract and their removal from the site on completion of the Contract.
- Completion of monthly reporting/monitoring of Emerging Enterprise Subcontract."

PSA 8.2 PAYMENT

PSA 8.2.2 Time-related items

Replace the contents of Clause 8.2.2 with the following:

"Subject to the provisions of sub clauses 8.2.3 and 8.2.4, payment under item 8.4.1 (time-related item) will be made monthly in equal amounts, calculated by dividing the sum tendered for the item by the tendered Contract period in months, provided always that the total of the monthly amounts so paid for the item is not out of proportion to the value of the progress of the Works as a whole.

Should the Employer's Agent grant an extension of time for the completion of the total works, the Contractor will be entitled to an increase in the sums tendered for time-related items, which increase shall be in the same proportion to the original tendered sums, as the extension of time is to the duration of construction as defined in PSA 8.1.2.1. The Contractor shall however note that the aforementioned will not apply to extensions of time granted in terms of PSA 8.4.6.

Payment of such increased sums will be taken to be as full compensation for all additional preliminary and general costs, either time-related costs or fixed costs that result from the circumstances pertaining to the extension of time granted."

The payment to the Contractor for Time-Related Items shall be adjusted in accordance with the following formula in the event of the Contract being extended by means of a Variation Order:

Sum of Tendered amounts for Time Related Items x Extension of Time authorised by Variation Order
Tender Contract period

For the purposes of applying this formula "Extension of Time" will exclude the Contractor's December / January close-down period, if applicable.

The abovementioned adjustment of the payment for Time-Related Items shall be made in the completion Payment Certificate and shall be the only payment for additional Time-Related costs irrespective of the actual period required to complete the Contract including its authorised extensions.

In the case of fixed price contracts, the amount by which the Time-Related Items is adjusted shall not be subject to the Contract Price Adjustment formula.

In the case of contracts subject to Contract Price Adjustment the amount by which the time-related items are adjusted shall be subject to the Contract Price Adjustment formula."

PSA 8.3.1 & Contractual requirements
8.4.1

Add the following:

"The sum tendered shall cover all initial costs incurred in complying with the requirements of the Conditions of Contract and include for the cost of providing and maintaining the special risks insurance stipulated in the Conditions of Contract, if applicable."

PSA 8.3.2.1 Facilities for Employer's Agent

Replace the contents of this Clause with the following:

"(a) One Contract NameboardUnit: Sum

The facilities provided shall comply with the applicable requirements of SABS 1200 AB and PSAB."

PSA 8.3.2.2 Facilities for Contractor

Notwithstanding the detail breakdown of items provided (items a to j), a single sum shall be tendered to cover all these items under the heading of "Facilities for Contractor".

PSA 8.4.1 Contractual requirements.....Unit: Sum

Add the following:

"The sum shall further cover all the time-related establishment costs and be the full compensation to the Contractor for:

- (i) The maintenance of his whole organisation as established for this Contract.
- (ii) The maintenance of all insurances, indemnities and guarantees required in terms of the Conditions of Contract, where applicable.
- (iii) Compliance with all general conditions and requirements which are not specifically measured elsewhere for payment in these Contract Documents.

Payment shall be made monthly in compliance with the method laid down in PSA 8.2.2.

The Contractor will not be paid Time-Related Preliminary and General Charges for any special Non-Working Days, as stipulated in the Conditions of Contract, which shall be deemed to have been allowed for in his rates.

The sum shall also include, where applicable, for the cost of providing and maintaining the special risks insurance stipulated in the Conditions of Contract."

PSA 8.4.2.1 Facilities for Employer's Agent

Replace the contents of this Clause with the following:

- (a) One Contract NameboardUnit: Sum
(b) Survey labourersUnit: Labourer Month

The facilities provided shall comply with the applicable requirements of SABS 1200 AB and PSAB.

Payment for the provision of survey labourers will be made pro-rata the period the labourers are provided."

PSA 8.4.2.2 Facilities for Contractor

Notwithstanding the detail breakdown of items provided (items a to j), a single sum shall be tendered to cover all these items under the heading of "Facilities for Contractor".

PSA 8.4.2.3 Replace the words "periods stated" in the second line of this Clause with the following:

"duration of construction as defined in PSA 8.1.2.1".

"PSA 8.4.6* Compensation in terms of Subclause 5.12.2.4 and Clause 9.1.4 of the Conditions of Contract for delays incurred:

- (a) PlantUnit: Sum per working day
(b) LabourUnit: Sum per working day
(c) SupervisionUnit: Sum per working day
(d) Other services, facilities etc. not covered by
(a), (b) and (c)Unit: Sum per working day

The sum tendered for each item shall cover the full and final standing cost per day of delaying the specified resource or facility and no additional compensation shall apply, notwithstanding any provisions to the contrary in the contract documents, or in respect of any extension of time granted in relation to the circumstances described in Subclauses 5.12.2.4, 9.1.1 and 9.1.2 of the Conditions of Contract.

For the purposes of calculating the total delay, a working week shall be held to consist of five working days and a working day 9 hours.

Payment for the partial standing of any of the scheduled resources for a day or part thereof, or the standing of a complete resource for a part day, will be made pro-rata in proportion to an appropriate factor assessed by the Employer's Agent.

The amount by which compensation for delays is adjusted shall be subject to the contract price adjustment formula as defined in the Conditions of Contract.

This payment item shall only apply to delays which in the opinion of the Employer's Agent are due to the circumstances described in Subclauses 5.12.2.4, 9.1.1 and 9.1.2 of the Conditions of Contract. No Payment will be made for any salary related or other internally caused strikes. The cost of delays incurred for all other circumstances shall be treated as provided for in the Conditions of Contract.

The provision of this Clause shall in no way prejudice the right of either the Employer or the Contractor to determine the Contract in terms of the provisions of Clause 9 of the Conditions of Contract.

The Contractor shall take note that no payment will be considered for any additional cost incurred in protecting his plant and site establishment, as well as for costs incurred in respect of damage to constructional plant and equipment."

PSA 8.5 SUMS STATED PROVISIONALLY BY THE EMPLOYER'S AGENT

Replace the contents of Clause 8.5 with the following:

"PSA 8.5.1 Works Executed by the ContractorUnit: Prov Sum

The Contractor will be reimbursed in substitution of the Provisional Sums (if any) allowed in the Bill of Quantities for work to be executed by the Contractor, in the amounts determined in accordance with the provisions of Clause 6.6 of the Conditions of Contract.

PSA 8.5.2 Works Executed and performed by the Selected Subcontractors in Consultation with the Employer

(a) Work to be executed and performed by the Selected Subcontractor in Consultation with the Employer.....Unit: Prov Sum

(b) Overheads, charges and profit on item (a) above.....Unit: % or Sum

Sub-items (a) and (b) will be provided in the Bill of Quantities for each different Selected Subcontract included in the Contract.

The Contractor shall be reimbursed under sub-item (a), in substitution of the respective Provisional Sums (if any) allowed in the Bill of Quantities, the amounts actually paid or payable by the Contractor to the respective Selected Subcontractors, in accordance with the provisions of Clauses 4.4.3 and 6.6 of the Conditions of Contract.

The Contractor shall be paid under sub-item (b), either:

(a) where the unit of measurement for sub-item (b) was specified as being a percentage, the respective percentage, as stated by the Contractor in its Tender, of the amount certified by the Employer's Agent for payment under the related sub-item (a), all in accordance with the provisions of Clause 6.6.1.2.1 of the Conditions of Contract: or

(b) where the unit of measurement for sub-item (b) was specified as being a Lump Sum, an amount which is in the same proportion to the amount certified for payment under sub-item (a) and the tendered Lump Sum is to the amount of the Provisional Sum stated under sub-item (a);

provided always that where the Contractor has failed for any reason, to insert a percentage or Sum (as applicable) for sub-item (b) in its tender, or where no provision was made in the Tender Documents for tenderers to make any such entry, the Contractor will, in accordance with the provisions of Sub-clause 6.6.1.2.2, be paid an amount equal to SEVEN AND ONE HALF PERCENT (7½%) of the amount actually certified by the Employer's Agent for payment under sub-item (a).

The percentage or sum (as applicable) paid under sub-item (b) as aforesaid, shall be deemed to include for full and final compensation to the Contractor for all costs as may be incurred and all charges and profits associated with the engagement, supervision, administration and management of the Nominated Subcontractor and in fulfilling its obligations under the contract as the principal Contractor."

Replace Clause 8.6 with the following:

"PSA 8.6 PRIME COST ITEMS

PSA 8.6.1 Prime Cost Sums

(a) Description of Item to which Prime Cost Sum Applies Unit: PC Sum

(b) Charge Required by Contractor on Sub-item (a) above Unit: %

Sub-items (a) and (b) will be provided in the Bill of Quantities for each different item to which a Prime Cost Sum applies.

The Contractor shall be reimbursed under sub-item(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services supplied, but excluding any charges for the Contractor's labour, profit, carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under sub-item (b), the respective percentage, as stated by the Contractor in its Tender, of the amount certified by the Employer's Agent for payment under the related sub-item (a). The percentages tendered by the Contractor for each respective sub-item (b) included in the Bill of Quantities shall be deemed to in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related sub-item (a).

If the Contractor shall have omitted within its Tender to insert a tendered percentage under sub-item (b), or tendered a zero percentage, the Contractor's tendered rate for sub-item (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under sub-item (b)."

Note:

1. Only payments for successful test will be made under the Prime Cost Sum provided in the Bill of Quantities for "additional acceptance control testing by the Employer's Agent".
2. The Contractor is responsible for the cost of process control testing. Payment in terms of the above will only be made for acceptance control testing ordered by the Employer's Agent.

"PSA 8.7 DAYWORK

Add the following:

"To ensure that the plant is achieving a reasonable output of work, the Employer's Agent personnel will randomly monitor and measure work produced. Poor performance of any item of plant will be noted by the Employer's Agent and certain reductions in payment may be applied.

Furthermore, should the performance of a machine be poor, or persistently break down, the Employer's Agent may order that it be replaced, all at the cost of the Contractor."

PSA 8.8 TEMPORARY WORKS

PSA 8.8.4 Existing services

Replace the heading of paragraph (c) with the following:

"(c) Excavate by hand in soft material to expose existing services Unit: m³

Add the following:

"The rate tendered for (c) shall further cover the cost of backfilling the excavation with excavated material compacted to 90% of modified AASHTO maximum density, loading, transporting and disposing of surplus material as directed, keeping the excavation safe, dealing with water, protecting the exposed services, and any other operation necessary to complete the work.

No distinction will be made between the various types of services to be exposed, or the depths to which excavations are taken.

Excavation in excess of that authorised will not be measured for payment."

"PSA 8.8.6 Dealing with water Unit: Sum

The sum shall cover the cost for the provision, operation, maintaining and removal of all plant and materials required to deal with any water anywhere on site as required in terms of Sub clause 5.1.3 of SABS 1200 D and Sub clause 5.1.2 of SABS 1200 DB. No additional payment will be made for "Special water hazards".

The sum shall cover the cost of providing the necessary plant or materials, or both, fully erected and operative on the Site, the cost of operating and maintaining pumps, well points, sheeting, close timbering, and other equipment, as applicable, for 24 Hours a day, 7 days a week, throughout the period during which the facilities are required,

and the cost of removing such goods and restoring the Site to its original condition on completion of that part of the project for which the temporary works were erected.

Two equal payments will be made, one with the first and the other with the last payment certificate.

"PSA 8.8.7* Compliance with the occupational health and safety act (Act 85 of 1993) and all relevant and applicable regulations, especially the construction regulations, 2014 as promulgated on 7 February 2014 under section 43 of the occupational health and safety act (Act 85 of 1993), as amended from time to time, for the duration of the contract

(a) Contractor Unit: Sum

(b) Subcontractors (own)..... Unit: Sum

The tendered sums shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and the Construction Regulations 2014 at all times, as described in the Scope of Work and Employer's health and safety specification (Refer Particular Specification PB). The successful tenderer shall provide the Employer's Agent with a complete breakdown of this tendered sum, if so required.

The Contractor shall note that all obligations contained in the Act, Regulations and Employers health and safety specification shall be included in this item. No additional claims will be considered; neither will an extension of time be considered for delays due to non-compliance with the Contractor's health and safety plan.

The sums will be paid to the Contractor in equal monthly amounts."

"PSA 8.9* Installation of Benchmarks by Registered Surveyor Unit: No

The number tendered shall include full compensation for the installation of benchmarks to mSL, by a registered surveyor as required by the Employer's Agent, during construction and shall include the protection during construction and marking the benchmark on completion of the Works.

NOTE: The cost to set out the Works in terms of 5.1.1 and PSA 5.1.1 shall be deemed to be covered by the sums tendered for other obligations under Subclauses 8.3.3 and 8.4.5."

"PSA 8.10* Sanctions Unit: Prov Sum

The provisional sum shall cover any sanction or bonus due as specified in subclause C3.3.3. The provisional sum shall be expended in accordance with Clause 6.6 of the Conditions of Contract."

PSC **SITE CLEARANCE**

PSC 3 **MATERIALS**

PSC 3.1 DISPOSAL OF MATERIAL

Add the following:

"Material obtained from clearing and grubbing, including builder's rubble, and other unwanted debris, shall be disposed of at spoil sites obtained by the Contractor.

All transport costs shall be included in the rates tendered for site clearance."

PSC 5 **CONSTRUCTION**

PSC 5.1 AREAS TO BE CLEARED AND GRUBBED

Add the following:

"Notwithstanding the above, the Employer's Agent may, where particular areas are scarcely vegetated, order that the clearing and grubbing operation be totally or partially omitted, in which case no payment will be made under this section.

Payment will then only be made for excavation included under the relevant earthworks section."

PSC 5.5 RECLEARING OF VEGETATION

Add the following:

"Except if otherwise agreed, where areas have to be recleared on the written instruction of the Employer's Agent, such reclearing shall be carried out at the Contractor's own cost and the Contractor is advised therefore, not to clear areas at such an early stage that reclearing may become necessary."

PSC 5.6 CONSERVATION OF TOPSOIL

Add the following:

"Conservation of topsoil, together with grass, roots and chipped mulch shall be applicable. Stockpiling of topsoil will be allowed on Site in specific locations indicated by the Employer's Agent. Topsoil shall not be stockpiled higher than 2,0m. Care shall be exercised to prevent the compaction of topsoil in any way especially by vehicles travelling over such material."

PSC 8 **MEASUREMENT AND PAYMENT**

PSC 8.1 BASIC PRINCIPLES

Add the following:

"The thickness of the layer that will unavoidably be stripped during clearing of vegetation will be taken as 100 mm. This implies that levels used in earthworks quantity calculations will be 100 mm lower than the original levels excluding stripping of topsoil to stockpile where applicable."

Add the following:

"Levels to be used for earthworks quantity calculations will be surveyed once the clearing operation has been completed."

PSC 8.2 SCHEDULED ITEMS

PSC 8.2.1 Clear and grub

Replace the first line with the following:

"The area designated by the Employer's Agent to be cleared and grubbed will be measured in square metre to the nearest metre or"

Delete "(except where 8.2.9 is applicable)" in the seventh line of this clause,

Add the following:

"The tendered rate shall also cover the cost of loading, transporting and disposing of vegetation, builder's rubble, and other unwanted debris encountered in road reserves or along service routes at the designated spoil site described in the Scope of Works."

"PSC 8.2.5 Take down and re-erect existing fences.....Unit: m

Add the following to subclause 8.2.5

"The rate shall further cover the cost to reinstate the fences to their original status, as well as for all new material in so doing"

"PSC 8.2.10 Remove topsoil to nominal depth of 150 mm, stockpile and maintain..... Unit: m³

Replace the heading and contents of subsubclause 8.2.10 with the following:

The rate shall cover the cost of removing the topsoil where ordered, together with such vegetation and small roots as may occur within the specified depth, for loading, transporting to designated area on site, for stockpiling, for maintaining and wetting (dust control) the stockpile for the full duration of the Contract.

Add the following clauses:

"PSC 8.2.11* Final finishing and cleaning up of site.....Unit: Sum

The tendered sum shall include full compensation for the clearing, disposal of material, finishing, tidying and all other work required to finish and clean up the Site of the works and affected areas by removing excess earth, stones, boulders, debris and other waste material, by clearing stormwater inlets and outlets and pipe barrels, by clearing the surfacing of all dirt, mud and foreign material, and by neatly finishing off all junctions, intersections and kerbing.

All material resulting from the finishing operations shall be disposed of to a spoil site furnished by the Contractor.

The tendered rate shall make provision for the reinstatement of existing driveways to their original condition where these have been affected by the works, as these items will not be measured and paid for separately.

"PSC 8.12* New gates (complete as detailed on drawings) Unit : No

The unit of measurement shall be the number of each type and size of gate erected. A pair of gates shall be measured as one. The rate tendered shall cover the cost of all labour equipment and materials required to fabricate and install the gates complete as detailed on the drawings, including for mesh covering, hinges, locking chains, gate posts and corrosion protection."

PSDB EARTHWORKS (PIPE TRENCHES)

PSDB 3 MATERIALS

PSDB 3.1 CLASSES OF EXCAVATION

Delete the contents of Clause 3.1 and replace with the following:

"The classification shall be as described in PSD 3.1".

PSDB 3.5 BACKFILL MATERIAL

Replace the contents of Subclause (b) and add Subclauses (c) and (d) as follows :

"In areas subject to road traffic loads which shall be held to extend 2,5m either side of the road centre line, as well as beneath concrete lined channels, backfill shall comply with the requirements of PSME 3.2.2

Add the following paragraphs to subclause 3.5:

"(c) Cement-stabilised backfilling

Backfilling shall, where directed by the Employer's Agent, be stabilised with 5% cement. The aggregate shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed with 5% cement and shall be compacted in layers of 100 mm thick to 90% of modified AASHTO density.

(d) Soilcrete backfilling

The aggregate for soilcrete shall be mixed with 5% cement and shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed in a concrete mixer with the cement and enough water to acquire a consistency that allows the mixture to be placed with vibrators to fill all voids between the pipe and the sides of the trench. Shuttering shall be used where necessary."

PSDB 3.7 SELECTION

Replace the words "if he so wishes" in the first line of the second paragraph with the words "at his own cost".

Add the following to subclause 3.7:

"Notwithstanding anything to the contrary stated in this subclause the Contractor shall, where so ordered, selectively stockpile topsoil, material complying with 3.5, as well as road materials for re-use in terms of 5.9."

PSDB 5 CONSTRUCTION

PSDB 5.2 MINIMUM BASE WIDTHS

Notwithstanding the provisions of this Subclause, the minimum base widths for the various trenches shall be as shown on the Drawings.

PSDB 5.4 EXCAVATION

Add the following:

"Except where otherwise specified, trenches shall be of such a depth that the minimum cover over the pipes shall be 700mm, except at road-crossings, where the minimum cover shall be 1 000 mm.

No trench may be left open over the period 16 December to 8 January inclusive.

Where trenches have to be excavated under this Contract adjacent to live services / other services laid under other contracts, it may be necessary to shore trenches to prevent damage to the live services / other services. It will be the responsibility of the Contractor to ensure that services constructed under other contracts of live services are not damaged by his operations during the Contract."

PSDB 5.6 BACKFILL

PSDB 5.6.1 General

Replace the first sentence with the following:

"Backfilling of pipe trenches may only commence after the pipe has been laid, firmly bedded in the specified cradle, the blanket placed and compacted as specified and after the pipe has been tested in terms of Clause 7 of SABS 1200 L."

PSDB 5.6.2 Material for backfilling

Replace the last paragraph of this Clause "In areas.....backfill" with the following:

"The material for backfilling in areas subject to road traffic loads shall comply with PSDB 3.5."

PSDB 5.6.3 Disposal of soft excavation material

Replace the words "unless otherwise required in the project specification." at the end of this Subclause with:

"or to spoil in accordance with the requirements of PSD 5.2.2.3 and Subclause 5.2.2.3 of SABS 1200 D, as instructed by the Employer's Agent."

PSDB 5.6.6 Completion of backfilling

Add the following:

"If in the opinion of the Employer's Agent insufficient progress is being made with the backfilling of trenches, the Employer's Agent will be entitled to order that no further excavation takes place until the backfilling operation has caught up."

PSDB 5.7 COMPACTION

PSDB 5.7.1 Areas not subject to Traffic Loads

Add the following sentence:

"All non-cohesive material shall be compacted to 100% of modified AASHTO maximum density."

Replace the heading and contents of subclause 5.7.2 with the following:

PSDB 5.7.2 Areas Subject to Traffic Loads and beneath concrete lined walkways, cyclepaths and stormwater channels:

In areas subject to traffic loads and beneath concrete lined walkways, cyclepaths and stormwater channels, trenches shall be backfilled from the top of the bedding to the extent scheduled below in layers of thickness not exceeding 150mm after compaction, and the material shall be compacted to 95% of modified AASHTO maximum density.

TRENCH DESCRIPTION	EXTENT OF BACKFILL
Trenches beneath roadways to be constructed under the contract	Up to designated level of underside of layerworks
Trenches beneath concrete lined walkways, cyclepaths and stormwater channels	Up to designated level of underside of concrete lining

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.1.1 Replace “along the route of the pipeline” in the third line of Clause 8.1.1 with “as specified in PSDB 5.6.3”.

Replace the contents of subclause 8.2.4 with the following:

"No separate items will be measured for shoring. Refer to Item PSD 5.1.1.2 in this regard."

“PSDB 8.2.5* If payment in terms of PSA 8.8.4 has been made to expose an existing service and the excavation involved falls within a proposed trench, the quantity measured for trench excavation shall be reduced accordingly.”

PSDB 8.3 SCHEDULED ITEMS

PSDB 8.3.2 Excavation

- (a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material ..
..... Unit: m or m³

Replace the first sentence with the following:

“Items will be provided for various trench widths as specified and detailed on the Drawings and various depths in increments as specified in the Bill of Quantities.”

Add the following to Clause (a):

“The rate tendered shall also cover the cost of complying with PSDB 3.5, as well as the cost of any disruption or delay in complying with PSDB 5.4 and PSL 5.1.4.

Delete Clause 8.3.2 (b)(1) as well as any reference to intermediate excavation in Clause (b). For the purpose of measurement and payment, excavation other than hard rock excavation will not be separately classified (refer PSDB 3.1).

Add the following new sub-items in 8.3.2 (b):

- “(3) Hand excavation where ordered Unit: m³

The rate tendered shall cover the additional cost, extra over that provided for under 8.3.2(a), for carrying out, where ordered by the Employer’s Agent and up to a depth of 1,0metre, trench excavation by hand as well as for any inconveniences related to the continuation with machines across and over hand-excavated trenches.

The volume shall be computed from the dimensions specified, shown on the Drawings or ordered by the Employer’s Agent.

Normal handwork required to clean and trim the sides and bottoms or mechanically excavated trenches will not qualify for payment in terms of this clause.

- (4) Hand backfilling machine excavated trenches where ordered Unit: m³

The rate tendered shall cover the additional cost, extra over that provided for under 8.3.2(a) to, except for compaction which shall be carried out by machine, hand backfill machine excavated trenches where ordered by the Employer’s Agent.

The volume shall be computed from the dimensions specified, shown on the Drawings or ordered by the Employer's Agent.

(5) Selective stockpiling of topsoil where orderedUnit: m³

The rate tendered shall cover the additional cost, extra over that provided for under 8.3.2 (a), to selectively stockpile topsoil where ordered by the Employer's Agent, including of off-loading, forming and maintaining the stockpile for as long as is required, reloading and transporting within the applicable freehaul distance from the stockpile.

The volume shall be computed from the dimensions ordered by the Employer's Agent."

(6) Disposing of spoil material on a site provided by the ContractorUnit: m³

The unit of measurement shall be the cubic metre, measured in accordance with Subclause 8.2 of SABS 1200D, of surplus and/or unsuitable material disposed of, on the instruction of the Employer's Agent, at a spoil site or spoil sites provided by the Contractor.

The tendered rate shall include full compensation for the additional cost of providing a spoil site or other means of disposing of surplus spoil material, for transporting the material regardless of the distance involved, for acceptance charges for such material and for all other incidental costs to dispose of the spoil material.

(7) Backfill stabilised with 5% cement where directed by the Employer's Agent.....Unit : m³

The unit of measurement shall be the cubic metre of backfill material, measured in place after compaction according to the authorised dimensions, which was stabilised on the Employer Agent instructions in accordance with Subclause PSDB 3.5(c).

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing, backfilling and compacting the stabilised material to 90% of modified AASHTO density."

(8) Soilcrete backfill where directed by the Employer's AgentUnit : m³

The unit of measurement shall be the cubic metre of soilcrete placed on the Employer's Agent instructions in accordance with Subclause PSDB 3.5(d), measured in place according to the authorised dimensions.

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing and placing the soilcrete as well as for the cost of shuttering if required."

PSDB 8.3.3 Excavation ancillaries:

PSDB 8.3.3.1 Deficiency in backfill material

Add the following to subclause 8.3.3.1(c):

The rate shall also include for compaction of sub base quality backfill as per PSDB 3.5

Replace the heading and contents of this Clause with the following:

PSDB 8.3.3.3 Compaction in road crossingsUnit : m³

"This item shall only apply to the compaction of materials in areas subject to road traffic loads as defined in PSDB 3.5.

The volume will be computed from the length of trench falling within the defined area, the width as shown on the Drawings and the depth from the top of the bedding to the designated level of the underside of the required selected layer, finished verge level etc. as scheduled on the Drawings. The rate tendered shall cover the cost of the additional compactive effort as specified.

Payment for this work will be additional to that covered by 8.3.2(a)."

PSDB 8.3.6 Finishing

PSDB 8.3.6.1 Reinstatement road surfaces

Replace from "a) Gravel on shoulders...." Through to "....Etcetera's.....Unit: m²" with the following:

- "(a) Backfilling using Trenchfill Unit : m³
- (b) Hot asphalt type IVA (min thickness 40mm) Unit : m²
- (c) Gravel Shoulders Unit : m²
- (d) Concrete Driveways and Walkways (min thickness 100mm) Unit : m²
- (e) Grass verges and Lawns Unit : m²

For item (a) the volume will be computed from the length of trench as applicable and the width determined from the applicable side allowances specified in 8.2.3, and the depth from road surface to top of selected fill blanket. Payment for this item will be additional to that for excavation covered by 8.3.2.

For items (b) to (e) the area will be computed from the length of paved trench surface as applicable and the width determined from the applicable side allowances specified in 8.2.3.

The rates shall further cover the cost of temporary accommodation of traffic (including the signs and bypasses), arranging for safety of the public, excavation (including breaking up, removal and disposal of surplus material) and the subsequent reinstatement as specified in 5.9, and shall include the cost of delays and the cost of any risk of having to repair damage as specified in 5.10."

PSDM EARTHWORKS (ROADS, SUBGRADE)

PSDM 2 INTERPRETATIONS

PSDM 2.3 DEFINITIONS AND ABBREVIATIONS

Notwithstanding the definition of roadbed given under Clause 2.2 of SABS 1200 M, all in-situ surfaces requiring compaction as indicated on the drawings, shall be classified as roadbed.

PSDM 3 MATERIALS

PSDM 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

Notwithstanding the provisions of this Clause, the excavation of material will, for purposes of measurement and payment, be classified as specified in PSD 3.1.2.

PSDM 3.2.2 Fill

Notwithstanding the requirements of this Clause, material from commercial sources or borrow pits located by the Contractor, to be used in the fill, shall comply with the requirements of Clause 3.2.3 and PSDM 3.2.3.

PSDM 3.2.3 Selected layer

Replace the contents of this Clause with the following:

"The following requirements shall apply in respect of the selected layer:

- a) Maximum particle size: 60% of compacted layer thickness
- b) Unstabilised selected layer
 - (i) Upper selected layer

Minimum CBR at 93% of modified AASHTO density: 15

Maximum PI: 12 (the Engineer has the right to alter this requirement to 3 x the grading modulus + 10)

Note:

The requirements for the upper selected layer also apply where only one selected layer is specified.

- (ii) Lower selected layer

Minimum CBR at 93% of modified AASHTO density: 7

Maximum PI: 12 (the Engineer has the right to alter this requirement to 3 x the grading modulus + 10)

PSDM 3.3 SELECTION

Notwithstanding the provisions of this Clause, the Contractor shall note that the excavation from the cutting shall be utilized for the construction of the lower layers of fills.

PSDM 5 CONSTRUCTION

PSDM 5.1.2 Accommodation of traffic

The requirements of Clauses PSA 5.10 and PSD 5.1.6 shall apply regarding the control and temporary accommodation of traffic.

PSDM 5.2.2.2 Dimensions of cuts

Delete "suitable material7" in the fifth line and replace with "material complying with 3.2.3 and PSDM 3.2.3."

Add after "drawings" in the second line of this subclause "which shall include for channels and sidewalks within the road reserve".

PSDM 5.2.2.3 Use of material

Add after "borrow pits" in the second line of subclause (d): "or commercial sources."

Add the following after subclause (d):

"(e) Commercial sources

The provisions of subclause PSD 5.2.2.5 of SABS 1200 D as amended shall apply."

PSDM 5.2.2.5 Disposal of surplus or unsuitable material

Add after "directed" in the second line of this Clause "(refer PSD 5.2.2.3)".

PSDM 5.2.3 Treatment of roadbed

PSDM 5.2.3.2 Removal of unsuitable ground

Replace the second sentence of paragraph (a) with the following:

"The excavated spaces shall then be backfilled with approved imported material compacted to the required density."

Add the following sentence to paragraph (b):

"Unsuitable excavated material will be paid for as cut to spoil."

PSDM 5.2.3.3 Treatment of roadbed

Add the following to Clause (a):

"The depth of compaction shall be 150mm."

Add the following paragraphs:

"(c) Three-pass roller compaction

Any portion of the roadbed that is shown on the Drawings or is specified or is directed by the Engineer to be given three-pass roller compaction because of its inadequate natural density, shall be prepared by shaping where necessary and compacting with a roller, complying with the requirements specified below.

Compaction shall comprise three complete coverages by the wheels of the specified roller over every portion of the area that is being compacted. While it is not the intention that the Contractor should apply water to the roadbed for this type of compaction, and while no rigid moisture control will be exercised during compaction, the Contractor shall nevertheless satisfy the Engineer that everything is being done to take full advantage of favourable soil moisture conditions during the rainy season, and that such compaction is as far as possible carried out when the roadbed is neither excessively dry nor excessively wet.

The Engineer has the authority to decide when conditions are favourable for compaction and where such compaction is to be carried out at any particular time, and he has the right to instruct the Contractor to water the roadbed at the Contractor's expense when, in the opinion of the Engineer, the Contractor failed, neglected or refused to comply with these requirements.

The rollers to be used for roller-pass compaction shall conform to the following requirements:

Grid roller: The grid roller shall have a mass of not less than 13,5 t when ballasted, shall be loaded to this mass if required, and shall be moved at a speed of not less than 12 km/h.

Vibratory roller: The vibratory roller shall be capable of exerting a combined static and dynamic force of not less than 120 kN/m width for every metre of loose-layer thickness at an operating frequency not exceeding 25 Hz and shall move at a speed not exceeding 4 km/h."

PSDM 5.2.4 Fill

PSDM 5.2.4.3 Finishing

Notwithstanding the provisions of this Clause the requirements of PSDM 5.2.9 shall as applicable apply to the finishing off of verges.

PSDM 5.2.5 Selected layer

Replace the contents of this Clause with the following:

"Except with regard to density, the requirements of Clause 5.2.4 shall apply. The degree of compaction shall be:

Upper selected / Selected	:	93% of modified AASHTO maximum density.
Lower selected maximum density."	:	93% of modified AASHTO

PSDM 5.2.8. Transport

Replace the contents of this subclause with the following:

"The provisions of Subclause PSD 5.2.5 of SABS 1200 D, as amended, shall apply."

"PSDM 5.2.9* Trimming and grading of verges

During the initial earthworks the verge width shall be cut or filled to approximately the final level and shall be kept trimmed and tidy during construction of the works. After completion of the road layers, including the premix surface, and after construction of the necessary kerbs, including the satisfactory backfilling behind the kerb, the verge shall be finished off to the lines and levels shown on the drawings or as specified.

The verge material shall consist of that material which would normally be occurring at that position or depth when in cut and shall not be contaminated by foreign materials such as bricks, basecourse material, horticulturally inferior materials from trench excavation, etc. Verges in fill conditions are to consist of the material as specified for the fills and similarly not be contaminated with foreign materials.

Over those sections of verge where grass is to be planted in which case the Contractor shall load, transport and spread as ordered by the Engineer. In the case of topsoil provided and imported by the Contractor the quality of the topsoil shall be approved of by the Engineer beforehand.

The Contractor shall be responsible for taking the necessary precautions and measures to control the dust nuisance which may arise due to his operations on the verge, whether from the natural ground surface or topsoil layer, until the verge is accepted by the Engineer."

"PSDM 5.2.10* Dimension and Level Control and Process Control

The Contractor shall submit to the Engineer records of dimension and level control and/or process control prior to requesting the Engineer to carry out any routine tests and/or inspections.

A sample form can be obtained from the Engineer."

"PSDM 5.2.11* Requesting of Tests

Tests and Inspections of the works will only be carried out by the Engineer once the appropriate test/inspection request forms have been fully completed. Test/inspection request forms can be obtained from the Engineer."

PSDM 6 TOLERANCES

"PSDM 6.5* DIMENSION AND LEVEL CONTROL

The requirements of PSM 6.4 shall apply."

PSDM 7 TESTING

PSDM 7.3 ROUTINE INSPECTION AND TESTING

Replace Table 2 and the contents of Clause 7.3.2 with the following:

"The dry density requirements for a particular lot of selected layer or wearing course shall be deemed to be satisfied if the average density and the results of individual tests meet the requirements specified in Table 2 below. Refer to Clause PSD 7.2 for the requirements for fill.

TABLE 2 - DENSITIES

1	2	3	4	5
Layer	Specified density (% of modified AASHTO density)	Number of tests per lot	Average density %	Minimum density for any single test, %
Upper selected	93	3 and 4 5 6	93,1 93,4 93,6	89,4 89,2 89,0
Lower selected layer or pioneer layer	93	3 and 4 5 6	93,1 93,4 93,6	89,4 89,2 89,0

"PSDM 7.4* INSPECTION AND TESTING BY ENGINEER

The requirements of PSM 7.3 shall apply."

PSDM 8 MEASUREMENT AND PAYMENT

PSDM 8.1 BASIC PRINCIPLES

Add the following:

"The requirements of PSM 8.2 shall apply. The Contractor shall further make provision in the various rates for the construction of the roadbed, fill and selected layer for the cost of his own process control testing and the cost of complying with PSDM 6.5 and PSDM 7.4."

PSDM 8.2 COMPUTATION OF QUANTITIES

Replace subclauses 8.2.1 through to 8.2.3 (inclusive) with the following:

"PSDM 8.2.1 The provisions of subclause 8.2.1 of SABS 1200 D shall apply.

PSDM 8.2.2 The provisions of subclause 8.2.2 of SABS 1200 D shall apply.

PSDM 8.2.3 The provisions of subclause 8.2.2 of SABS 1200 D shall apply."

PSDM 8.2.5 Verifying quantities

Replace the first sentence with the following:

"Before any earthworks are commenced but after completion of any site preparation, the Engineer will, upon a written request from the Contractor, provide cross-sections for the purpose of measurement of earthworks quantities."

PSDM 8.3 SCHEDULED ITEMS

PSDM 8.3.3 Treatment of roadbed

(a) Roadbed preparation and compaction of material to

Add the following:

"The unit of measurement shall be the cubic metre of material re-compacted as specified and the volume shall be determined from levelled cross-sections on which are superimposed the levels to which the roadbed is to be constructed. When material is imported to make up the required volume, such material will be paid for as cut or borrow to fill as relevant."

Note :

No additional payment will be made for difficult work or hand operations in confined areas."

Add the following to Clause 8.3.3(a) :

"(4) Minimum of 93% of modified AASHTO maximum density Unit : m³

Add the following paragraph to the end of Clause 8.3.3(a):

"The unit of measurement shall be the cubic metre of material re-compacted as specified and the volume shall be determined from levelled cross-sections on which are superimposed the levels to which the roadbed is to be constructed. When material is imported to make up the required volume, such material will be paid for as cut or borrow to fill as relevant.

Note :

No additional payment will be made for difficult work or hand operations in confined areas."

Replace the heading of subclause (b) with the following:

"(b) In-place treatment of road-bed in hard rock material by"

Add the following:

"(c) Three-pass roller compaction:

(i) Grid roller Unit: m²

(ii) Vibratory roller Unit: m²

The units of measurement shall be the square metre of roadbed compacted as specified in subclause PSDM 5.2.3.3(c) for the areas designated by the Engineer.

The tendered rates shall include full compensation for shaping the areas, providing the rollers and compacting the roadbed by means of three roller passes over the entire area."

PSDM 8.3.4 Cut to fill, borrow to fill

Replace the contents of this Clause with the following:

“(a) Cut to fill compacted to 93% of modified AASHTO maximum density Unit : m³

The rate tendered shall cover the cost of excavating from the site as if in soft material, transporting, preparing, processing, shaping, watering, mixing, compacting to percentage of modified AASHTO maximum density specified, trimming and testing the fill.

(b) Borrow to fill from commercial or off site sources located by the Contractor compacted to 93% of modified AASHTO maximum density..... Unit : m³

The rate tendered shall cover the cost of acquiring the material from commercial or off site sources located by the Contractor, any excavation and selection required, loading, transporting to the point of use irrespective of distance, temporary stockpiling if necessary, placing, watering, compacting to percentage of modified AASHTO maximum density specified, trimming and testing the fill.

No additional payment will be made for difficult work or hand operations in confined areas.

Replace the heading and contents of Clause 8.3.5 with the following:

“PSDM 8.3.5 Selected layers

(a) Selected layers using material cut from the site and compacted to:

i) 93% of modified AASHTO maximum density Unit : m³

ii) 95% of modified AASHTO maximum density Unit : m³

The rate tendered shall cover the cost of excavating as if in soft material, selecting, loading, transporting, placing, watering, compacting to percentage of modified AASHTO maximum density specified, trimming and testing the selected layer.

(b) Selected layers using material from commercial or off site sources located by the Contractor, compacted to:

i) 93% of modified AASHTO maximum density Unit : m³

ii) 95% of modified AASHTO maximum density Unit : m³

The rate tendered shall cover the cost of acquiring the material from commercial or off site sources located by the Contractor, any excavation and selection required, loading, transporting to the point of use irrespective of distance, temporary stockpiling if necessary, placing, watering, compacting to percentage of modified AASHTO maximum density specified, trimming and testing the selected layer.

Note :

No additional payment will be made for difficult work or hand operations in confined areas.”

PSDM 8.3.6 Extra over items 8.3.4, 8.3.5 and 8.3.16 for excavating and breaking down material in

Replace the words "items 8.3.4 and 8.3.5" with the words "items 8.3.4, 8.3.5 and 8.3.16".

PSDM 8.3.7 Cut to spoil or stockpile from

Delete paragraph (b). In terms of PSDM 3.1 intermediate excavation will not be separately measured for payment.

Add the following:

"Separate items will be scheduled for cut to spoil and cut to stockpile. The rate tendered shall further cover the cost of complying with the requirements of Clause 5.2.3.2 irrespective of the depth or extent of the material

ordered to be removed, or whether the order to remove unsuitable material is given after the completion of any initial cut operation.

The tendered rate shall further, in the case of cut to spoil, include full compensation for transporting the material regardless of the distance involved and for all other incidental cost to dispose of the spoil material. (Refer also PSD 5.2.2.3, PSD 5.2.5 and PSDM 8.3.12)."

PSDM 8.3.11 Extra over 8.3.2, 8.3.4, 8.3.5 or 8.3.7 for temporary stockpiling of material

Add the following:

The temporary stockpiling of material from commercial sources or borrow pits located by the Contractor will not be measured for payment."

PSDM 8.3.12 Overhaul

Delete this item as no overhaul will be paid on material for the purposes of this Contract and all the costs for transporting material shall be included in the applicable tendered rates and amounts.

PSDM 8.3.13* Surface finishes

"(a) Topsoiling Unit: m²

Measurement shall be the surface area of the topsoiling reinstated in accordance with the requirements of PSDM 5.2.9. The rate tendered shall cover the cost of all things necessary to reinstate the topsoil as specified, including the acquisition of material to make up for material lost due to weather or other reasons."

(b) Grassing or other vegetation cover Unit: m²

The rate shall cover the costs of finishing off areas to be landscaped. The rate tendered shall cover the cost of all things necessary to reinstate proposed landscaped areas as specified."

Add the following new subclauses:

"(c)* Trim, shape and roll verge Unit: m²

Measurement shall be the surface area of the verge prepared in accordance with the requirements of PSDM 5.2.9. The rate tendered shall cover the cost of all things necessary to finish off the verge as specified, including the incorporation of material to make up for material lost due to weather or other reasons. (Cut and fill to bring verge to level payment under 8.3.4)."

(d)* Finishing of Cut and Fill slopes, medians and interchange areas Unit: m²

The rate shall cover the costs of finishing of cut and fill slopes, in terms of subclause 5.2.4.3 of SABS 1200 D."

PSDM 8.3.17* Variations in the number of roller passes (applicable to sub-sub item 8.3.3(c)):

- (a) Vibratory rollersUnit: m²-pass
- (b) Oscillatory rollers.....Unit: m²-pass
- (c) Grid rollers.....Unit: m²-pass
- (d) Tamping rollersUnit: m²-pass
- (e) Impact rollers.....Unit: m²-pass
- (f) Pneumatic-tyred rollersUnit: m²-pass

The unit of measurement shall be the square-metre coverage, and shall be computed by multiplying the number of square metres to which the changed pass efforts apply by the increased or decreased number of roller passes.

Where a change in the compaction effort is requested, the Contractor will be compensated at the tendered rates for the above items in respect of the increased number of square-metre roller passes of each type of roller required over and above that specified in the relevant standard effort. His compensation will be decreased simultaneously, at the applicable rates, by the number of square-metre roller passes of each type of roller which is either decreased or completely left out.

The tendered rate for each additional square metre-pass ordered by the Engineer over and above the specified number of passes, shall include full compensation for all supervision, labour, plant, equipment, fuel, materials, work and incidentals necessary for completing the work. The same rates shall be accepted by the Contractor during computation of a decrease in his compensation where the number of roller passes for each specific type of roller is decreased."

"PSDM 8.3.18* Reinforcement of soils..... Unit: m²

The tendered rates shall include full compensation for providing all labour, materials and equipment required to carry out the work, for all preparatory work, for installing the reinforcement scheduled in a workmanlike manner. Refer to PSDM 3.2.5."

PSGA **CONCRETE (SMALL WORKS)**

PSGA 3 **MATERIALS**

PSGA 3.2.1 Applicable Specifications

Add the following to this Subclause:

“Notwithstanding the contents of this Subclause, where reference is made in this specification or the standard specifications to any cement specification, it shall be replaced with the following specification, SANS EN 197-1-Cement-Part 1: Composition, specifications and conformity criteria for common cements.

On this Contract cement grade CEM I 42,5N shall be used.”

PSGA 3.8 **CURING COMPOUND**

Curing compound shall be white pigmented natural resin based liquid curing compound complying with ASTM C 309 Type 2 Class B.”

PSGA 4 **PLANT**

PSGA 4.4.2 Finish

The finish to all exposed concrete shall be smooth and that to buried or backfilled surfaces, rough.

PSGA 5 **CONSTRUCTION**

PSGA 5.4 **Concrete**

PSGA 5.4.1 Quality

PSGA 5.4.1.5 Strength Concrete

Add the following:

“The Contractor shall, when requesting approval of a mix design, submit the constituent proportions of the proposed mix together with the results of compressive strength tests carried out. Reliable test records made from the same materials and mix proportions will, without prejudicing the requirements of this subclause, be accepted as a basis for approving a mix design”.

PSGA 5.4.2 Batching

Notwithstanding the requirements of this subclause, the method of batching shall be subject to approval. If volume batching is allowed only full standard 50kg bags of cement may be used to make up a batch.

PSGA 5.4.3 Mixing

Add the following:

“All site mix concrete shall be mixed in a rotary type mixer and the minimum size of mixer that may be used shall have the capacity to mix a batch comprising one standard 50kg bag of cement”. (SANS ENV 197 CEM 1 42.5 Black bag.)

PSGA 5.4.6 Compaction

Replace “or (if approved).....forking” in the first sentence of subclause 5.4.6.3 with “using approved vibrators”.

PSGA 5.4.7 Curing and Protection

Notwithstanding the requirements of this subclause, all cast insitu concrete shall be cured in accordance with the requirements of this subclause using a white pigmented natural resin based liquid curing compound complying with ASTM C 309-74, except where the surface to be cured is to receive further concrete, in which case curing shall be carried out in accordance with one of the methods described in subclause (a) and (b).

PSGA 7 TESTS

PSGA 7.1 Facilities and Frequency of Sampling

PSGA 7.1.2 Frequency and Sampling

Notwithstanding the requirements of this subclause the Contractor shall take note that he is responsible for taking an adequate number of tests to ensure that the concrete being used complies with the Specification. The Engineer’s Representative will only carry out such check testing as he requires.

PSGA 8 MEASUREMENT AND PAYMENT

Delete the contents of this Clause. Measurement and Payment would be done in accordance with the Standard Preambles.

PSL MEDIUM PRESSURE PIPELINES

PSL 1 SCOPE

PSL 1.1 Add the following:

“This specification shall also cover the installation of the cross-connection and pipework inside the tower.”

PSL 2 INTERPRETATIONS

“PSL 2.1.3* Drawings

Drawings numbered L1, L2 and L3 referred to in this standardized specification have been superseded by the Employer’s Agent Drawings. Wherever the aforementioned drawings are referred to, the appropriate of the details shown on the Employer’s Agent Drawings shall apply.”

PSL 2.4 ABBREVIATIONS

Add the following:

“HDPE: High Density Polyethylene.”

PSL 3 MATERIALS

PSL 3.3 CI PIPES, FITTINGS AND SPECIALS

Add the following:

“CI fittings and specials for use with uPVC pipes shall be class 16.”

“PSL 3.7.3* uPVC pipes

uPVC pipes and fittings shall be provided with spigot and socket rubber ring joints and shall be manufactured to standards acceptable to the Employer’s Agent. Solvent welded fabricated fittings will not be acceptable.”

PSL 3.8.3 Flanges and accessories

Add to Subclause 3.8.3:

“The insertion piece shall be such as to cover the full face of the flange (i.e. the O/D). Drilling shall conform to SABS 1123/1600/3.

PSL 3.8.4 Loose flanges

Bolts and nuts shall comply with SABS 135.

PSL 3.9.1 CI pipes and specials

Notwithstanding the provisions of this subclause, all CI pipes, fittings and specials shall be coated internally and externally using “Rillsan”. The coating shall be 250 – 300 microns thick and shall be applied by an approved applicator.

PSL 3.9.2 Steel pipes

Notwithstanding the provisions of this Sub-Clause, all steel pipes and specials to be installed shall be heavy duty hot dipped galvanized complying with the requirements of SABS ISO 1461 and shall **not** be passivated.

After the galvanizing process, all steel pipes and specials shall be cleaned, scrubbed and washed down firstly with a suitable solvent and then with clean water. Immediately thereafter, the pipes and specials shall be internally and externally coated as scheduled below, all in accordance with the manufacturer's instructions.

Coat	Product	DFT (µm)		
		Min	Nominal	Max
1	Holding Primer Sigmacover or approved equivalent	45	50	75
2	Sigma TCN 300 (Brown) or approved equivalent	125	150	175
3	Sigma TCN 300 (Black) or approved equivalent	125	150	175
Total DFT		295	350	425

All coats shall be in contrasting colours and no DFT reading may be less than nor more than the minimum and maximum values specified. The overall average DFT shall not be less than the nominal DFT specified.

Application shall be by airless or conventional pressure pot spray systems and thinners shall be used strictly in accordance with the manufacturer's instructions. All critical areas like edges and welds shall be given an extra stripe coat.

Note:

The drilling patterns for flanges shall be SABS 1123/NP1600/3 and all pipes, specials and fittings shall be supplied complete with all necessary stainless steel bolts, washers and nuts as well as appropriate insertion pieces applicable to diameter and material.

PSL 3.9.6 Corrosive soil

All buried flanged joints, together with their bolts, shall be protected by means of "Denso" paste and then wrapped to give a covering of at least three layers of "Denso" impregnated tape, or other means of inhibiting corrosion approved of by the Employer's Agent. Denso tape must be carefully moulded over the paste and fitting in order to expel all voids.

"PSL 3.9.7* Corrosion protection for valves and Hydrants

All gate valves and hydrants shall be fusion-bonded epoxy coated internally and externally to SABS 1217 or DIN 30677".

PSL 3.10 VALVES

Notwithstanding the provisions of this Subclause, the following shall apply with respect to the various valves specified on the drawings and scheduled:

PSL 3.10.1* Gate Valves

Gate valves shall comply with the following:

Gate valves shall be AVK Series 43/60 or approved equivalent gate valves which conform to the requirements of SABS 664 and shall be of the resilient seal type. All valves shall have a working pressure rating of at least 16 Bar and shall be clockwise opening with non-rising spindle and cap top unless otherwise specified. The wedge shall be fully encapsulated with NBR rubber internally and externally. The wedge nut shall be of the "fixed nut" concept allowing no movement and manufactured from dezincification resistant high tensile navy brass. The primary seal for stern sealing shall be a NBR rubber hydraulic U seal (Manchette type) and the secondary seal shall consist of at least two NBR O rings inside and two outside of a Nylon Bush. The body of the valve shall further bear the SABS mark, trade name, as well as the size and class of valve.

PSL 3.11.1 Bricks

All bricks shall comply with SABS 227 and shall be NFX burnt clay masonry units free of stones, cracks and other defects. The bricks shall be obtained from an approved manufacturer and samples of the bricks shall be submitted to the Employer's Agent for approval.

PSL 3.11.6 Surface boxes

Delete the contents of this sub-clause and replace by:

"For non-trafficked areas, surface boxes are to be the thermoplastic type."

PSL5 CONSTRUCTION

PSL 5.1.1 Add the following:

"uPVC pipes shall be laid, cut and jointed strictly in accordance with the manufacturer's instructions. A pipeline shall further be laid continuously; the leaving of gaps for fittings will not be permitted."

PSL 5.1.4 Depths and cover

Replace the contents of subclause 5.1.4.1 with the following:

Unless otherwise shown on the drawings or instructed by the Employer's Agent, cover to pipes shall be as follows:

During construction:

Where construction traffic is liable to cross over pipes, they shall be laid so that there is not less than 0,75m of cover over the pipe. Road crossings shall be constructed after the construction of the road layers has reached the stage where 0,75m cover is available.

Pipes beneath Verges and Open Spaces:

The tops of pipes beneath verges shall be not less than 0,75m and not more than 1,25m below the final verge level.

Supply Connection:

The tops of pipes shall not be less than 450mm and not more than 600mm below the final road surface.

Pipes beneath existing roadways:

The tops of pipes beneath a road shall not be less than 1m and not more than 1,25m below the road level.

"PSL 5.1.4.6* The top of the spindle of a gate valve shall not be less than 75mm nor more than 600mm below the level at which the top of the valve box is to be set. To ensure the aforementioned, valve spindle extension pieces shall be fitted by the Contractor."

PSL 5.3 SETTING OF VALVES, SPECIALS AND FITTINGS

Add to Clause 5.3:

"The hydrant shall be bolted to the tee such that the outlet is in line with the pipeline. Valves shall be positioned opposite the erf splay peg at intersections."

"PSL 5.11* KOGUA LOCAL MUNICIPALITY WATER MAINS

The Contractor shall not operate any valve on the Kouga Local Municipality (KLM) water mains. When a section of the existing network is required to be isolated, the Contractor shall request the KLM Water Division to

close the necessary valves. Any work on an existing main shall also only be carried out with the knowledge of the KLM Water Division, and if required, under the supervision.”

“PSL 5.12* SUBSEQUENT MAINTENANCE

Should leaks develop during the maintenance period or any defects need attention, these will be rectified by the Municipality (KLM) at the Contractor’s expense, including the cost of retesting and subsequent sterilisation.”

PSL 5.13* MARKERS FOR VALVES AND FIRE HYDRANTS

An appropriate marker shall be placed by the Contractor at the position of each valve, fire hydrant and on pipes (bends and pipeline lengths exceeding on bulk pipelines at 80m intervals).

The markers shall be manufactured and installed in accordance with the details shown on the drawings.”

PSL 6 TOLERANCES

PSL 6.2 CONTROL POINTS

Add the following:

“Valves shall be located as indicated on the plan layout opposite the boundary peg of the erf, and to within a longitudinal tolerance of 100mm.”

PSL 6.3 ALIGNMENT (PLAN & LEVEL)

Add to the last sentence:

“, provided this does not result in a reversal of the grade of the pipeline.”

PSL 7 TESTING

PSL 7.1 GENERAL

Notwithstanding the provisions of this subclause, the Contractor shall take note that an official of the Municipality’s Water Division shall witness each successful leakage test carried out. Visits to the site of this official to witness a test will be charged at a rate determined by the Water Engineer per visit after the initial visit, which monies shall be payable by the Contractor.

PSL 7.3.1 Test pressure and time of test

Add to sub-clause 7.3.1.1:

“The Contractor’s test equipment shall be connected directly to the flange of a hydrant tee – not through the hydrant’s screwed outlet – or through a specially adapted end cap or a short, discardable pipe. Alterations may have to be made to the Contractor’s test equipment to allow the placing of a Water Division’s “in-line” check pressure gauge. If necessary, this will be requested by the Employer’s Agent prior to the start of a leakage test.

Upon the successful conclusion of a leakage test, the removal of the Contractor’s equipment from the tee and the fitting of the hydrant (supplied by Contractor) will be done by the Water Division when connecting the new reticulation.”

With reference to subclause 7.3.1.2 the maximum working pressure shall be the pressure rating of the pipe.

Replace the last line of Clause 7.3.1.3 “less than these points” with the following:

“less than 1,25 nor more than 1,5 times the specified maximum working pressure.”

Delete Subclauses 7.3.1.3 and 7.3.1.4

Add to sub-clause 7.3.1.5:

"Water used by the Contractor to fill the reticulation and during testing shall be water drawn from the Municipal mains and transported in a clean container. A metered connection may be installed by the Water Division upon the request of the Contractor and upon the payment of the prescribed fee. The bleeding off of air trapped within the reticulation shall only be carried out via the hydrants, erf connections or at the prescribed connection points to the existing reticulation by:

- (1) a bleeder system fitted to the end caps, or
- (2) a bleeder system fitted to a short length, say 500mm, of a pipe included at the end of the new reticulation.

PSL 7.3.3 Permissible Leakage Rates

"When testing reticulations made up of different types of pipes, the arithmetical sum of the respective calculated leakage rates for the various pipe types, diameters and lengths shall be taken as the maximum allowable leakage. Alternatively, the Contractor may request that each section be tested separately in which case the additional tests, witnessing and connecting fees shall be at his expense."

"PSL 7.3.4* Witnessing of a Successful Leakage Test by an Official of the Water Division

The Contractor shall take note that the Employer's Agent Representative is required to ensure that an Official of the Water Division (KLM) witnesses a successful leakage test of the whole new reticulation being put forward for acceptance. Visits to site of this official to witness the test after the initial visit will be charged at a rate determined by the Municipality.

This amount shall be payable directly to the Municipality by the Contractor prior to each subsequent visit.

"PSL 7.3.5* Removal of Test Equipment

Upon the successful completion of the leakage test the new reticulation will be deemed to be Municipal property and the Contractor shall not carry out any work on the pipes apart from the disconnection of his pump, the completion of the backfilling to the pipeline and construction of the hydrant and valve chambers and connecting in the new reticulation as soon as possible and the Contractor shall supply such materials, pipes and specials as detailed by the Employer's Agent. The completion of backfill at the connection points and the surface restoration / reinstatement shall be carried out by the Contractor."

"PSL 7.5* DEFECTS LIABILITY PERIOD

Should leaks or defects develop during the Defects Liability Period they shall be rectified by the Municipality at the Contractor's expense. This will include the cost of re-testing and subsequent sterilization. During the Defects Liability Period the Municipality may carry out further pressure tests on the whole or part of the new reticulation and any necessary remedial work shall be carried out at the Contractor's expense."

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.1 GENERAL

Replace the second sentence of this subclause with the following:

"No payment will be made for depths of excavation in excess of those specified unless ordered in writing by the Employer's Agent."

Amend the heading of subclause 8.2.1 as follows:

"PSL 8.2.1 Collect, lay, joint, bed and test pipes complete with couplings and including disinfections Unit: m"

Add the following:

"Couplings shall be held to include compression couplings required to join lengths of HDPE pipeline.

The rate tendered shall further cover the cost of the work provided for under 8.2.4, and with respect to testing, the supply and installation of all equipment, fittings and specials required, as well as the cost of water drawn (Refer PS 6.1). The measured quantity of pipe length will not, except for the payment of materials on site, be measured for payment until the length under consideration has been accepted in terms of subclause 7.3, PSL 7.3.1 and PSL 7.3.3. Refer also PS 8.3."

Amend the heading of subclause 8.2.2 as follows:

"PSL 8.2.2 Extra over 8.2.1 for the supplying, laying, jointing, bedding and testing of specials complete with Couplings Unit: No

Add the following:

"The rate tendered shall also as applicable cover the cost of the provision of corrosion protection as specified in PSL 3.9.1, PSL 3.9.6 and PSL 3.9.7."

PSL 8.2.3 Extra over 8.2.1 for the supplying, fixing and bedding of valves..... Unit: No

Add the following:

"The rate tendered shall also as applicable cover the cost of the provision of corrosion protection as specified in PSL 3.9.1, PSL 3.9.6 and PSL 3.9.7".

Replace the heading and contents of subclause 8.2.13 with the following:

"PSL 8.2.13 Chambers

a) Valve Chambers, etc. Unit: No

Valve chambers, etc., will be measured as complete units for which separate items will be scheduled for each type of chamber of overall depth not exceeding 1,5m from soffit of roof to floor level complete as detailed on the Drawings.

The tendered rate shall cover all materials, plant and labour necessary for the complete construction of the chambers, including ladders, doors, manhole covers and frames, handrails, the lifting davit as well as the compaction of the bottom of the chamber excavation to 90% of modified AASHTO maximum density as well as for building in of the pipes through the wall, for frames and concrete pedestals, as and when required.

b) Extra over for chambers of depth exceeding 1,5m..... Unit: No

Additional depths of chambers in excess of 1,5m will be measured in increments of 0,5m depth for each type of chamber.

The rate tendered shall cover the cost of the complete construction of each extra 0,5m additional depth as well as for additional step irons, brickwork and uPVC pipe as required."

"PSL 8.2.16* Supply and install valve and hydrant markers Unit: No

The rate tendered shall cover the cost of the supply of the markers complying with the details shown on the drawings, as well as the cost of all labour and equipment required to install the markers as specified in PSL 5.13, or as directed."

"PSL 8.2.17* Connection to Existing Mains..... Unit: No

An item will be allowed in the Schedule of Quantities for the connection to existing mains by the Contractor after acceptance of the reticulation.

The rate tendered shall cover the cost of isolating the main, cutting into the main, connect fitting, dewatering the excavation, taking steps to prevent the ingress of ground, stones and other material into the main, as well as for making good any damage to the existing main.

The excavation to expose the main, the supply, laying, bedding, coupling up and testing of valves and specials used in the connection, as well as the provision of bedding, will be measured for payment under the appropriate items provided for this in the schedule."

PSLB BEDDING (PIPES)

PSLB 2.3 DEFINITIONS

Flexible pipe

Add the following:

“uPVC pipes shall be classified as flexible pipes.”

PSLB 3 MATERIALS

PSLB 3.1 SELECTED GRANULAR MATERIAL

Replace the contents of Clause 3.1 with the following:

“Selected granular material shall be an aggregate, sand or granular material, all being a non-cohesive material that is free of vegetation, the grading analysis of which shows 100% passing a 9,5 mm sieve and not more than 5% passing a 0.075mm sieve and has a compactability factor not exceeding 0,4.”

PSLB 3.3 BEDDING

Add the following:

“For the purposes of this clause uPVC pipes shall be classified as flexible pipes.”

PSLB 3.4.1 Suitable material available from trench excavation

Replace the words “(but is not required)” in the fifth line with the words “(at his own cost).”

“PSLB 3.5* BEDDING IN WATERLOGGED CONDITIONS

Where ordered by the Employer’s Agent a bedding cradle of the specified thickness, comprising of 6,7mm concrete stone complying with SABS 1083, shall be used in waterlogged conditions.”

PSLB 5 CONSTRUCTION

PSLB 5.1.1.2 Bottom

Add the following:

“Where expansive clay is encountered in the trench bottom, the selected fill blanket shall comprise of selected granular material.”

PSLB 5.2 PLACING AND COMPACTING OF RIGID PIPES

Stormwater pipes shall be bedded as specified for rigid pipes unless otherwise indicated on the drawings or ordered by the Employer’s Agent.

PSLB 5.3 PLACING AND COMPACTING OF FLEXIBLE PIPES

Notwithstanding the provisions of this subclause, the bedding for flexible pipes shall be constructed to the dimensions shown on the Drawings and by using the bedding material specified (refer also PSLB 5.1.2).

PSLB 8 MEASUREMENT AND PAYMENT

PSLB 8.1.3 Volume of bedding materials

Notwithstanding the provisions of this subclause, the volume of bedding will be computed from the dimensions shown on the Drawings.

Replace the last sentence with the following:

“No allowance will be made for bulking of material or any additional volume of bedding material required due to over break or any other cause.

Further, the volume of bedding displaced by the pipeline will not be measured for payment.”

PSLB 8.1.5 Disposal of displaced material

Replace the contents of this Clause with the following:

“Material displaced by the pipeline and by imported material from sources other than trench excavation, shall be disposed of at an approved site furnished by the Contractor. No haulage shall be payable for such material.”

PSLB 8.2.2.3 From commercial sources

(c)* 6,7 mm concrete stone to SABS 1083Unit: m³

Add the following to the end of this Clause:

“Commercial sources shall include off-site sources located by the Contractor.”

PSLB 8.2.4 Encasing of pipes in concreteUnit: m³

The item volume for concrete encasement to the pipes will be computed from the dimensions of the concrete as given on the drawings.

The concrete shall be 20 MPa concrete with 19mm stone. The rate shall cover the cost of dealing with any excavation (in all material including disposal of surplus) that is additional to that measured under the item for pipe trench excavation, the cost of encasing the pipe in concrete including the cost of formwork (if any), etc., and the cost of formwork to form flexible joints at each pipe collar or joint.

“PSLB 8.2.6* Supply and install geofabric material (Kaytech A2 or similar approved)..... Unit: m²

The unit of measurement shall be the square metre, measured in accordance with Subclause 8.2.4 of SABS 1200 DK.

PSLG **PIPE JACKING**

PSLG 5 **CONSTRUCTION**

PSLG 5.6 **BACKFILLING AND DISPOSAL OF EXCAVATED MATERIAL**

Backfilling shall be completed in 150 mm layers and the material shall be compacted at OMC to 90% of modified AASHTO density.

Excess material shall be disposed of as directed by the Engineer.

PSLK VALVE INSTALLATIONS. (SPEC LK)

PSLK 3 MATERIALS

PSLK 3.1 GENERAL

The applicable detail sheets found in Part C3.2 of this tender document are to be filled in for all the relevant valves.

PSLK 3.2 AIR VALVES

Air valves shall be as detailed on the drawings or similar approved. Each air valve shall be fitted with a flanged resilient seal gate valve with handwheel. All air valves shall have a PN 16 pressure rating and shall be flanged and drilled in accordance with the relevant tables of SANS 1123.

PSLK 3.3 GATE VALVES

PSLK 3.3.1 General

The resilient seal gate valves supplied under this Contract shall be constructed in accordance with SABS 664 for CI waterworks gate valves, be double flanged, anticlockwise closing, with non-rising spindle type fitted with hand wheels. The direction of closing must be shown clearly on the valve. The valve shall be drop-tight when tested in accordance with BS 5163.

The design of the stuffing box shall be such that the rubber or neoprene "O" rings can be replaced while the valve is in service without having to remove the valve dome. Gate valves shall be "AVK" or similar approved.

The valves shall be capable of being operated manually under maximum unbalanced operating conditions.

PSLK 3.3.2 Operating condition – Resilient seal gate valves

The resilient seal gate valves will be used as isolating valves on the air valve installations.

PSLK 3.4 Protection against corrosion. (Subclause 3.14)

The isolating and non-return valves shall be internally and externally epoxy painted in accordance with SPEC HP and PSHP.

PSLK 8 MEASUREMENT AND PAYMENT

PSLK 8.1 VALVES - SUPPLY AND INSTALL

PSLK 8.1.1 General

Measurement and payment for equipment to be supplied and delivered to Site shall be in accordance with Subclauses 8.1(c) and 8.2.1. The tendered rates shall include for all items specified in Subclause 8.2.2.

PSLK 8.1.2 Installation, site testing and commissioning

The installation of the valves will be measured by number.

The tendered rates shall cover the costs of handling, installing, site testing and commissioning of the valve together with the cost of any cutting, turning, and jointing of pipes required to locate the valves, as well as for the construction of the valve pedestal block, other supports, plant and labour.

No separate payment will be made for the repairs to paintwork in the event of damage to the valves.

The tendered rates shall cover the cost of supply and delivery to Site of all the necessary bolts, nuts and jointing material and the storing of the valves in an approved manner.

PSME SUBBASE

PSME 1 SCOPE

Add the following:

"All the requirements as specified for the construction of subbase shall, except where otherwise stated or ordered, apply to the stabilization of the in situ material as new subbase."

PSME 3 MATERIALS

PSME 3.2 PHYSICAL PROPERTIES

PSME 3.2.1 Subbase material

Replace the contents of paragraph (a) with the following:

"(a) The maximum particle dimension of the gravel shall not exceed 63 mm."

Replace the contents of paragraph (d) and (e) with the following:

"(d) The CBR at specified density shall be 45 for unstabilised as well as for stabilised material prior to stabilisation or as directed by the Engineer.

The UCS at 7 days of each cement-stabilized material shall at 100% modified AASHTO maximum density be as follows:

- For C3 cemented natural gravel : 1,50 MPa minimum and 3,00 MPa maximum
- For C4 cemented natural gravel : 0,75 MPa minimum and 1,50 MPa maximum"

(e) The ITS (Indirect Tensile Strength) for cement-stabilised material shall at 100% modified AASHTO maximum density be as follows:

- For C3 cemented natural gravel : 250 kPa minimum
- For C4 cemented natural gravel : 200 kPa minimum"

PSME 3.3.1 General

Add the following to this subclause:

"Where reference is made in this specification or the Standard Specifications to the cement specifications, e.g. SABS 471: Portland cement and rapid hardening Portland cement, it shall be replaced with the new specification:

SABS ENV 197-1: Cement-composition, specifications and conformity criteria.

Part 1: Common cements.

Furthermore, where reference is made in this specification or the Standard Specifications to different cement types, the following new names shall be used as a guide but must be confirmed by the Engineer.

Cement Grade	Cement Type	Approximate product name	old	New Alpha	New Blue Circle	New NPC	New PPC	New Slagment
52.5	CEM I	Rapid hardening		Rapid Hard	Duracast	Eagle Super		-
42.5R	CEM I	Rapid hardening		-	-	-		-
42.5	CEM I	OPC*		Portland Cement	Duratech	-	OPC	-
	CEM I	LASRC		-	-	-	LASRC	-
	CEM II A-S	PC15SL		-	-	Eagle Plus	-	-

Cement Grade	Cement Type	Approximate product name	old	New Alpha	New Blue Circle	New NPC	New PPC	New Slagment
	CEM II B-S	RH30SL			-	Eagle Plus	-	-
32.5R	-	-	-	-	-	-	-	-
32.5	CEM II A-V	PC15FA	All – purpose cement	-	-	-	Surebuild	-
	CEM II A-W	PC15FA	-	-	-	-	Surebuild	-
	CEM II A-L	-	All purpose cement	-	-	-	Surebuild	-
	CEM II B-V OR W	PC25FA/PFAC* *	-	Structcrete	-	-	Surecrete	-
	CEM II B-V OR W	PC25FA/PFAC* *	-	Duracrete	-	-	Surecrete	-
	CEM III A	PBFC	-	BFC	Eagle Pro	-	-	PBFG
	CEM III A	RHSL	-	-	-	-	-	RHSL
22.5	MC 22.5X	PFAC***	Multi-purpose cement	Durabuild	-	-	-	-
	MC 22.5X	PFAC***	-	Buildcrete	-	-	-	-
12.5	MC 12.5	Walcrete	Mortar cement	Walcrete	-	-	Masonry	-
	MC 12.5	Mortacem	-	-	-	-	-	-

PSME 5 CONSTRUCTION

PSME 5.1 PRECAUTIONS

Add the following to this subclause:

“No stabilization shall be carried out during falling temperatures when the ambient air temperature falls below 7°C or during rising temperatures when the ambient air temperature is below 3°C.

The surface temperature of a compacted stabilized layer shall not be allowed to fall below 1°C during the first three (3) days after stabilization. The Contractor shall be responsible for taking the necessary measures in this connection, and especially to refrain from stabilizing when such temperatures become probable.

When a sudden unforeseen temperature drop to a level below this limit occurs, the stabilized layer shall be covered with the material required for the next layer to be constructed.

All stabilized layers damaged by frost or by the formation of ice in the layer shall be removed and replaced by the Contractor at his own expense.

The Contractor shall make allowance for these requirements in his construction programme, and no claims in this connection will be considered.”

The Contractor shall at all times supply all workers exposed to chemical stabilizing agents with approved protective apparel, eyewear and masks, and no person without such apparel, eyewear and masks shall be permitted to work with or be exposed to the chemical agents. Precautionary measure shall also be taken to ensure that any livestock and the public will not be exposed to the chemical agents blown by the wind or under similar circumstances”

PSME 5.2 EXCAVATION

PSME 5.2.2 Borrow pits

Insert the words "designated by the Engineer and" between the words "pits" and "established" in the first line.

PSME 5.4.1 Placing

The compacted thickness of the subbase for the various areas shall be that shown on the drawings.

PSME 5.4.4 Compaction

Notwithstanding the requirements of Clause 5.4.4.2 the subbase shall be compacted to 96% of modified AASHTO maximum density, as the case may be.

PSME 6 TOLERANCES

PSME 6.1 DIMENSIONS, LEVELS, ETC.

PSME 6.1.1 General

Add the following to subclause 6.1.1:

"For layers, constructed of subbase quality material, on which the bituminous surface will be placed, the tolerance for dimensions and level shall be as set out in SABS 1200 MF Subclauses 6.1.2 to 6.1.6 inclusive."

PSME 6.3 STABILIZATION

Add the following:

"The coefficient of variation shall not exceed 0,3 (30%) for mixing in place and 0,2 (20%) for plant mixed material, calculated as follows :

$$\frac{S_n}{X_n} \times 100$$

Where:

Xn is the average and

Sn is the standard deviation of stabilizing content per lot"

"PSME 6.4* DIMENSION AND LEVEL CONTROL

The requirements of PSM 6.4 shall apply."

PSME 7 TESTING

PSME 7.3.3 Strength tests for stabilized material

Amend the contents of this clause to read as follows:

"The Contractor shall carry out tests on the stabilized material at the frequency specified in 7.2.1 and 7.2.2 and check that the material complies with PSME 3.2.1 (d) and (e).

PSME 8 MEASUREMENT AND PAYMENT

PSME 8.1 BASIC PRINCIPLES

Insert a semicolon in the first line of paragraph (b) after the words "will be paid for once only" and delete the rest of the paragraph.

Add the following to clause (d):

"A commercial source shall be held to include any off site sources or borrow pits located by the Contractor. Further that no additional payment will be made for the temporary stockpiling of material from commercial sources, class of excavation, method of processing (except stabilizing), or for overhaul."

Add the following new clause after (d):

"(e)* The requirements of PSM 8.2 shall apply. The Contractor shall further make provision in the rates tendered for the construction of the subbase, for the cost of his own process control testing and the cost of complying with PSME 6.4."

PSME 8.3 SCHEDULED ITEMS

Replace the heading and contents of Clause 8.3.2 with the following:

"8.3.2 Construct subbase using material from stockpile Unit: m³

The rate tendered shall cover the cost of basic selection, loading from stockpiles, transporting, spreading, watering, compacting, final grading, complying with the tolerances, and testing.

No additional payment will be made for difficult work or hand operations in confined areas."

Replace the heading clause 8.3.3 with the following:

"PSME 8.3.3 Construct the subbase course/shoulders/gravel wearing course with material from commercial sources" Unit: m³

Add the following paragraph:

"No additional payment will be made for difficult work or hand operations in confined areas."

PSME 8.3.9 Overhaul (haul exceeding 2 km):

Replace the contents with the following:

"No haul will be paid."

PARTICULAR SPECIFICATIONS

The following particular specifications are included:

- **PA: Environmental Management**
- **PB: Borehole Pump Specifications**
- **PC: Electrical Specifications**
- **PD: Health & Safety Specifications**

PARTICULAR SPECIFICATION: PA

PA ENVIRONMENTAL MANAGEMENT (COMPREHENSIVE)

PA 1 SCOPE

This Specification covers the requirements for controlling the impact of construction activities on the environment. It contains clauses that are generally applicable to the undertaking of civil engineering works in areas where it is necessary to impose pro-active controls on the extent to which the construction activities impact on the environment.

All construction activities shall observe any relevant environmental legislation and in so doing shall be undertaken in such a manner as to minimise impacts on the natural and social environment.

PA 2 NORMATIVE REFERENCES

PA 2.1 SUPPORTING REFERENCES

Where this Specification is required for a project the following specifications shall, inter alia, form part of the Contract Document.

- a) Scope of Work;
- b) Construction Regulations, 2014, and
- c) Kouga Local Municipality Health and Safety Specification

PA 3 DEFINITIONS

For the purposes of this Specification the definitions and abbreviations given in the applicable specifications listed in 2.1 and the following definitions shall apply:

Environment:

The surroundings within which humans exist and that are made up of:

- i) the land, water and atmosphere of the earth;
- ii) micro-organisms, plant and animal life;
- iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Potentially hazardous Substance:

A substance that, in the reasonable opinion of the Employer's Agent, can have a deleterious effect on the environment.

Method Statement:

A written submission by the Contractor to the Employer's Agent in response to the Specification or a request by the Employer's Agent, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, identified by the relevant specification or the Employer's Agent when requesting the Method Statement, in such detail that the Employer's Agent is enabled to assess whether the Contractor's proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications.

The Method Statement shall cover applicable details with regard to: construction procedures, materials and equipment to be used, transportation of equipment/materials to and from site, movement of equipment/material on site, storage of materials on site, containment (or action to be taken if containment is not possible) of leaks or

spills of any liquid or material that may occur, timing and location of activities, areas of non-compliance with the Specifications, and any other information deemed necessary by the Employer's Agent.

Reasonable :

Unless the context indicates otherwise, reasonable in the opinion of the Employer's Agent after he has consulted with a person, not an employee of the Employer, suitably experienced in "environmental implementation plans" and "environmental management plans" (both as defined in Act No107,1998).

Solid waste:

All solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Contaminated water:

Water contaminated by the Contractor's activities, e.g. concrete water and runoff from plant/personnel wash areas.

Top material:

The top 150 mm of soil (topsoil) and root material of cleared vegetation.

PA 4 REQUIREMENTS

PA 4.1 MATERIALS

PA 4.1.1 Materials handling, use and storage

The Contractor shall ensure that any delivery drivers are informed of all procedures and restrictions (including "no go" areas) required to comply with the Specifications. The Contractor shall ensure that these delivery drivers are supervised during off loading, by someone with an adequate understanding of the requirements of the Specifications.

Materials shall be appropriately secured to ensure safe passage between destinations. Loads including, but not limited to sand, stone chips, fine vegetation, refuse, paper and cement, shall have appropriate cover to prevent them spilling from the vehicle during transit. The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.

PA 4.1.2 Hazardous substances

Procedures detailed in the Material Safety Data Sheets (MSDSs) shall be followed in the event of an emergency situation.

Petroleum, chemicals, harmful and hazardous waste shall be stored in an enclosed and bunded area. This area shall be subject to the approval of the Employer's Agent. The waste shall be disposed of at a hazardous waste disposal site as approved by the Employer's Agent.

PA 4.1.2.1 Shutter oil and curing compound

Shutter oil and curing compound pose a risk of causing water and soil contamination and accordingly are regarded as potential hazardous substances. The Contractor shall ensure that shutter oil and curing compound containers in use are stored within the fuel bund. The remaining containers shall be inspected regularly to ensure that no leakage occurs. When shutter oil or curing compound is dispensed, the proper dispensing equipment shall be used, and the storage container shall not be tipped in order to dispense the oil/compound. The dispensing mechanism of the shutter oil/curing compound storage container shall be stored in a waterproof container when not in use.

Shutter oil and curing shall be used in moderation and shall be applied under controlled conditions using appropriate equipment. The Contractor shall take all reasonable precautions to prevent accidental and incidental spillage during the application of these compounds.

In the event of a shutter oil or curing compound spill, the source of the spillage shall be isolated, and the spillage contained. The Contractor shall clean up the spill, either by removing the contaminated soil or by the application of absorbent material in the event of a larger spill. Treatment and remediation of the spill area shall be undertaken to the reasonable satisfaction of the Employer's Agent.

PA 4.1.2.2 Bitumen

The Employer's Agent shall be advised of the area that the Contractor intends using for the storage of bitumen drums/ products. The storage area shall have a smooth impermeable (concrete or 250 µm plastic covered in sand) floor. The floor shall be bunded and sloped towards a sump to contain any spillages of substances. The bund shall be inspected and emptied daily, and serviced when necessary. The bund shall be closely monitored during rain events to ensure that it does not overflow.

PA 4.2 PLANT

PA 4.2.1 Ablution facilities

The Contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied and that the contents are properly stored and removed from Site. Discharge of waste from toilets into the environment and burial of waste is strictly prohibited. The Contractor shall prevent any littering on site and ensure that staff disposes of all litter (including leftover foodstuff) in the bins provided.

Washing, whether of the person or of personal effects and acts of excretion and urination are strictly prohibited other than at the facilities provided.

PA 4.2.2 Solid waste management

The Contractor shall provide sufficient bins with lids on Site to store the solid waste produced on a daily basis. Solid, non-hazardous waste shall be disposed of in the bins provided and no on-site burying, dumping or burning of any waste materials, vegetation, litter or refuse shall occur. Bins shall not be allowed to become overfull and shall be emptied a minimum of once daily. The waste may be temporarily stored on Site in a central waste area that is weatherproof and scavenger-proof, and which the Employer's Agent has approved.

All solid waste shall be disposed of offsite at an approved landfill site. The Contractor shall supply the Employer's Agent with a certificate of disposal.

PA 4.2.3 Contaminated water

The Contractor shall set up a contaminated water management system, which shall include collection facilities to be used to prevent pollution, as well as suitable methods of disposal of contaminated water. The Contractor shall prevent the discharge of water contaminated with any pollutants, such as soaps, detergent, cements, concrete, lime, chemicals, glues, solvents, paints and fuels, into the environment.

The Contractor shall notify the Employer's Agent immediately of any pollution incidents on Site. The Employer's Agent approval is required prior to the discharge of contaminated water to the Municipal sewer system.

PA 4.2.4 Site structures

All site establishment components (as well as equipment) shall be positioned to limit visual intrusion on neighbours and the size of area disturbed. The type and colour of roofing and cladding materials to the Contractor's temporary structures shall be selected to reduce reflection.

PA 4.2.5 Noise control

The applicable regulations framed under the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), and the provisions of SANS 1200 A Subclause 4.1 regarding "built-up areas" shall apply to all areas within audible distance of residents whether in urban, peri-urban or rural areas.

Appropriate directional and intensity settings are to be maintained on all hooters and sirens, and the Contractor shall provide and use suitable and effective silencing devices for pneumatic tools and other plant such that the noise level in inhabited areas and dwellings adjacent to the work areas will not increase by more than 7 dB(A)Leq 60 above residual background sound levels. Similarly in habituated areas adjacent to access roads maximum noise levels shall not exceed 60 dB(A)Leq 60 and maximum sound pressure level of 70 dB(A).

Where excess noise generation is unavoidable, the Contractor shall, by means of barriers, effectively isolate the source of any such noise in order to comply with the said regulations. The Contractor shall restrict any of his operations that may result in undue noise disturbance to those communities and dwellings abutting the Site to the hours of 08:00 to 17:00 on weekdays and Saturdays. No work will be permitted on Sundays unless otherwise agreed to with the Employer's Agent.

No amplified music shall be allowed on Site. The use of radios, tape recorders, compact disc players, television sets etc. shall not be permitted unless the volume is kept sufficiently low as to avoid any intrusion on members of the public within range. The Contractor shall not use sound amplification equipment on Site unless in emergency situations.

PA 4.2.6 Lights

The Contractor shall ensure that any lighting installed on the site for his activities does not interfere with road traffic or cause a reasonably avoidable disturbance to the surrounding community or other users of the area.

PA 4.2.7 Fuel (petrol and diesel) and oil

Unless otherwise specified in the Specification Data, fuel may be stored on site in an area approved by the Employer's Agent. The Contractor shall ensure that all liquid fuels (petrol and diesel) are stored in tanks with lids, which are kept firmly shut or in bowzers. The tanks/bowzers shall be situated on a smooth impermeable surface (concrete or 250 µm plastic) with an earth bund (plastic must have a 5 cm layer of sand on top to prevent damage and perishing). The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 130% of the total capacity of all the storage tanks/ bowzers. The bunded area shall be covered to protect it from rain. Provision shall be made for refuelling at the fuel storage area, by protecting the soil with 250 µm plastic covered with a minimum of a 5 cm layer of sand.

If fuel is dispensed from 200 litre drums, only empty externally clean drums may be stored on the bare ground. All empty externally dirty drums shall be stored on an area where the ground has been protected. The proper dispensing equipment shall be used, and the drum shall not be tipped in order to dispense fuel. The dispensing mechanism of the fuel storage drum shall be stored in a waterproof container when not in use.

The Contractor shall prevent unauthorised access into the fuel storage area. No smoking shall be allowed within the vicinity of the fuel storage area. The Contractor shall ensure that there is adequate fire-fighting equipment at the fuel stores.

Where reasonably practical, plant shall be refuelled at the fuel storage area or at the workshop as applicable. If it is not reasonably practical then the surface under the refuelling area shall be protected against pollution to the reasonable satisfaction of the Employer's Agent prior to any refuelling activities. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/ breakdown and where possible be designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to handle a minimum of 200 □ of hydrocarbon liquid spill. The Contractor shall obtain the Employer's Agent prior approval for any refuelling or maintenance activities.

PA 4.2.8 Workshop, equipment maintenance and storage

Leaking equipment shall be repaired immediately or removed from the Site. Where practical, all maintenance of equipment and vehicles on Site shall be performed off Site or in the workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain the approval of the Employer's Agent prior to commencing activities. The Contractor shall ensure that in his workshop and other plant maintenance facilities, including those areas where, after obtaining the Employer's Agent approval, the Contractor carries out emergency plant maintenance, there is no contamination of the soil or vegetation. The workshop shall have a smooth impermeable (concrete or 250 µm plastic covered with sand) floor. The floor shall be bunded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil).

When servicing equipment on site, drip trays shall be used to collect the waste oil and other lubricants. Drip trays shall also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles). Drip trays shall be inspected and emptied daily. Drip trays shall be closely monitored during rain events to ensure that they do not overflow. Where practical, the Contractor shall ensure that equipment is covered so that rainwater is excluded from the drip trays.

The washing of equipment shall be restricted to urgent or preventative maintenance requirements only. All washing shall be undertaken off Site or in the workshop. The use of detergents for washing shall be restricted to low phosphate and nitrate containing, low sudsing-type detergents.

PA 4.2.9 Dust

The Contractor shall take all reasonable measures to minimise the generation of dust as a result of construction activities to the satisfaction of the Employer's Agent. The Contractor's dust management planning shall, as a minimum, take cognisance of the following:

- Schedule of spraying water on unpaved roads paying due attention to control of runoff.
- Speed limits for vehicles on unpaved roads and minimisation of haul distances.
- Measures to ensure that material loads are properly covered during transportation.
- Schedule for wheel cleaning and measures to clean up public roads that may be soiled by construction vehicles.
- Minimisation of the areas disturbed at any one time and protection of exposed soil against wind erosion, e.g. by dampening with water or covering with straw
- Location and treatment of material stockpiles taking into consideration prevailing wind directions and location of sensitive receptors.
- Controlled blasting techniques to minimise dust and fly rock during blasting.
- Adherence to the dust loads and protective gear stipulated in the Occupational Health and Safety Act.
- Reporting mechanism and action plan in case of excessive wind and dust conditions.

During summer, a water tanker shall be permanently available for the control of dust generation, and the Contractor shall ensure that the sprays do not generate excess run off. During winter, provision shall be made for a tanker, as required by the Employer's Agent.

During high wind conditions, the Contractor shall comply with the Employer's Agent instructions regarding dust-damping measures. The Employer's Agent may request the temporary cessation of all construction activities where wind speeds are unacceptably high, and until such time as wind speeds return to acceptable levels.

Vehicle speeds should not exceed 20km/h on dirt roads or when traversing unconsolidated or non-vegetated areas. Contractors shall develop and implement a programme for the monitoring of dust fallout in areas where dust generation may be expected.

PA 4.3 METHODS AND PROCEDURES

PA 4.3.1 Method Statements

Any Method Statement required by this Specification, the Specification Data or the Employer's Agent shall be produced within such reasonable time as is required by this Specification, the Specification Data or the Employer's Agent. The Contractor shall not commence the activity until the Method Statement has been approved. Except in

the case of emergency activities, the Contractor shall allow a period of two weeks for approval of the Method Statement by the Employer's Agent. Such approval shall not unreasonably be withheld.

Method Statements in respect of environment management that shall be provided by the Contractor within 14 days of receipt of the letter of acceptance and prior to the activity covered by the Method Statement being undertaken, include:

- 1) Location and structure of the fuel storage site, including the type and volume of storage container and the design and capacity of the bund.
- 2) Contaminated water management system, including an indication of the source and volume of contaminated water and how this would be disposed of.
- 3) Dust control, including methods to prevent dust generation and methods to reduce dust where its generation is unavoidable.
- 4) Location and layout of the construction camp in the form of a plan showing offices, stores for fuels and explosives, vehicle parking, access point, equipment cleaning areas and staff toilet placement.
- 5) Location of proposed site access routes and proposed traffic safety measures.
- 6) Emergency procedures for fire, and accidental leaks and spillages of hazardous materials.
- 7) Location, layout and preparation of cement/ concrete batching facilities including be minimised and cleared.
- 8) Method of undertaking earthworks, including spoil management, erosion, dust and noise controls.
- 9) Motivation and method for undertaking any construction related activities within a "no-go" area, including requisite emergency procedures. Unless need clearly motivated and proposed methodology exhibits clear focus on environmentally sensitive construction practice, no activity will be permitted within the defined "no-go" areas.

PA 4.3.2 Environmental awareness training

Not applicable on this Contract.

PA 4.3.3 Construction personnel information posters

Not applicable on this Contract.

PA 4.3.4 Site clearance

The Contractor shall ensure that the clearance of vegetation is restricted to that required to facilitate the execution of the Works. Site clearance shall occur in a planned manner and cleared areas shall be stabilised as soon as possible. The detail of vegetation clearing shall be to the Employer's Agent approval. All cleared vegetation shall either be mulched and mixed into the topsoil stockpiles or disposed of at an approved disposal site. The disposal of vegetation by burying or burning is prohibited without the requisite permit from the local authority.

The Contractor shall strip the Top material within the working areas. The Top material shall be stockpiled separately from subsoil and used for subsequent rehabilitation and revegetation. Top material stockpiles shall not be compacted.

Should fauna be encountered during site clearance, earthworks shall cease until fauna have been safely relocated.

PA 4.3.5 Site division

The Employer's Agent shall be advised of the area that the Contractor intends using for his site establishment. The Contractor's camp shall occupy as small an area as possible, and no site establishment shall be allowed within 50 m of any watercourse unless otherwise approved by the Employer's Agent.

The Contractor shall inform the Employer's Agent of the intended actions and programme for site establishment. The site layout shall be planned to facilitate ready access for deliveries, facilitate future works and to curtail any disturbance or security implications for neighbours.

PA 4.3.6 Site demarcation

As required by the Specification Data, the Contractor shall erect and maintain permanent and/or temporary fences of the type and in the locations directed by the Employer's Agent. Such fences shall, if so specified, be erected before undertaking designated activities.

PA 4.3.7 "No go" areas

If so required by the Specification Data, certain areas shall be considered "no go" areas. The Contractor shall ensure that, insofar as he has the authority, no unauthorised entry, stockpiling, dumping or storage of equipment or materials shall be allowed within the demarcated "no go" areas.

"No go" areas shall be demarcated with fencing consisting of wooden or metal posts at 3 m centres with 1 plain wire strand tensioned horizontally at 900 mm from ground level. Commercially available danger tape shall be wrapped around the wire strand. The Contractor shall maintain the fence for the duration of construction and ensure that the danger tape does not become dislodged.

PA 4.3.8 Protection of natural features

The Contractor shall not deface, paint, damage or mark any natural features (e.g. rock formations) situated in or around the Site for survey or other purposes unless agreed beforehand with the Employer's Agent. Any features affected by the Contractor in contravention of this clause shall be restored/ rehabilitated to the satisfaction of the Employer's Agent.

The Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

PA 4.3.9 Protection of flora and fauna

Except to the extent necessary for the carrying out of the Works, flora shall not be removed, damaged or disturbed nor shall any vegetation be planted without authorisation.

Trapping, poisoning and/ or shooting of animals is strictly forbidden. No domestic pets or livestock are permitted on Site.

Where the use of herbicides, pesticides and other poisonous substances has been specified, they shall be stored, handled and applied with due regard to their potential harmful effects.

PA 4.3.10 Protection of archaeological and paleontological remains

The Contractor shall take reasonable precautions to prevent any person from removing or damaging any fossils, coins, articles of value or antiquity and structures and other remains of archaeological interest discovered on the Site, immediately upon discovery thereof and before removal. The Contractor shall inform the Employer's Agent immediately of such a discovery and carry out the Employer's Agent instructions for dealing therewith. All

construction within the vicinity of the discovery shall cease immediately and the area shall be cordoned off until such time as the Employer's Agent authorises resumption of construction in writing.

The Employer's Agent will contact the relevant heritage authority.

PA 4.3.11 Access routes/ haul roads

Access to the Construction camp and working areas shall utilise existing roads or tracks. Entry/exit points onto public roads shall take cognisance of traffic safety. Traffic safety measures shall include appropriate signage and signalmen where relevant.

On the Site, and, if so required by the Specification Data, within such distance of the Site as may be stated, the Contractor shall control the movement of all vehicles and plant including that of his suppliers so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic and that all relevant laws are complied with. In addition such vehicles and plant shall be so routed and operated as to minimise disruption to regular users of the routes not on the Site. On gravel or earth roads on Site and within 500 m of the Site, the vehicles of the Contractor and his suppliers shall not exceed a speed of 20 km/h.

Mud and sand deposited onto public roads by construction activities shall be cleared on a daily basis.

PA 4.3.12 Cement and concrete batching

Where applicable, the location of the batching plant (including the location of cement stores, sand and aggregate stockpiles) shall be as approved by the Employer's Agent. The concrete/cement batching plant shall be kept neat and clean at all times.

No batching activities shall occur directly on unprotected ground. The batching plant shall be located on a smooth impermeable surface (concrete or 250 µm plastic covered with 5 cm of sand). The area shall be bunded and sloped towards a sump to contain spillages of substances. All wastewater resulting from batching of concrete shall be disposed of via the contaminated water management system and shall not be discharged into the environment. Contaminated water storage areas shall not be allowed to overflow and appropriate protection from rain and flooding shall be implemented

Empty cement bags shall be stored in weatherproof containers to prevent windblown cement dust and water contamination. Empty cement bags shall be disposed of on a regular basis via the solid waste management system, and shall not be used for any other purpose. Unused cement bags shall be stored so as not to be affected by rain or runoff events. In this regard, closed steel containers shall be used for the storage of cement powder and any additives. The Contractor shall ensure that sand, aggregate, cement or additives used during the mixing process are contained and covered to prevent contamination of the surrounding environment.

The Contractor shall take all reasonable measures to prevent the spillage of cement/ concrete during batching and construction operations. During pouring, the soil surface shall be protected using plastic and all visible remains of concrete shall be physically removed on completion of the cement/ concrete pour and appropriately disposed of. All spoiled and excess aggregate/ cement/ concrete shall be removed and disposed of via the solid waste management system.

Where "readymix" concrete is used, the Contractor shall ensure that the delivery vehicles do not wash their chutes directly onto the ground. Any spillage resulting from the "readymix" delivery shall be immediately cleared and disposed of via the solid waste management system.

PA 4.3.13 Earthworks

All earthworks shall be undertaken in such a manner so as to minimise the extent of any impacts caused by such activities, particularly with regards to erosion and dust generation. No equipment associated with earthworks shall be allowed outside of the Site and defined access routes unless expressly permitted by the Employer's Agent.

PA 4.3.14 Pumping

Pumps shall be placed over a drip tray in order to contain fuel spills and leaks. The Contractor shall take all reasonable precautions to prevent spillage during the refuelling of these pumps.

The Contractor shall ensure that none of the water pumped during any dewatering activities, including well points, is released into the environment without the Employer's Agent approval. The Employer's Agent approval is required prior to the discharge of this water into the Municipal sewer system.

PA 4.3.15 Bitumen

Over spray of bitumen products outside of the road surface and onto roadside vegetation or the surrounding environment shall be prevented using a method approved by the Employer's Agent.

When heating bitumen products, the Contractor shall take cognisance of appropriate fire risk controls. Heating of bitumen products shall only be undertaken using LPG or similar zero emission fuels and appropriate fire fighting equipment shall be readily available.

Stone chip/gravel excess shall not be left on road / paved area verges. This shall be swept / raked into piles and removed to an area approved by the Employer's Agent.

Water quality from runoff from new/ fresh bitumen surfaces will be monitored visually by the Employer's Agent and remedial actions taken where necessary by the Contractor.

PA 4.3.16 Fire control

No fires may be lit on site. Any fires that occur shall be reported to the Employer's Agent immediately. Smoking shall not be permitted in those areas where it is a fire hazard. Such areas shall include the workshop and fuel storage areas and any areas where the vegetation or other material is such as to make liable the rapid spread of an initial flame. In terms of the Atmospheric Pollution Prevention Act (No. 45 of 1965), burning is not permitted as a disposal method.

The Contractor shall ensure that there is basic fire-fighting equipment available on Site at all times. This shall include at least rubber beaters when working in urban open spaces and fynbos areas, and at least one fire extinguisher of the appropriate type when welding or other "hot" activities are undertaken.

PA 4.3.17 Emergency procedures

The Contractor's procedures for the following emergencies shall include:

i) Fire

The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall ensure that his employees are aware of the procedure to be followed in the event of a fire.

ii) Accidental leaks and spillages

The Contractor shall ensure that his employees are aware of the emergency procedure(s) to be followed for dealing with spills and leaks, which shall include notifying the Employer's Agent and the relevant authorities. The Contractor shall ensure that the necessary materials and equipment for dealing with spills and leaks is available on Site at all times. Treatment and remediation of the spill areas shall be undertaken to the reasonable satisfaction of the Employer's Agent.

In the event of a hydrocarbon spill, the source of the spillage shall be isolated, and the spillage contained. The area shall be cordoned off and secured. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/ breakdown and where possible be designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to handle a minimum of 200 l of hydrocarbon liquid spill.

PA 4.3.18 Community relations

Where applicable, the Contractor shall erect and maintain information boards in the position, quantity, design and dimensions specified. Such boards shall include contact details for complaints by members of the public in accordance with details provided by the Employer's Agent.

Where applicable, the Contractor shall keep a "Complaints Register" on Site. The Register shall contain all contact details of the person who made the complaint, and information regarding the complaint itself. The Contractor shall erect and maintain an information board at the access gate to the Site Office.

PA 4.3.19 Erosion and sedimentation control

The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities. Where erosion and/or sedimentation, whether on or off the Site, occurs despite the Contractor complying with the foregoing, rectification shall be carried out in accordance with details specified by the Employer's Agent. Where erosion and/or sedimentation occur due to the fault of the Contractor, rectification shall be carried out to the reasonable requirements of the Employer's Agent.

Any runnels or erosion channels developed during construction or during the defects liability period shall be backfilled and compacted. Stabilisation of cleared areas to prevent and control erosion shall be actively managed. Consideration and provision shall be made for various methods, namely, brushcut packing, mulch or chip cover, straw stabilising (at a rate of one bale/ 20 m² and rotovated into the top 100 mm of the completed earthworks), watering, soil binders and anti-erosion compounds, mechanical cover or packing structures (e.g. Hessian cover).

Traffic and movement over stabilised areas shall be restricted and controlled, and damage to stabilised area shall be repaired and maintained to the satisfaction of the Employer's Agent.

PA 4.3.20 Aesthetics

The Contractor shall take reasonable measures to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

PA 4.3.21 Recreation

If so required by the Specification Data, the Contractor shall take measures to reduce disruption to recreational users of the area abutting the Site.

PA 4.3.22 Access to site

The Contractor shall ensure that access to the Site and associated infrastructure and equipment is off-limits to the public at all times during construction. If so required, as directed by the Employer's Agent, the Contractor shall fence the site to ensure effective control of access to the site. This fence shall be a diamond mesh fence or similar with a minimum height of 1.8 m, and it shall be erected around the site and shall be maintained for the duration of construction.

PA 4.3.23 Crane operations

Drive plants shall be well maintained and drip trays shall be positioned at potential leak areas. Over-greasing of crane cables shall be avoided.

Movement and lifting of hazardous materials shall be undertaken such that they do not cause a pollution, spillage or safety risk (in particular where concrete buckets are in use).

PA 4.3.24 Trenching

Trenching for services shall be undertaken in accordance with the engineering specifications with the following environmental amplifications, where applicable:

- a) Soil shall be excavated and used for refilling trenches i.e. soil from the first trench shall be excavated and stockpiled, thereafter soil from the second excavated trench length shall be used to backfill the trench behind it once the services have been laid. The last trench shall be filled using the soil stockpiled from the first trench.
- b) Trench lengths shall be kept as short as practically possible before backfilling and compacting.
- c) Trenches shall be re-filled to the same level as (or slightly higher to allow for settlement) the surrounding land surface to minimise erosion.

PA 4.3.25 Demolition

Hazardous and non-hazardous materials shall be separated at site and disposed of in a manner approved by the Employer's Agent.

All buildings older than 60 years require a permit from South African Heritage Resources Agency in terms of the National Heritage Resources Act (no. 25 of 1999). A demolition permit is also required from the local authority in terms of the National Building Regulations.

PA 4.3.26 Drilling and jack hammering

The Contractor shall take all reasonable measures to limit dust generation and noise as a result of drilling operations. The Contractor shall ensure that no pollution results from drilling operations, either as a result of oil and fuel drips, or from drilling fluid.

Any areas or structures damaged by the drilling and associated activities shall be rehabilitated by the Contractor to the satisfaction of the Employer's Agent.

PA 4.3.27 Stockpiling

The Employer's Agent will identify suitable sites for stockpiling. Stockpiles shall be convex in shape, shall be no higher than 2 m and shall be located so as to cause minimal disturbance. Stockpiles shall be so placed to occupy minimum width compatible with the natural angle of repose of material, and measures shall be taken to prevent the material from being spread over too wide a surface. Where required, appropriate precautions shall be taken to prevent the erosion and limit the compaction of the stockpiles. The Contractor shall ensure that all stockpiles do not cause the damming of water or run off, or is itself washed away.

Top material stockpiles shall not be covered with any material (e.g. plastic) that may kill seeds or cause it to compost. If the stockpiles start to erode significantly or cause dust problems, they shall be covered with hessian. Where practical, Top material shall not be left for longer than six to eight months before being used for rehabilitation. If stored for longer than six months, the Top material shall be analysed and, if necessary, upgraded before placement.

PA 4.3.28 Site closure and rehabilitation

Any areas that the Employer's Agent believes may have been impacted upon or disturbed, shall be rehabilitated to the satisfaction of the Employer's Agent, which includes all areas where Topmaterial has been stripped. Once construction is complete the Contractor shall clear everything from the Site not forming part of the Permanent Works. The area to be rehabilitated shall first be landscaped to match the topography of the surrounding area as it was prior to construction. The composition of vegetation to be used for any rehabilitation shall be as specified in the Specification Data.

The Contractor may not use herbicides, pesticides, fertilisers or other poisonous substances for the rehabilitation process unless otherwise agreed with the Employer's Agent.

All rehabilitated areas shall be considered “no go” areas and the Contractor shall ensure that none of his staff or equipment enters these areas.

The Contractor shall undertake to remove all alien vegetation re-establishing on the area and shall implement the necessary temporary or permanent measures to combat soil erosion.

PA 4.3.29 Temporary revegetation of the areas disturbed by construction.

Where there is likely to be a delay of greater than two weeks in the landscaping and revegetation of a disturbed area or where that site is likely to be the subject of further construction activities at a later stage, the Contractor shall ensure that the area is temporarily revegetated to combat dust generation and prevent erosion. This revegetation shall occur incrementally immediately upon completion of the construction activities at the subject location.

Prior to revegetation structures and material not forming part of the Permanent Works, including remnants of building materials, concrete foundations, timber and other foreign debris, shall be removed and disposed of via the solid waste management system. The area shall be revegetated as follows:

- a) The surface shall be levelled by hand or machine as far as practically possible.
- b) Alien vegetation shall be cleared by cutting the plants off at ground level and painting the stump with 0.5% Garlon in diesel.
- c) For areas with a slope of greater than 1:3, straw shall be utilised as a binding material to stabilise the soil during revegetation and rehabilitation of the site. Straw shall consist of natural, dried fibres of hay or chaff of various lengths between 50 mm and 400 mm, delivered to Site in bales and shall be applied evenly by hand or machine at a rate of 1 bale per 20 m² over the area to be revegetated. It shall then immediately be rotovated into the upper 100 mm layer of soil.
- d) The prepared area shall be hydro- or hand-seeded at a rate of 40 kg/ha using Rye grass (*Lolium multiflorum*). In the event of hand-seeding, the seed mixture as specified shall be mixed with two parts per volume of clean dry plaster sand, then divided in half and applied evenly in two successive applications, one after the other, by means of an approved hand seeding machine (known colloquially as a “tefsaaier”). On completion of the seeding the surface shall be lightly raked to cover the seed with no more than 5 mm of soil.
- e) Water used for the irrigation of vegetated areas shall be free of pollutants that will have a detrimental effect on the plants. The vegetated area shall only be watered once, immediately following seeding. Watering should be carried out from a tanker, using a fine nozzle spray to avoid erosion and disturbance of the vegetation. Water for irrigation purposes may not be drawn from any water body.

No construction equipment, vehicles or unauthorised personnel shall be allowed onto areas that have been vegetated. Only persons or equipment required for the preparation of areas, application of fertiliser and maintenance of revegetated area shall be allowed to operate on these areas.

PA 4.3.30 Temporary site closure

If the site is closed for a period exceeding one week, the Contractor, in consultation with the Employer’s Agent shall carry out the following checklist procedure.

Hazardous materials stores

Outlet secure/ locked
Bund empty (where applicable)
Fire extinguishers serviced and accessible
Secure area from accidental damage e.g. vehicle collision
Emergency and contact details displayed
Adequate ventilation

Safety

All trenches and manholes secured
Fencing and barriers in place as per the Occupational Health and Safety Act (No 85 of 1193)
Emergency and management contact details displayed
Pipe stockpile wedged/ secured

Erosion

Wind and dust mitigation in place
Slopes and stockpiles at stable angle
Revegetated areas watering schedules and supply secured

Water contamination and pollution

Cement and materials stores secured
Toilets empty and secured
Refuse bins empty and secured
Drip trays empty and secure (where possible)
Structures vulnerable to high winds secure

PA 5 COMPLIANCE WITH REQUIREMENTS AND PENALTIES

PA 5.1 COMPLIANCE

Environmental management is concerned not only with the final results of the Contractor's operations to carry out the Works but also with the control of how those operations are carried out. Tolerance with respect to environmental matters applies not only to the finished product but also to the standard of the day-to-day operations required to complete the Works.

It is thus required that the Contractor shall comply with the environmental requirements on an ongoing basis and any failure on his part to do so will entitle the Employer's Agent to certify the imposition of a penalty as detailed below.

PA 5.2 Penalties

Penalties will be issued for certain transgressions. Penalties may be issued per incident at the discretion of the Employer's Agent. Such penalties will be issued in addition to any remedial costs incurred as a result of non-compliance with this Specification. The Employer's Agent will inform the Contractor of the contravention and the amount of the penalty, and shall be entitled to deduct the amount from monies due under the Contract.

Penalties will be issued for the transgressions listed below. Penalties may be issued per incident at the discretion of the Employer's Agent. Such penalties will be issued in addition to any remedial costs incurred as a result of non-compliance with the environmental specifications. The Employer's Agent will inform the Contractor of the contravention and the amount of the fine, and will deduct the amount from monies due under the Contract.

Penalties for the activities detailed below, will be imposed by the Employer's Agent on the Contractor.

- | | | |
|----|---|---------|
| a) | Any employees, vehicles, plant, or thing related to the Contractor's operations operating within the designated boundaries of a "no-go" area. | R 2 000 |
| b) | Persistent and un-repaired oil leaks from machinery. | R 1 000 |
| c) | Persistent failure to monitor and empty drip trays timeously. | R 1 000 |
| d) | The use of inappropriate methods for refuelling. | R 1 000 |
| e) | Litter on site associated with construction activities. | R 500 |
| f) | Deliberate lighting of fires on site. | R 5 000 |

g)	Failure to implement specified noise controls, particularly during blasting	R 1 000
h)	Failure to empty waste bins on a regular basis.	R 1 000
i)	Inadequate dust control.	R 2 500
j)	Employees urinating or defecating anywhere on site other than the site ablution facilities.	R 500
k)	A spillage, pollution, fire or any damage to any water course or surrounding environment resulting from negligence on the part of the Contractor or his staff.	R 5 000

For each subsequent similar offence the fine will be doubled in value to a maximum value of R 30 000.

The Employer's Agent shall be the judge as to what constitutes a transgression in terms of this clause, subject to the provisions of Clause 10.2.1 of the General Conditions of Contract. In the event that transgressions continue the Contractor's attention is drawn to the provisions of Subclauses 4.11 and 9.2.1 of the General Conditions of Contract under which the Employer's Agent may remove an individual from site or terminate the Contract.

PA 5.3 Removal from site and suspension of Works

The Employer's Agent may instruct the Contractor to remove from Site any person(s) who in their opinion is guilty of misconduct, or is incompetent, negligent or constitutes an undesirable presence on Site. Subclause 4.1.9 of this Specification requires that all Plant be in good working order, and accordingly the Employer's Agent may order that any Plant not complying with the Specifications be removed from Site. Where the Employer's Agent deems the Contractor to be in breach of any of the requirements of this Specification, he may order the Contractor to suspend the progress of the Works or any part thereof.

PA 6 TOLERANCES

Not applicable.

PA 7 TESTING/QUALITY CONTROL

Not applicable.

PA 8 MEASUREMENT AND PAYMENT

PA 8.1 BASIC PRINCIPLES

PA 8.1.1 General

Except as specified below, or as billed, no separate measurement and payment will be made to cover the costs of complying with the provisions of this Specification and such costs shall be deemed to be covered by the rates tendered for the items in the Bill of Quantities completed by the Contractor when submitting his tender.

PA 8.1.2 All requirements of the environmental management specification

All work not measured elsewhere, associated with complying with any requirement of this Environmental Management specification will be measured and paid as a sum.

The tendered sum shall cover the cost of with complying with the environmental management specification and shall include for all materials, labour and plant required to execute and complete the Works as specified, described in the Bill of Quantities or shown on the Drawing(s).

PA 8.1.3 Work "required by the Specification Data"

Where a clause in this Specification includes a requirement as "required by the Specification Data", measurement and payment for compliance with that requirement shall be in accordance with the relevant measurement and payment clause of the Specification Data.

PA 8.2 BILLED ITEMS

PA 8.2.1 Method Statements: Additional work

No separate measurement and payment will be made for the provision of Method Statements but, where the Employer's Agent requires a change on the basis of his opinion that the proposal may result in, or carries a greater than warranted risk of damage to the environment in excess of that warranted by the Specifications, then any additional work required, provided it could not reasonably have been foreseen by an experienced contractor, shall be valued in accordance with the Clause in the General Conditions of Contract dealing with Provisional Sums.

A stated sum is provided in the Bill of Quantities to cover payment for such additional work.

PA 8.2.2 All requirements of the environmental management specificationUnit: Sum

All other work not measured elsewhere, associated with complying with any requirement of the environmental management specification shall be measured as a sum.

The tendered rate shall cover any cost associated with complying with the environmental management specification and shall include for all materials, labour and plant required to execute and complete the work as specified, described in the Bill of Quantities or shown on the drawing(s).

PARTICULAR SPECIFICATION: PB

PB BOREHOLE PUMP SPECIFICATIONS

PB 1 PUMP PERFORMANCE DATA (PROPOSED)

Qty.	Description
1	SP 17-10  Received by:  Note! Product picture may differ from actual product Product No.: 12A01910 Submersible borehole pump, suitable for pumping clean water. Can be installed vertically or horizontally. All steel components are made in stainless steel, EN 1.4301 (AISI 304), that ensures high corrosive resistance. This pump carries drinking water approval. The pump is fitted with a 5.5 kW MS4000 motor with sand shield, mechanical shaft seal, water-lubricated journal bearings and a volume compensating diaphragm. The motor is a canned type submersible motor offering good mechanical stability and high efficiency. Suitable for temperatures up to 40 °C. The motor is fitted with the Grundfos Tempcon sensor that, by use of powerline communication together with a MP204 control panel, enables temperature monitoring. The motor is for direct-on-line starting (DOL). Liquid: Pumped liquid: Water Maximum liquid temperature: 40 °C Max liquid t at 0.15 m/sec: 40 °C Technical: Pump speed on which pump data are based: 2900 rpm Actual calculated flow: 15.31 m³/h Resulting head of the pump: 86.1 m Shaft seal for motor: HM/CER Approvals on nameplate: CE, EAC Curve tolerance: ISO9906:2012 3B Motor version: T40 Materials: Pump: Stainless steel EN 1.4301 AISI 304 Impeller: Stainless steel EN 1.4301 AISI 304 Motor: Stainless steel DIN W.-Nr. 1.4301 AISI 304 Installation: Pump outlet: RP2 1/2 Motor diameter: 4 inch Electrical data: Motor type: MS4000 Rated power - P2: 5.5 kW



Company name:

Created by:

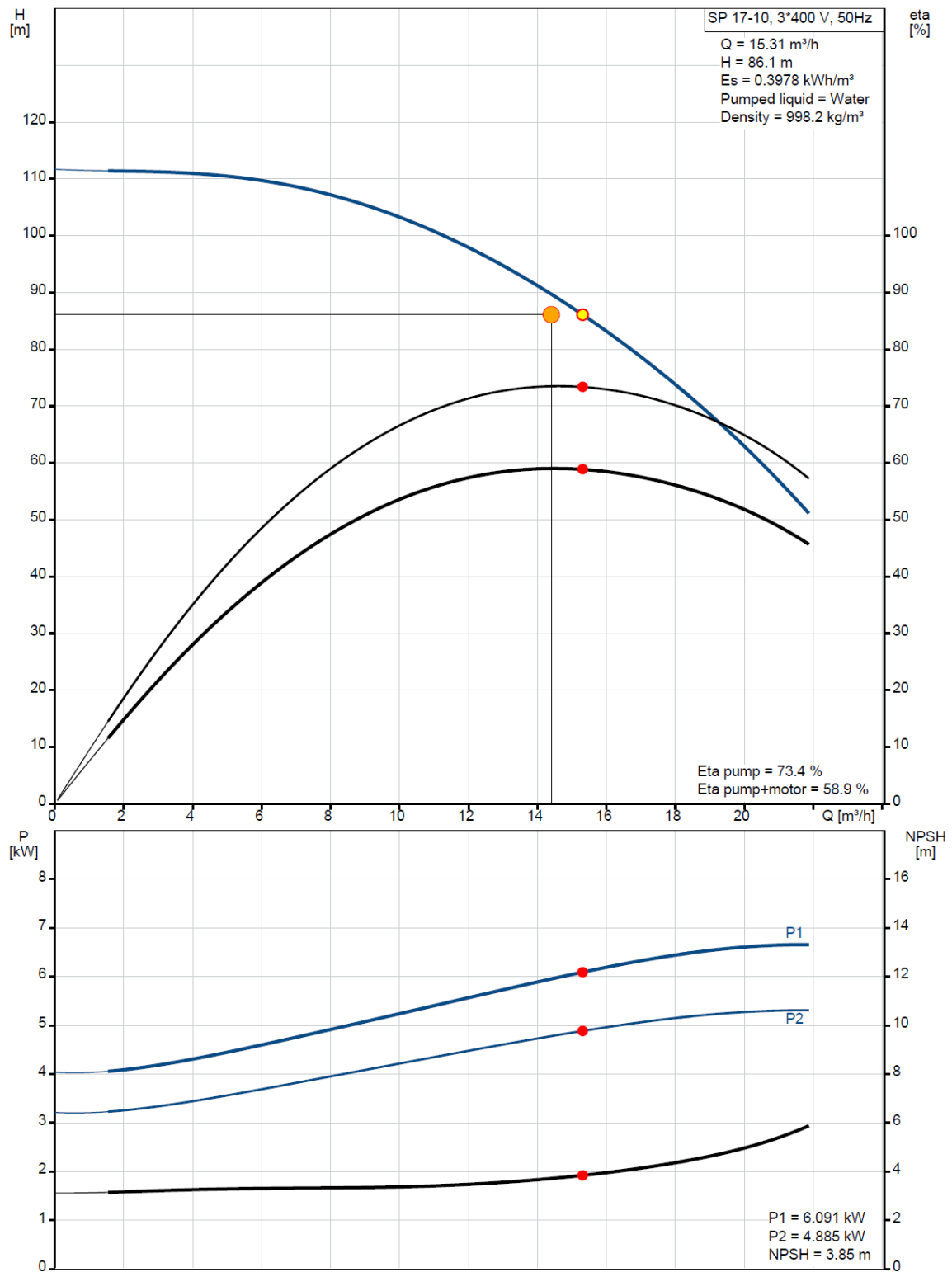
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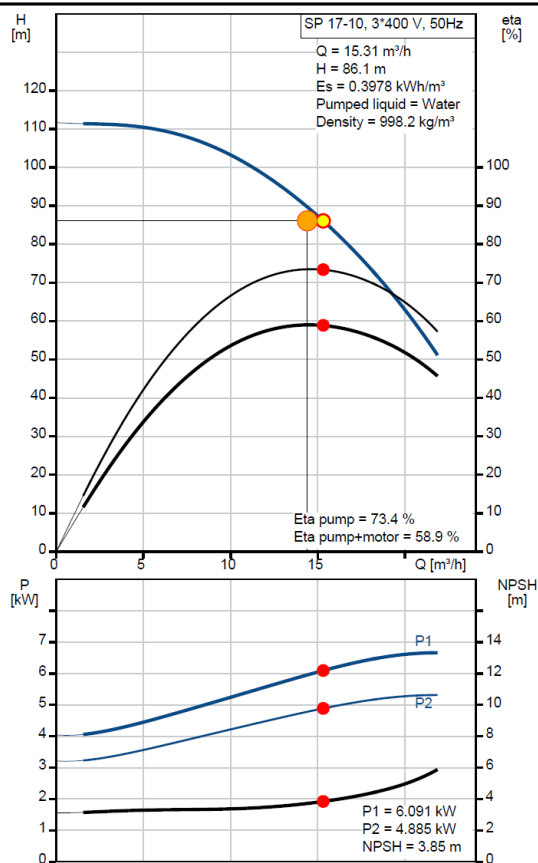
21/06/2021

Qty.	Description
	Power (P2) required by pump: 5.5 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-400-415 V Rated current: 13.0-13.0-13.4 A RequestedVoltage: 400 V RatedCurrentAtThisVoltage: 13 A Starting current: 480-530-550 % Cos phi - power factor: 0.85-0.81-0.76 Rated speed: 2850-2860-2870 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Insulation class (IEC 85): F Built-in temp. transmitter: yes Motor No: 79195511 Windings: Enamelled Others: Minimum efficiency index, MEI ≥: 0.70 ErP status: EuP Standalone/Prod. Net weight: 44.5 kg Gross weight: 69.8 kg Shipping volume: 0.2 m³ Danish VVS No.: 388336100 Finnish LVI No.: 4762723 Country of origin: DK Custom tariff no.: 84137025

12A01910 SP 17-10 50 Hz



Description	Value
General information:	
Product name:	SP 17-10
Product No:	12A01910
EAN number:	5700391131202
Price:	ZAR 54071
Technical:	
Pump speed on which pump data are based:	2900 rpm
Actual calculated flow:	15.31 m³/h
Resulting head of the pump:	86.1 m
Stages:	10
Impeller reduc.:	NONE
Shaft seal for motor:	HM/CER
Approvals on nameplate:	CE,EAC
Curve tolerance:	ISO9906:2012 3B
Model:	B
Valve:	YES
Motor version:	T40
Materials:	
Pump:	Stainless steel
Pump:	EN 1.4301
Pump:	AISI 304
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Motor:	Stainless steel
Motor:	DIN W.-Nr. 1.4301
Motor:	AISI 304
Installation:	
Pump outlet:	RP2 1/2
Motor diameter:	4 inch
Liquid:	
Pumped liquid:	Water
Maximum liquid temperature:	40 °C
Max liquid t at 0.15 m/sec:	40 °C
Electrical data:	
Motor type:	MS4000
Applic. motor:	GRUNDFOS
Rated power - P2:	5.5 kW
Power (P2) required by pump:	5.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-400-415 V
Rated current:	13.0-13.0-13.4 A
Requested voltage:	400 V
Rated current at this voltage:	13 A
Starting current:	480-530-550 %
Cos phi - power factor:	0.85-0.81-0.76
Rated speed:	2850-2860-2870 rpm
Start. method:	direct-on-line
Enclosure class (IEC 34-5):	IP68
Insulation class (IEC 85):	F
Motor protec:	NONE
Thermal protec:	external
Built-in temp. transmitter:	yes
Motor No:	79195511
Windings:	Enamelled
Others:	
Minimum efficiency index, MEI ≥:	0.70





Company name:

Created by:

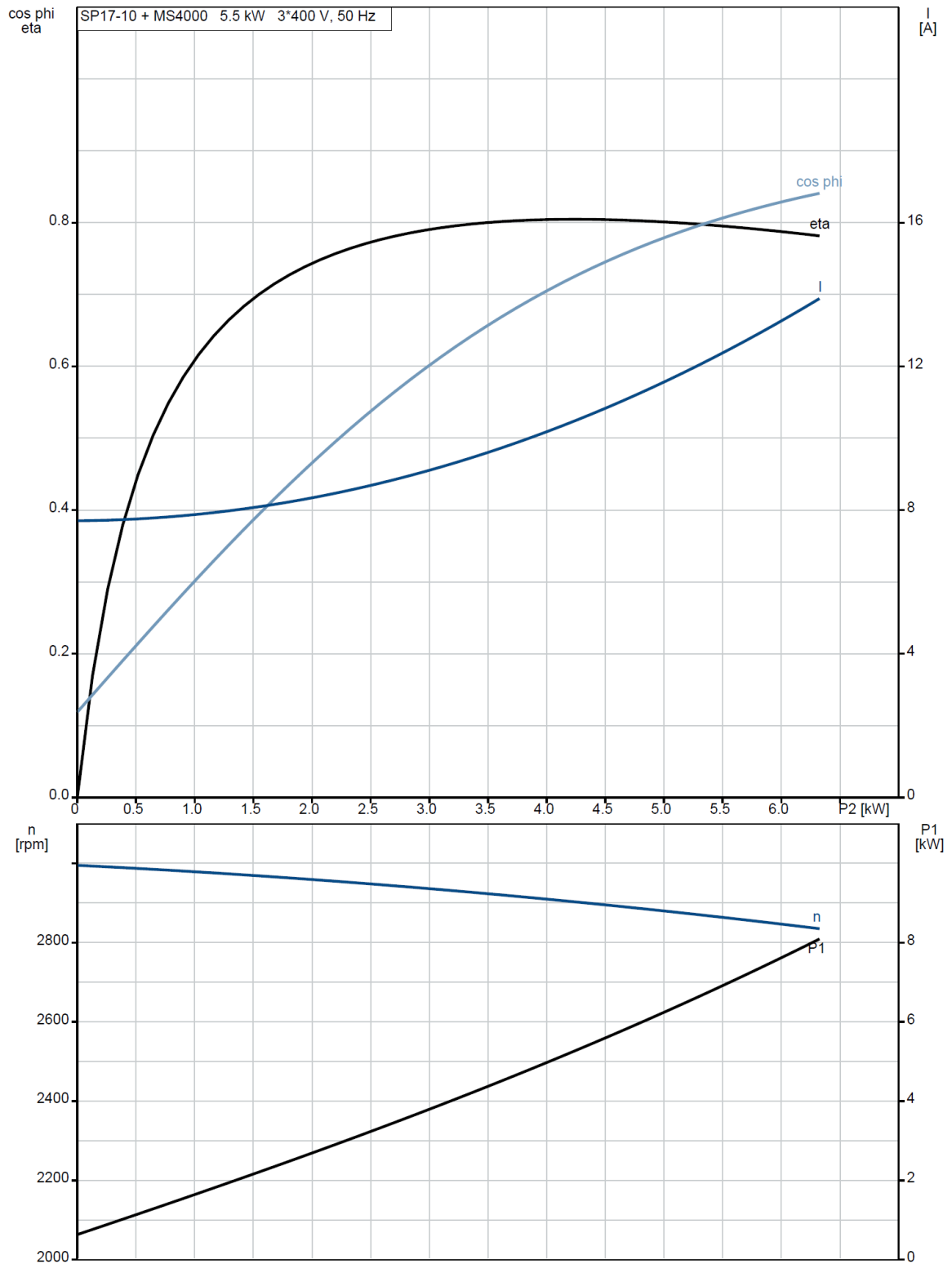
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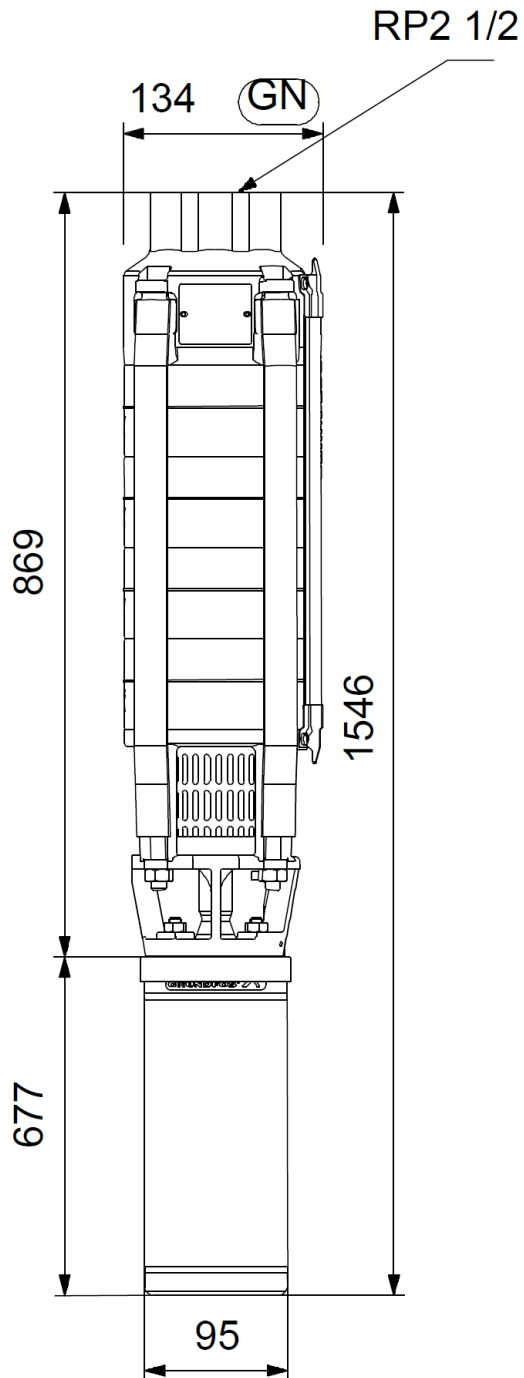
21/06/2021

Description	Value
ErP status:	EuP Standalone/Prod.
Net weight:	44.5 kg
Gross weight:	69.8 kg
Shipping volume:	0.2 m³
Danish VVS No.:	388336100
Finnish LVI No.:	4762723
Country of origin:	DK
Custom tariff no.:	84137025

12A01910 SP 17-10 50 Hz

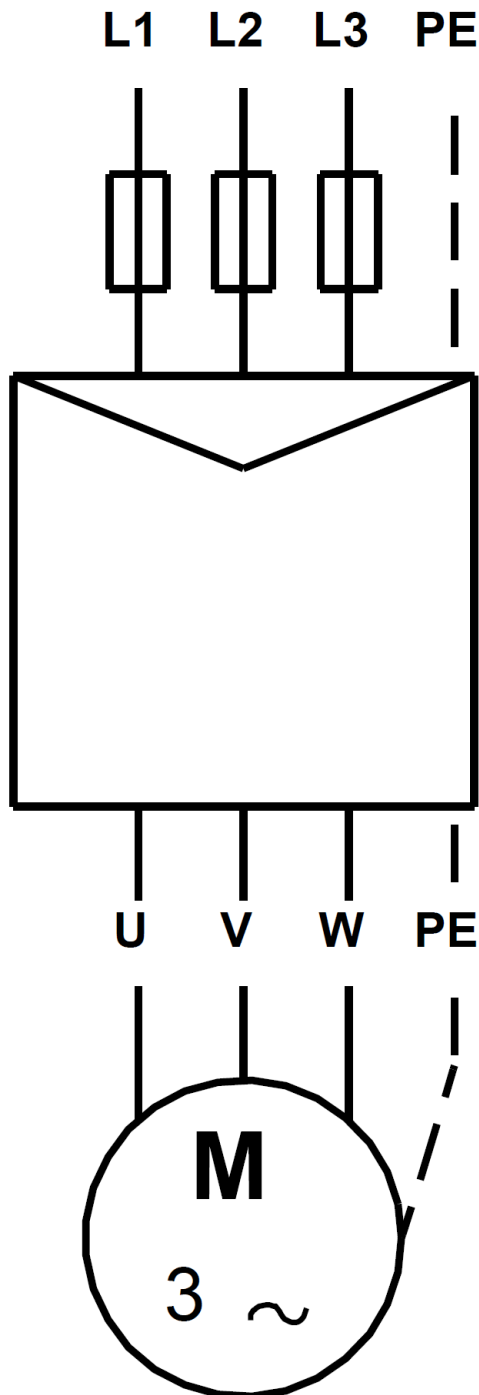


12A01910 SP 17-10 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

12A01910 SP 17-10 50 Hz



Note! All units are in [mm] unless others are stated.

Qty.	Description
1	SP 14-13  Received by:  Note! Product picture may differ from actual product Product No.: 98699357 Submersible borehole pump, suitable for pumping clean water. Can be installed vertically or horizontally. All steel components are made in stainless steel, EN 1.4301 (AISI 304), that ensures high corrosive resistance. This pump carries drinking water approval. The pump is fitted with a 3 kW MS4000 motor with sand shield, mechanical shaft seal, water-lubricated journal bearings and a volume compensating diaphragm. The motor is a canned type submersible motor offering good mechanical stability and high efficiency. Suitable for temperatures up to 40 °C. The motor is not fitted with a temperature sensor. If temperature monitoring is desired, a Pt1000 sensor can be fitted. The motor is for direct-on-line starting (DOL). Liquid: Pumped liquid: Water Maximum liquid temperature: 40 °C Max liquid t at 0.15 m/sec: 40 °C Technical: Pump speed on which pump data are based: 2900 rpm Actual calculated flow: 10.94 m³/h Resulting head of the pump: 62.2 m Shaft seal for motor: HM/CER Approvals on nameplate: CE,EAC Curve tolerance: ISO9906:2012 3B Motor version: T40 Materials: Pump: Stainless steel EN 1.4301 AISI 304 Impeller: Stainless steel EN 1.4301 AISI 304 Motor: Stainless steel DIN W.-Nr. 1.4301 AISI 304 Installation: Pump outlet: Rp2 Motor diameter: 4 inch Electrical data:



Company name:

Created by:

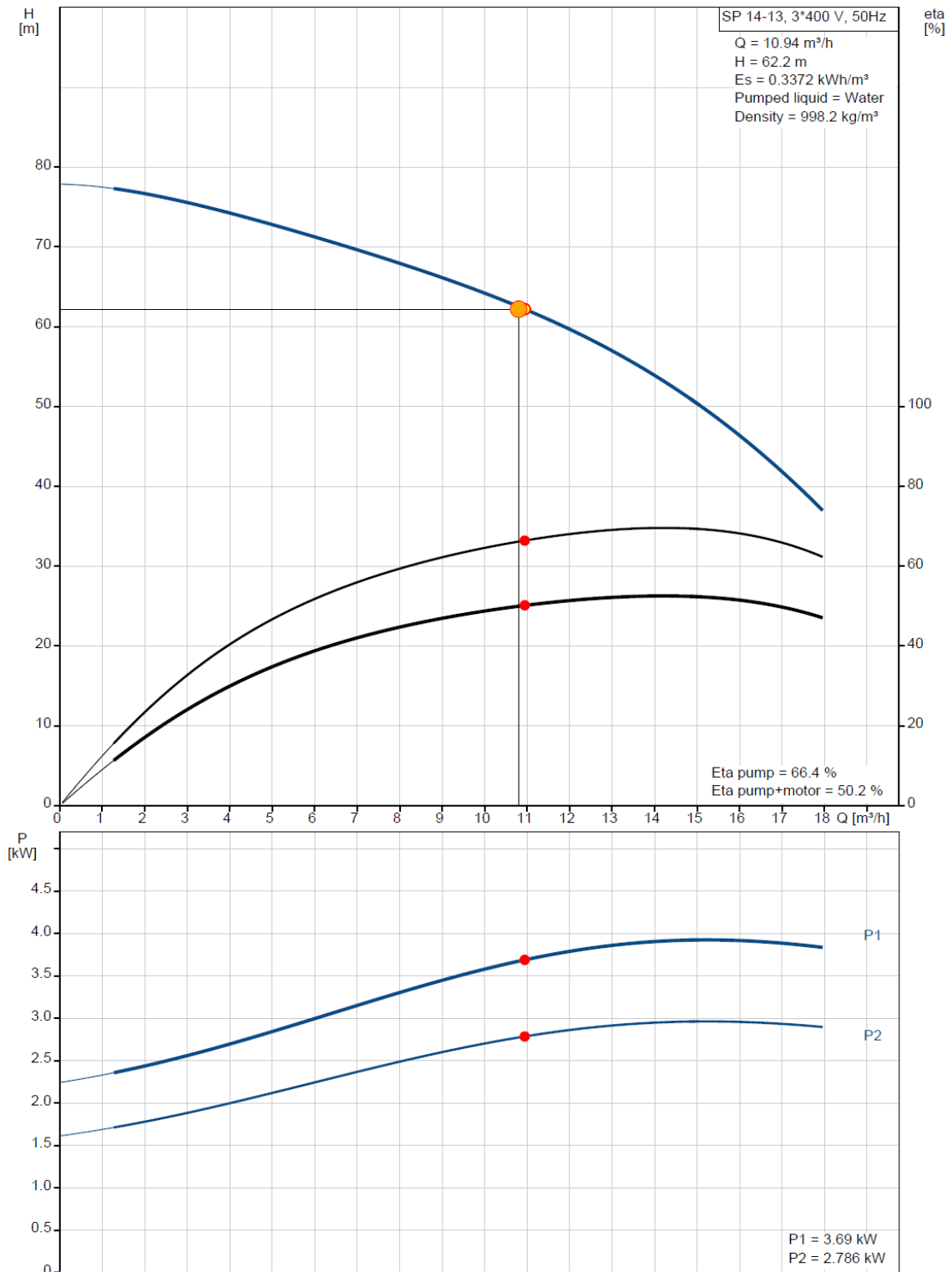
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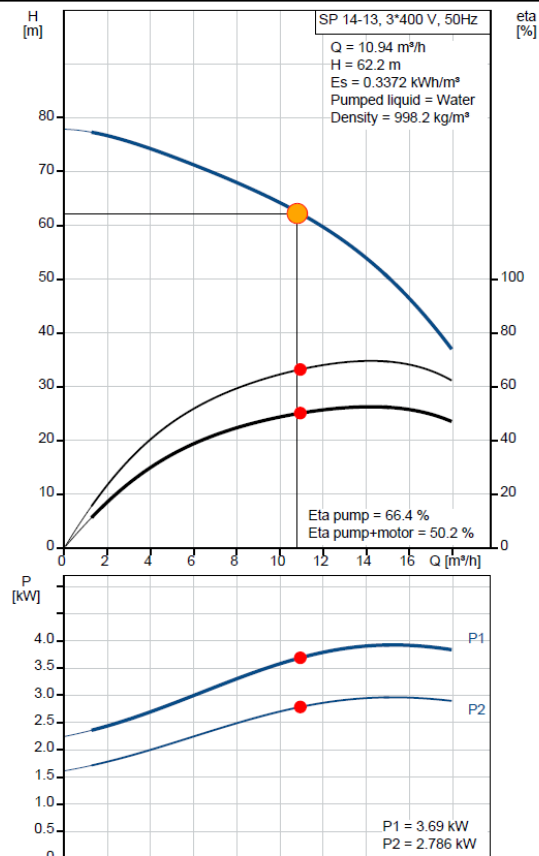
21/06/2021

Qty.	Description
	Motor type: MS4000 Rated power - P2: 3 kW Power (P2) required by pump: 3 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-400-415 V Rated current: 7.70-7.85-8.10 A Requested voltage: 400 V Rated current at this voltage: 7.79 A Starting current: 460-490-500 % Cos phi - power factor: 0.82-0.77-0.73 Rated speed: 2850-2865-2875 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Insulation class (IEC 85): F Built-in temp. transmitter: no Motor No: 79194508 Windings: Enamelled Others: Minimum efficiency index, MEI ≥: 0.50 ErP status: EuP Standalone/Prod. Net weight: 32.4 kg Gross weight: 38 kg Shipping volume: 0.068 m³ Danish VVS No.: 388482013 Finnish LVI No.: 4762709 Country of origin: DK Custom tariff no.: 84137025

98699357 SP 14-13 50 Hz



Description	Value
General information:	
Product name:	SP 14-13
Product No:	98699357
EAN number:	5712600111974
Price:	ZAR 33631
Technical:	
Pump speed on which pump data are based:	2900 rpm
Actual calculated flow:	10.94 m³/h
Resulting head of the pump:	62.2 m
Stages:	13
Impeller reduc.:	NONE
Shaft seal for motor:	HM/CER
Approvals on nameplate:	CE, EAC
Curve tolerance:	ISO9906:2012 3B
Model:	A
Valve:	YES
Motor version:	T40
Materials:	
Pump:	Stainless steel
Pump:	EN 1.4301
Pump:	AISI 304
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Motor:	Stainless steel
Motor:	DIN W.-Nr. 1.4301
Motor:	AISI 304
Installation:	
Pump outlet:	Rp2
Motor diameter:	4 inch
Liquid:	
Pumped liquid:	Water
Maximum liquid temperature:	40 °C
Max liquid t at 0.15 m/sec:	40 °C
Electrical data:	
Motor type:	MS4000
Applic. motor:	NEMA
Rated power - P2:	3 kW
Power (P2) required by pump:	3 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-400-415 V
Rated current:	7.70-7.85-8.10 A
Requested voltage:	400 V
Rated current at this voltage:	7.79 A
Starting current:	460-490-500 %
Cos phi - power factor:	0.82-0.77-0.73
Rated speed:	2850-2865-2875 rpm
Start. method:	direct-on-line
Enclosure class (IEC 34-5):	IP68
Insulation class (IEC 85):	F
Motor protec:	NONE
Thermal protec:	external
Built-in temp. transmitter:	no
Motor No:	79194508
Windings:	Enamelled
Others:	
Minimum efficiency index, MEI ≥:	0.50





Company name:

Created by:

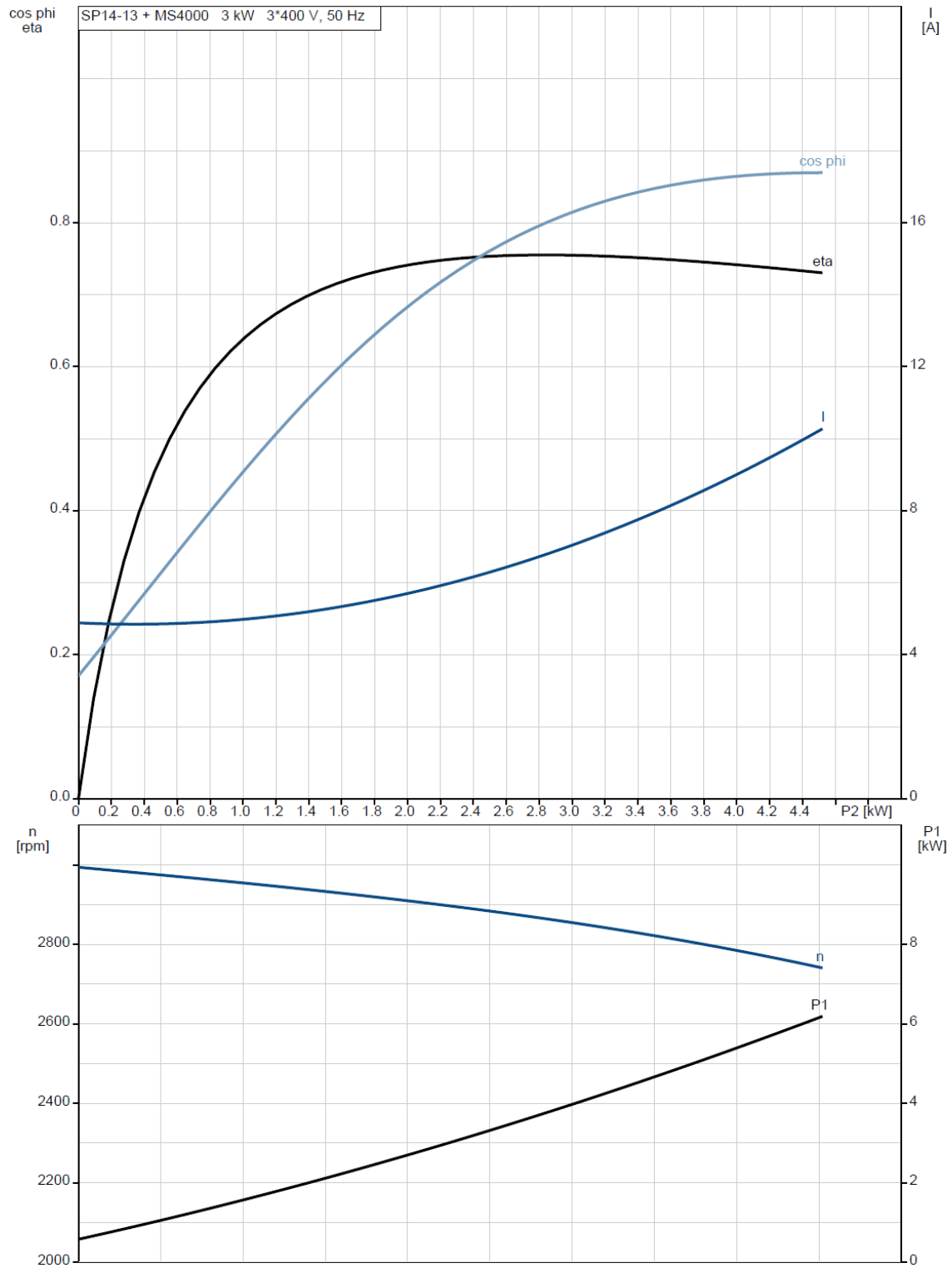
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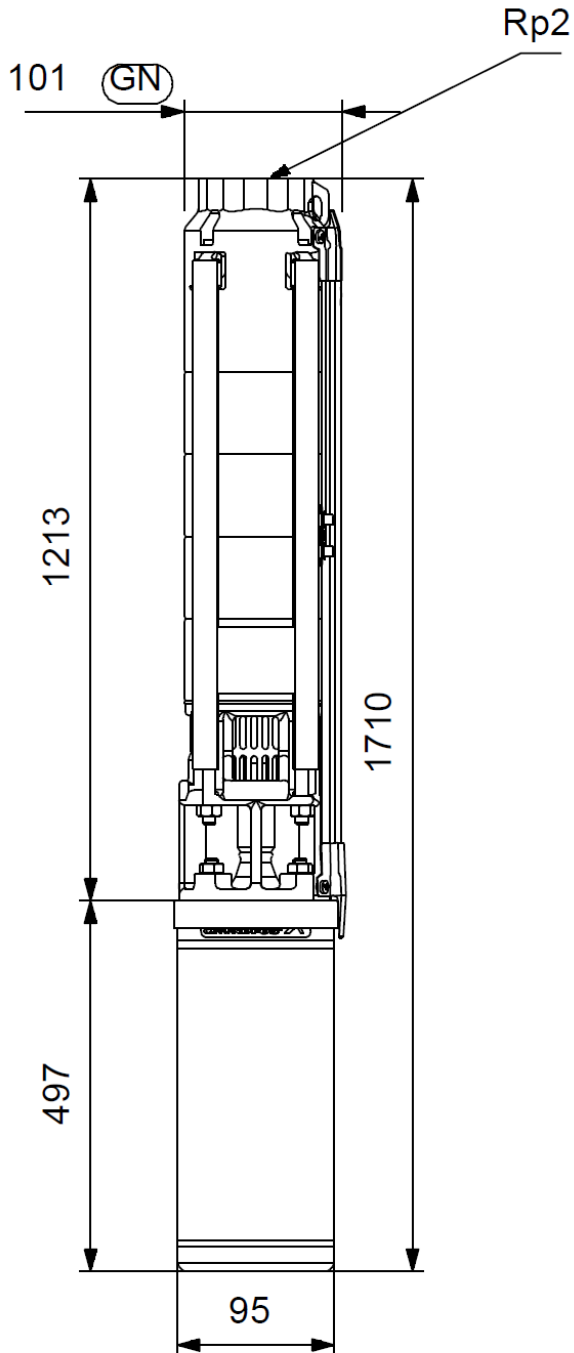
21/06/2021

Description	Value
ErP status:	EuP Standalone/Prod.
Net weight:	32.4 kg
Gross weight:	38 kg
Shipping volume:	0.068 m ³
Danish VVS No.:	388482013
Finnish LVI No.:	4762709
Country of origin:	DK
Custom tariff no.:	84137025

98699357 SP 14-13 50 Hz

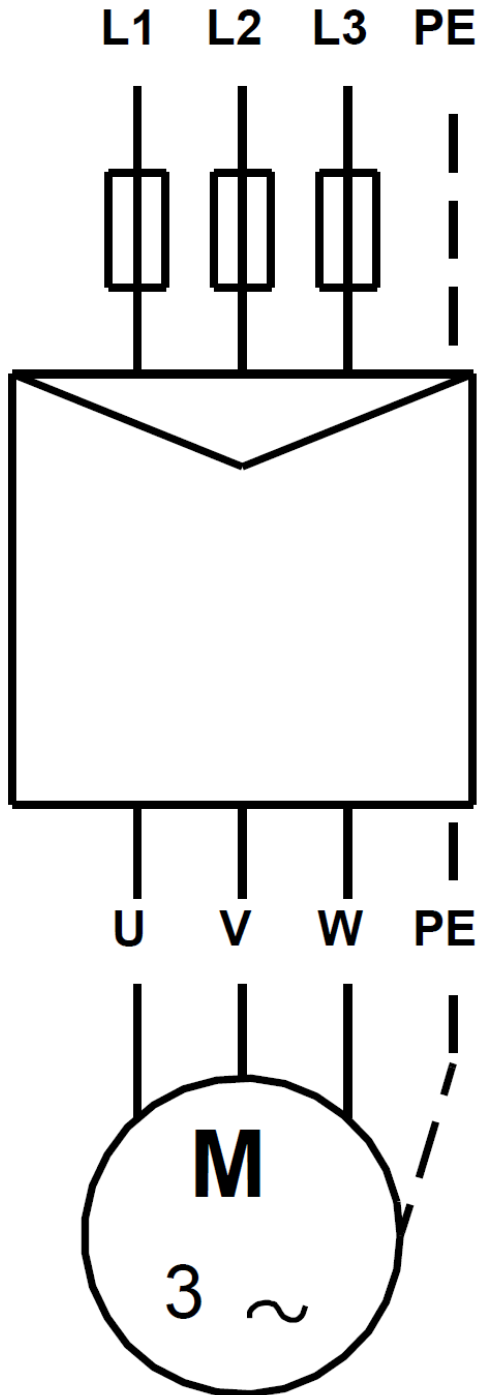


98699357 SP 14-13 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

98699357 SP 14-13 50 Hz



Note! All units are in [mm] unless others are stated.

Qty.	Description
1	SP 30-10  Received by:  Note! Product picture may differ from actual product Product No.: 13A01910 Submersible borehole pump, suitable for pumping clean water. Can be installed vertically or horizontally. All steel components are made in stainless steel, EN 1.4301 (AISI 304), that ensures high corrosive resistance. This pump carries drinking water approval. The pump is fitted with a 9.2 kW MS6000 motor with sand shield, mechanical shaft seal, water-lubricated journal bearings and a volume compensating diaphragm. The motor is a canned type submersible motor offering good mechanical stability and high efficiency. Suitable for temperatures up to 40 °C. The motor is fitted with the Grundfos Tempcon sensor that, by use of powerline communication together with a MP204 control panel, enables temperature monitoring. The motor is for direct-on-line starting (DOL). Liquid: Pumped liquid: Water Maximum liquid temperature: 40 °C Max liquid t at 0.15 m/sec: 40 °C Technical: Pump speed on which pump data are based: 2900 rpm Actual calculated flow: 23.69 m³/h Resulting head of the pump: 89.5 m Shaft seal for motor: CER/CARNBR Approvals on nameplate: CE, GOST2 Curve tolerance: ISO9906:2012 3B Motor version: T40 Materials: Pump: Stainless steel EN 1.4301 AISI 304 Impeller: Stainless steel EN 1.4301 AISI 304 Motor: Stainless steel DIN W.-Nr. 1.4301 AISI 304 Installation: Pump outlet: RP3 Motor diameter: 6 inch Electrical data:



Company name:

Created by:

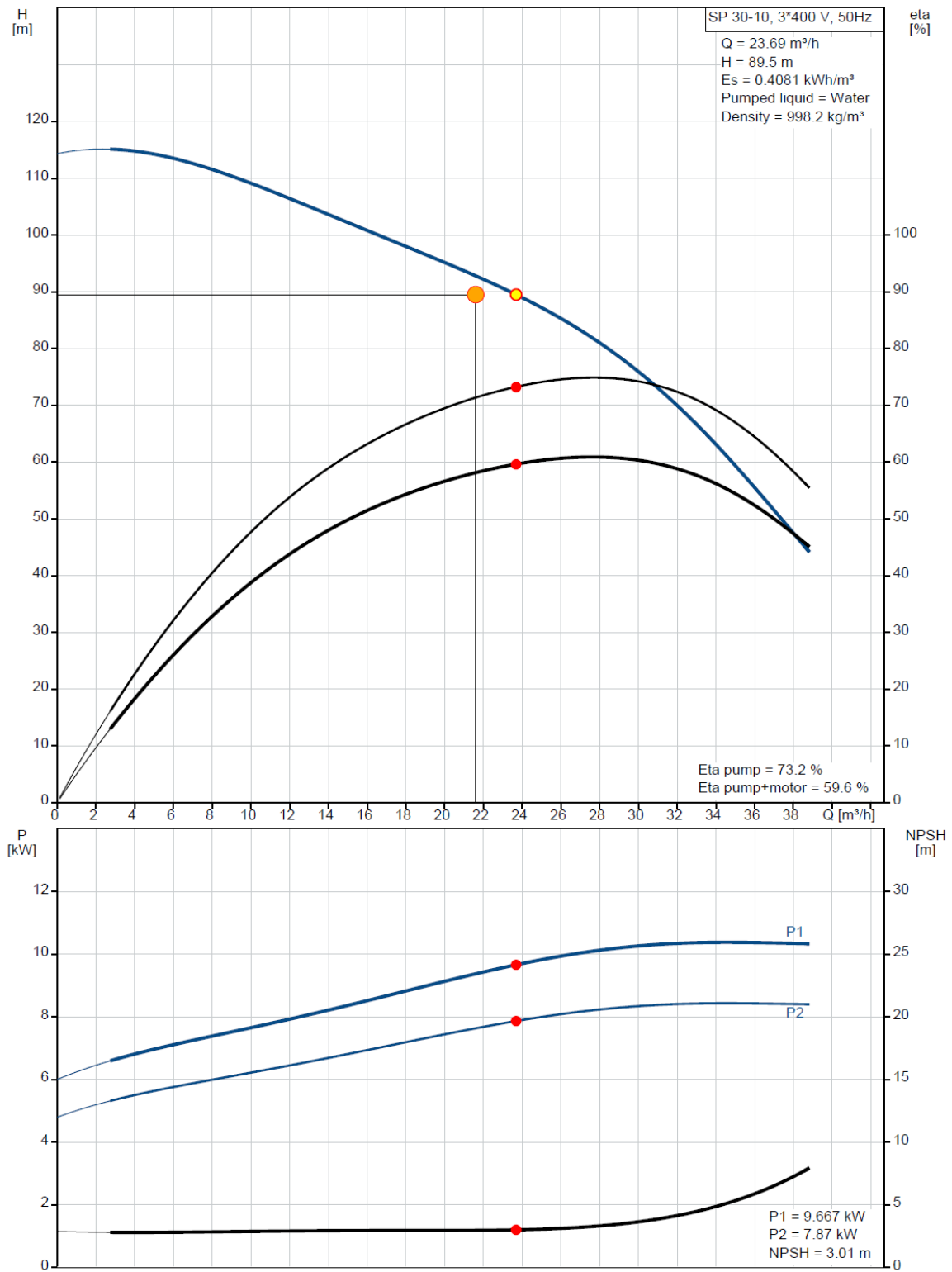
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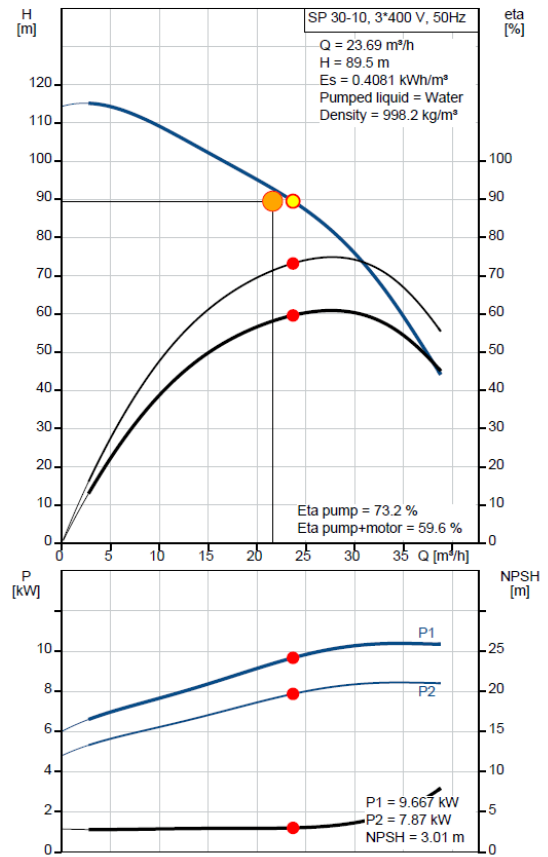
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Qty.	Description
	Motor type: MS6000 Rated power - P2: 9.2 kW Power (P2) required by pump: 9.2 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-400-415 V Rated current: 21.8-21.2-21.2 A Requested Voltage: 400 V Rated Current At This Voltage: 21.5 A Starting current: 480-520-550 % Cos phi - power factor: 0.84-0.82-0.78 Rated speed: 2850-2870-2880 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Insulation class (IEC 85): F Built-in temp. transmitter: yes Motor No: 78195513 Windings: Enamelled Others: Minimum efficiency index, MEI ≥: 0.50 ErP status: EuP Standalone/Prod. Net weight: 68.9 kg Gross weight: 98.7 kg Shipping volume: 0.232 m³ Danish VVS No.: 388338100 Finnish LVI No.: 4762739 Country of origin: DK Custom tariff no.: 84137025

13A01910 SP 30-10 50 Hz



Description	Value
General information:	
Product name:	SP 30-10
Product No:	13A01910
EAN number:	5700390381196
Price:	ZAR 75685
Technical:	
Pump speed on which pump data are based:	2900 rpm
Actual calculated flow:	23.69 m³/h
Resulting head of the pump:	89.5 m
Stages:	10
Impeller reduc.:	NONE
Shaft seal for motor:	CER/CARNBR
Approvals on nameplate:	CE,GOST2
Curve tolerance:	ISO9906:2012 3B
Model:	B
Valve:	YES
Motor version:	T40
Materials:	
Pump:	Stainless steel
Pump:	EN 1.4301
Pump:	AISI 304
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Motor:	Stainless steel
Motor:	DIN W.-Nr. 1.4301
Motor:	AISI 304
Installation:	
Pump outlet:	RP3
Motor diameter:	6 inch
Liquid:	
Pumped liquid:	Water
Maximum liquid temperature:	40 °C
Max liquid t at 0.15 m/sec:	40 °C
Electrical data:	
Motor type:	MS6000
Applic. motor:	GRUNDFOS
Rated power - P2:	9.2 kW
Power (P2) required by pump:	9.2 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-400-415 V
Rated current:	21.8-21.2-21.2 A
Requested voltage:	400 V
Rated current at this voltage:	21.5 A
Starting current:	480-520-550 %
Cos phi - power factor:	0.84-0.82-0.78
Rated speed:	2850-2870-2880 rpm
Start. method:	direct-on-line
Enclosure class (IEC 34-5):	IP68
Insulation class (IEC 85):	F
Motor protec:	NONE
Thermal protec:	external
Built-in temp. transmitter:	yes
Motor No:	78195513
Windings:	Enamelled
Others:	
Minimum efficiency index, MEI ≥:	0.50





Company name:

Created by:

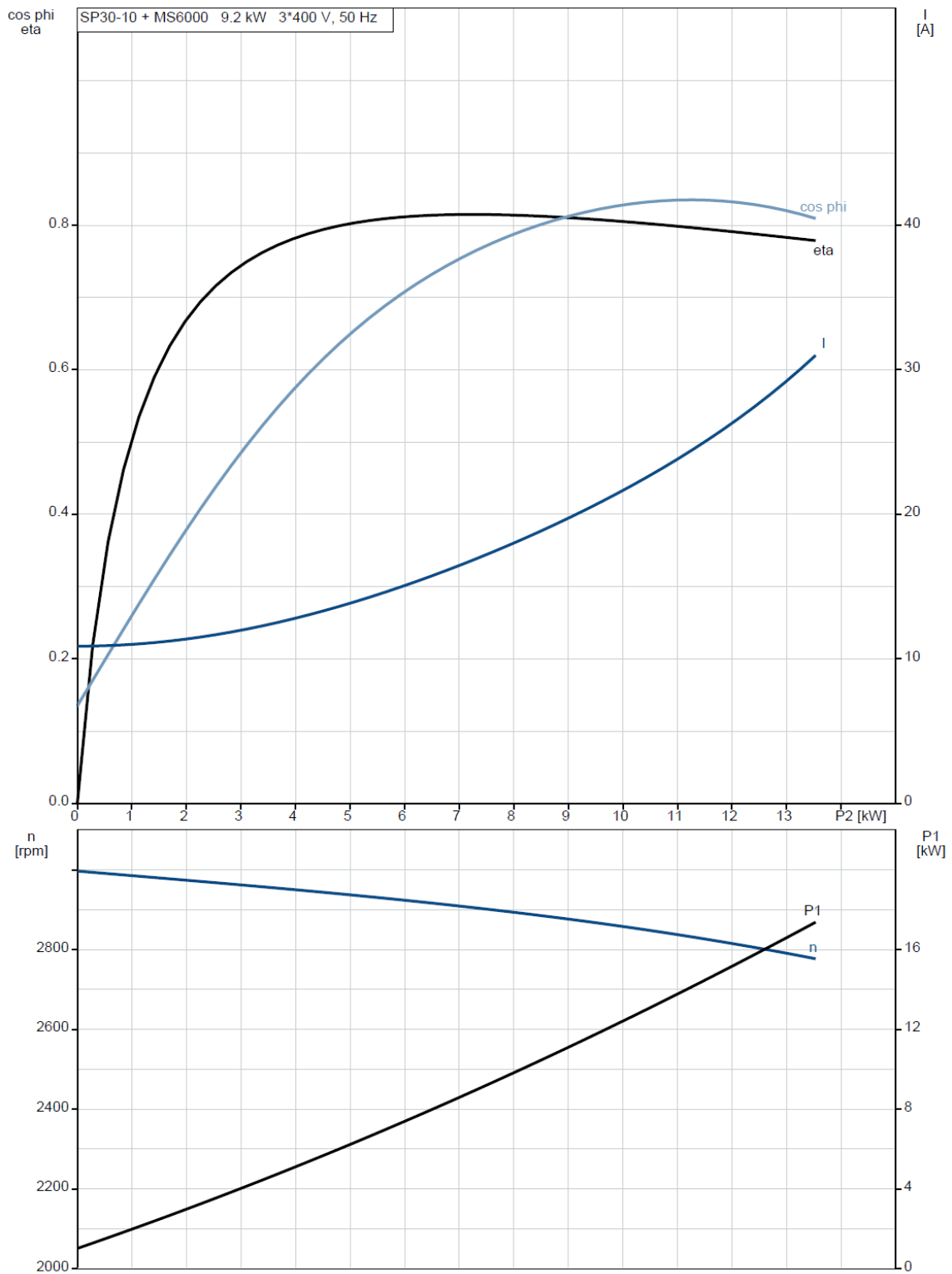
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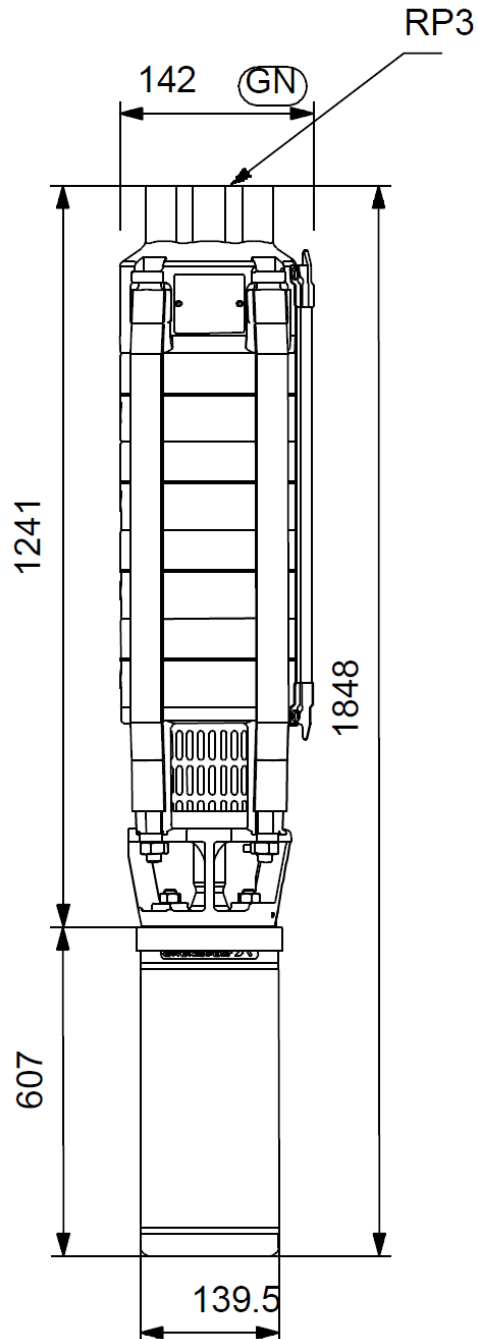
21/06/2021

Description	Value
ErP status:	EuP Standalone/Prod.
Net weight:	68.9 kg
Gross weight:	98.7 kg
Shipping volume:	0.232 m ³
Danish VVS No.:	388338100
Finnish LVI No.:	4762739
Country of origin:	DK
Custom tariff no.:	84137025

13A01910 SP 30-10 50 Hz

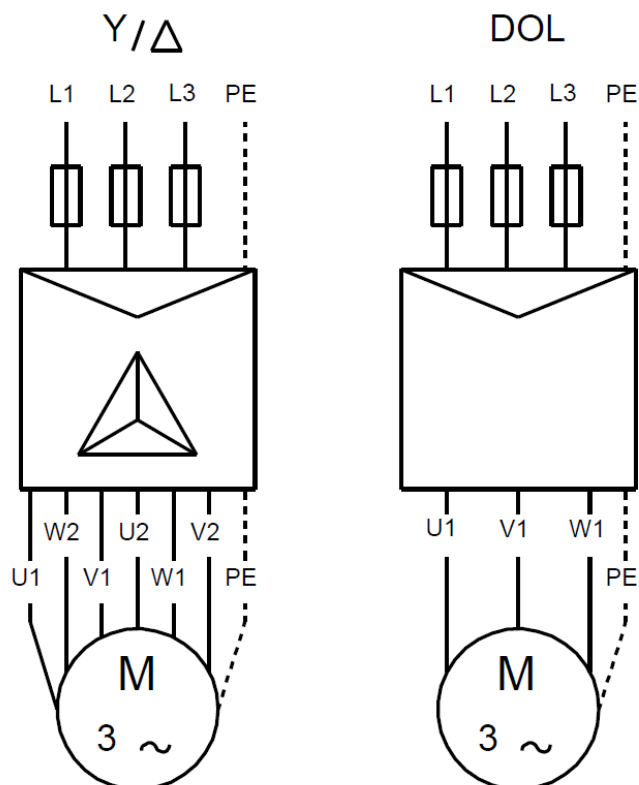


13A01910 SP 30-10 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

13A01910 SP 30-10 50 Hz



U1, W2	Brown
V1, U2	Black
W1, V2	Grey

Note! All units are in [mm] unless others are stated.

Qty.	Description
1	SP 30-12  Received by:  Note! Product picture may differ from actual product Product No.: 13A01912 Submersible borehole pump, suitable for pumping clean water. Can be installed vertically or horizontally. All steel components are made in stainless steel, EN 1.4301 (AISI 304), that ensures high corrosive resistance. This pump carries drinking water approval. The pump is fitted with a 11 kW MS6000 motor with sand shield, mechanical shaft seal, water-lubricated journal bearings and a volume compensating diaphragm. The motor is a canned type submersible motor offering good mechanical stability and high efficiency. Suitable for temperatures up to 40 °C. The motor is fitted with the Grundfos Tempcon sensor that, by use of powerline communication together with a MP204 control panel, enables temperature monitoring. The motor is for direct-on-line starting (DOL). Liquid: Pumped liquid: Water Maximum liquid temperature: 40 °C Max liquid t at 0.15 m/sec: 40 °C Technical: Pump speed on which pump data are based: 2900 rpm Actual calculated flow: 25.75 m³/h Resulting head of the pump: 102.8 m Shaft seal for motor: CER/CARNBR Approvals on nameplate: CE,GOST2 Curve tolerance: ISO9906:2012 3B Motor version: T40 Materials: Pump: Stainless steel EN 1.4301 AISI 304 Impeller: Stainless steel EN 1.4301 AISI 304 Motor: Stainless steel DIN W.-Nr. 1.4301 AISI 304 Installation: Pump outlet: RP3 Motor diameter: 6 inch Electrical data:



Company name:

Created by:

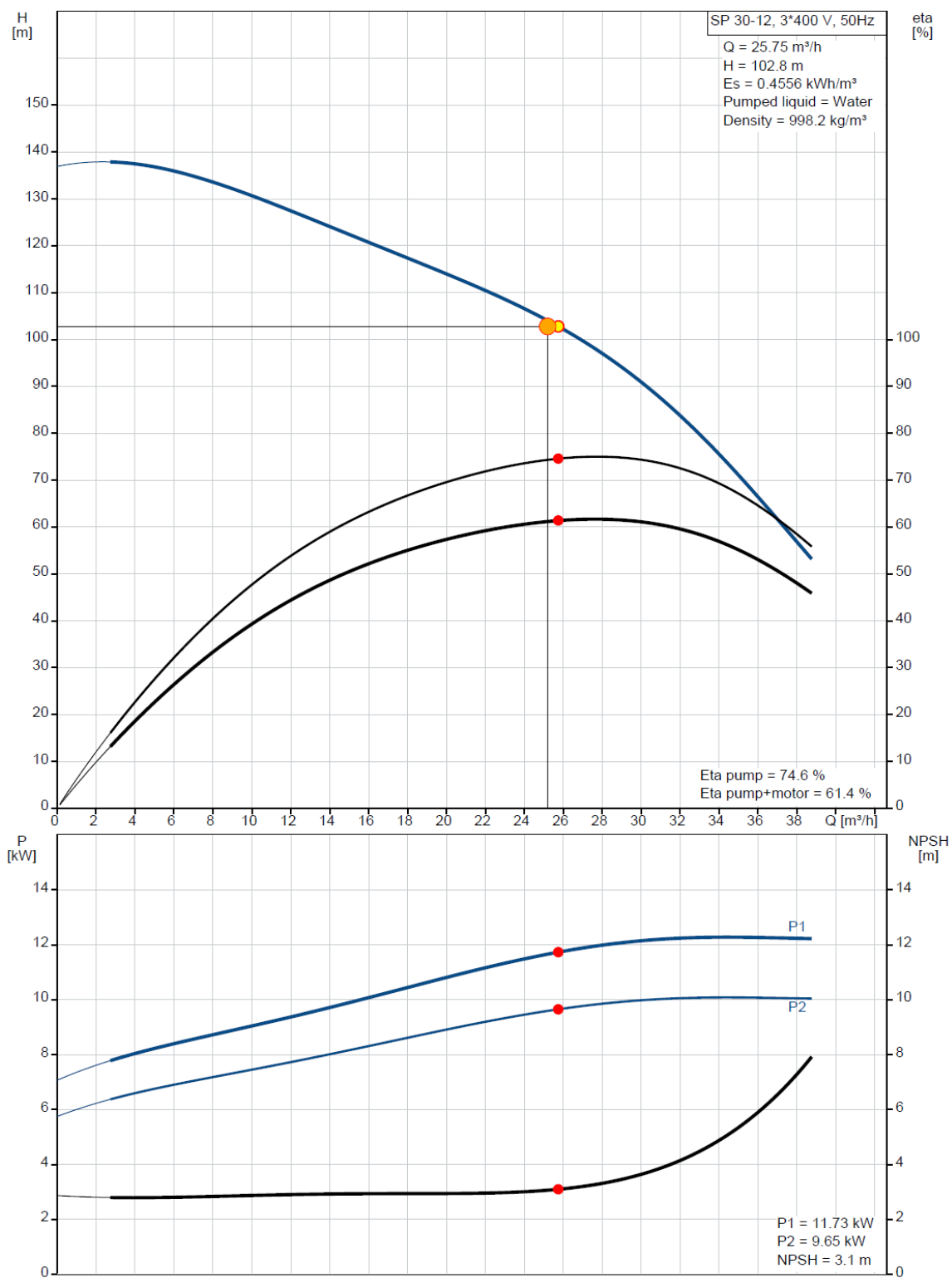
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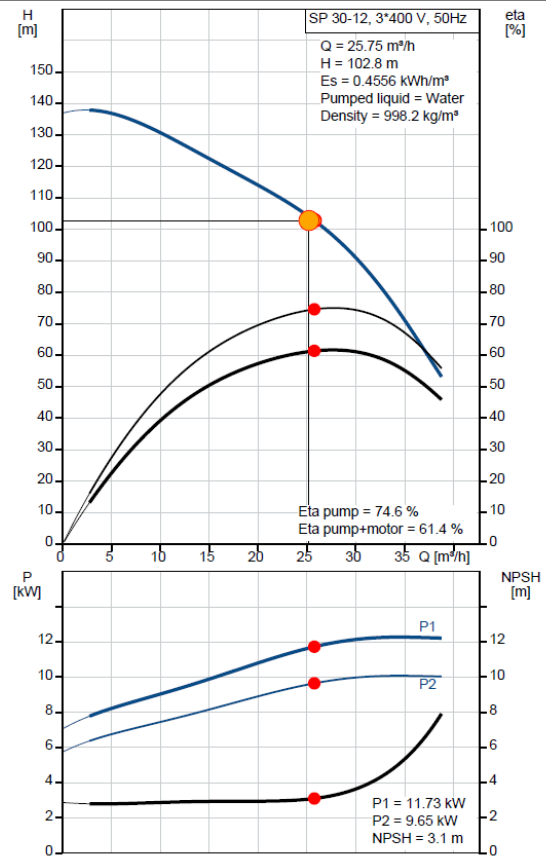
21/06/2021

Qty.	Description
	Motor type: MS6000 Rated power - P2: 11 kW Power (P2) required by pump: 11 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-400-415 V Rated current: 26.0-25.0-24.8 A RequestedVoltage: 400 V RatedCurrentAtThisVoltage: 25.4 A Starting current: 470-520-540 % Cos phi - power factor: 0.84-0.82-0.79 Rated speed: 2850-2870-2880 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Insulation class (IEC 85): F Built-in temp. transmitter: yes Motor No: 78195514 Windings: Enamelled Others: Minimum efficiency index, MEI ≥: 0.50 ErP status: EuP Standalone/Prod. Net weight: 75.8 kg Gross weight: 110 kg Shipping volume: 0.264 m³ Danish VVS No.: 388338120 Finnish LVI No.: 4762741 Country of origin: DK Custom tariff no.: 84137025

13A01912 SP 30-12 50 Hz



Description	Value
General information:	
Product name:	SP 30-12
Product No:	13A01912
EAN number:	5700390381233
Price:	ZAR 81767
Technical:	
Pump speed on which pump data are based:	2900 rpm
Actual calculated flow:	25.75 m³/h
Resulting head of the pump:	102.8 m
Stages:	12
Impeller reduc.:	NONE
Shaft seal for motor:	CER/CARNBR
Approvals on nameplate:	CE,GOST2
Curve tolerance:	ISO9906:2012 3B
Model:	B
Valve:	YES
Motor version:	T40
Materials:	
Pump:	Stainless steel
Pump:	EN 1.4301
Pump:	AISI 304
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Motor:	Stainless steel
Motor:	DIN W.-Nr. 1.4301
Motor:	AISI 304
Installation:	
Pump outlet:	RP3
Motor diameter:	6 inch
Liquid:	
Pumped liquid:	Water
Maximum liquid temperature:	40 °C
Max liquid t at 0.15 m/sec:	40 °C
Electrical data:	
Motor type:	MS6000
Applic. motor:	GRUNDFOS
Rated power - P2:	11 kW
Power (P2) required by pump:	11 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-400-415 V
Rated current:	26.0-25.0-24.8 A
Requested voltage:	400 V
Rated current at this voltage:	25.4 A
Starting current:	470-520-540 %
Cos phi - power factor:	0.84-0.82-0.79
Rated speed:	2850-2870-2880 rpm
Start. method:	direct-on-line
Enclosure class (IEC 34-5):	IP68
Insulation class (IEC 85):	F
Motor protec:	NONE
Thermal protec:	external
Built-in temp. transmitter:	yes
Motor No:	78195514
Windings:	Enamelled
Others:	
Minimum efficiency index, MEI ≥:	0.50





Company name:

Created by:

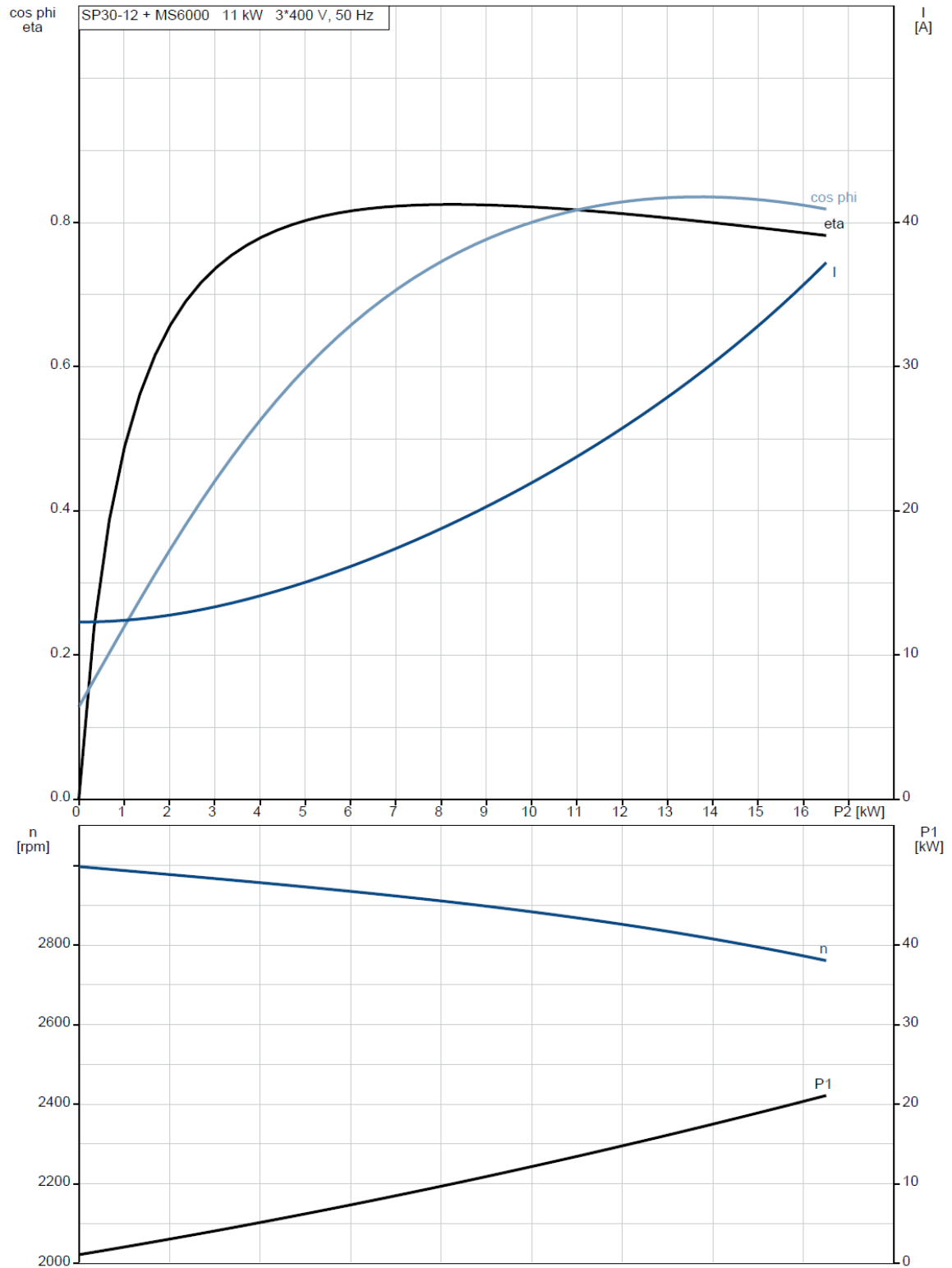
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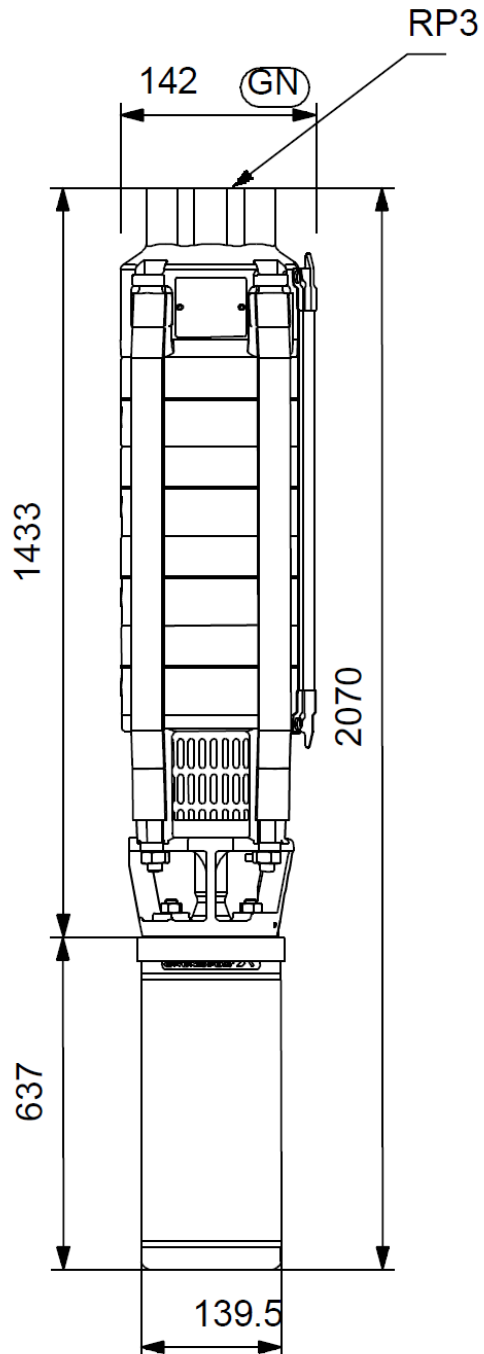
21/06/2021

Description	Value
ErP status:	EuP Standalone/Prod.
Net weight:	75.8 kg
Gross weight:	110 kg
Shipping volume:	0.264 m ³
Danish VVS No.:	388338120
Finnish LVI No.:	4762741
Country of origin:	DK
Custom tariff no.:	84137025

13A01912 SP 30-12 50 Hz

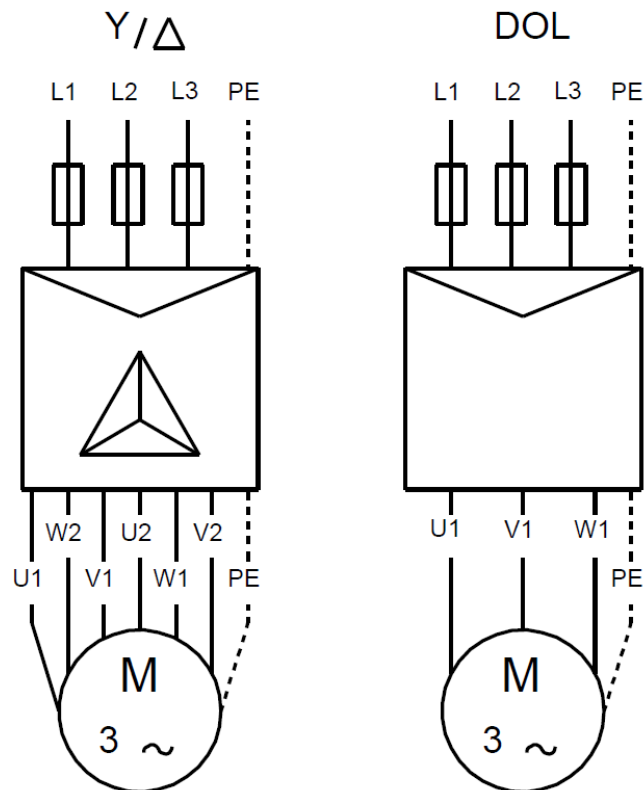


13A01912 SP 30-12 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

13A01912 SP 30-12 50 Hz



U1, W2	Brown
V1, U2	Black
W1, V2	Grey

Note! All units are in [mm] unless others are stated.

PARTICULAR SPECIFICATION: PC

PC ELECTRICAL SPECIFICATIONS

PC 1 ELECTRICAL

PC 1.1 ELECTRICITY SUPPLY

The Humansdorp borehole pump stations HD4 and pump station HD1 will receive power from a new Municipal 22kV/420, 50kVA pole mounted transformer near the two boreholes.

The Humansdorp borehole pump stations HD3 and pump station HD2C will also receive power from a second new Municipal 22kV/420, 50kVA pole mounted transformer near the two boreholes.

The contractor shall connect supply cables at the supply transformers circuit breaker located in the transformer distribution kiosk, which will be provided by the supply authority. The contractor shall therefore liaise directly with the Municipal electrical department for energizing of the transformers and to make the connection.

PC 1.2 LV ELECTRICAL INSTALLATION

PC 1.2.1 General

The Electrical works shall be provided in accordance with the following Technical Data Sheets:

- | | |
|---------------|---|
| a) DS-EE-0010 | LV Switchgear and Control-gear Assemblies |
| b) DS-EE-0011 | LV Cables and Cable Supports |
| c) DS-EE-0013 | Small Power |

The following tables and schedules are appended to and form part of this Project Specification:

- a) Motor and Equipment Schedule
- b) Cable Schedule
- c) MCC and Field Control Schedule

The tables and schedules depend on the actual mechanical equipment offered by the Contractor. The Contractor is responsible for pricing any changes to the electrical design that are caused by his/her selection of mechanical equipment.

PC 1.2.2 LV Switchgear

- a) One new outdoor LV Kiosk shall be installed in each borehole pump station above the borehole chamber.
- b) The LV MCC and Local Control Table attached to the specification contain details of the starters, control and indication which shall be provided in the Kiosk.
- c) The electrical kiosk assemblies shall consist of:
 - i. Main incomer.
 - ii. Feeder to borehole motor.
 - iii. Time delay relay for preventing borehole pump motor to start until a pre-set time (between 5 min to 24 hours) has elapsed after pump motor stop.
 - iv. A 5 pin 3 phase socket outlet and a single normal switched socket outlet.
 - v. Control and instrumentation compartment for relay logic control and mounting of instrument transmitters.

PC 1.2.3 LV Cables and Cable Supports

- a) The Kiosks motor and equipment cable schedules attached indicate the LV cables that shall be provided, based on the engineer's design.
- b) Borehole pump motor shall come pre-wired with appropriate submersible power cables of at least 60 m.

- c) LV multi core cable shall be copper conductor, PVC insulated with steel wire armouring.
- d) Medium duty mild steel hot-dipped galvanised cable ladders shall be provided to support power cables.
- e) Medium duty mild steel hot-dipped galvanised wire mesh cable tray shall be provided to support control and instrumentation cables.
- f) Control and instrumentation cables shall be installed at least 300 mm away from power cables.
- g) All surface-mounted conduits used for the installation of LV cables shall be hot-dip galvanised.
- h) Conduits that are installed in concrete or brickwork shall be PVC.
- i) Cables through walls and floors shall be sealed watertight with expansion foam, screeded over and coated similar to the surrounding surfaces.

PC 1.2.4 Low Voltage Electric Motors

- a) The Kiosks motor and equipment cable schedules attached indicate the engineer's estimated ratings of the motor and equipment.
- b) High efficiency motors shall be provided for the borehole pumps.
- c) Each pump/motor shall be supplied with protection as shown on the MCC and Field Control Schedule and as described in the mechanical specification.

PC 1.2.5 LV Earthing and Bonding

- a) Earth continuity conductors (ECCs) shall be provided with all the LV power cables to the equipment and as shown on the Cable Schedule attached.
- b) Where no separate earth continuity conductor is shown on the Cable design schedule, the intent is that a spare core in the power cable shall serve this function.
- c) Use the Kiosk's earth bar as the main earth bar.
- d) All electrical equipment shall be earthed.
- e) All accessible extraneous conductive parts of the electrical equipment/electrically-driven equipment shall be bonded in accordance with SANS 10142-1.

PC 1.3 ELECTRONIC INSTALLATION

PC 1.3.1 General

The Electronic works shall be provided in accordance with the following Technical Data Sheets:

- a) DS-II-0001 Control, Instrumentation, Data Cables and Junction Boxes
- b) DS-II-0007 Instrumentation

The following table and schedule is appended to and form part of this Project Specification:

- a) Instrumentation and Control Cable Schedule

The tables and schedules depend on the actual mechanical equipment offered by the Contractor. The Contractor is responsible for pricing any changes to the electrical design that are caused by his/her selection of mechanical equipment.

PC 1.3.2 Electricity Supply

- a) A single-phase 230V 50Hz supply shall be provided from the LV Kiosks above the borehole pump station chambers.

PC 1.3.3 Control Cables

- a) Control cables shall be provided as required for control circuitry of all controlled equipment.
- b) Control cables shall be 600 / 1000V multicore 1,5mm² copper conductor, PVC-insulated cables with galvanised steel wire armouring and PVC serving.

PC 1.3.4 Instrumentation Cables

- a) Instrumentation cables shall be provided as required for all instrumentation signals, where the instrumentation is not equipped with integral cables long enough to reach the Kiosks control and instrumentation section.
- b) Instrumentation cables shall be twisted pair, copper conductor, individually and overall screened, PVC-insulated with galvanised steel wire armouring and PVC serving.

PC 1.3.5 Instrumentation

- a) The Contractor shall provide instrumentation as indicated on the instrumentation and control cable schedule and instrumentation data sheet.
- b) A single phase 230VAC shall be provided from the Kiosks to the instrumentation where applicable.
- c) The following instruments shall be installed:
 - i. 1 x hydrostatic level transmitter in each borehole.
 - ii. 1 x flow switch for pump low flow protection and control.
 - iii. Water ingress protection (integral to pump).
 - iv. Temperature sensor (integral to pump) and transmitter.
- d) The level meter transmitters shall be mounted in the control and instrumentation compartment of the Kiosks.
- e) The signal from ultrasonic level meter sensor shall be protected from surges at the transmitter by a suitable surge protection device

PC 1.3.6 Spares

No spares are required.

DATA SHEET No. DS-EE-0010**LV SWITCHGEAR AND CONTROLGEAR ASSEMBLIES - MOTOR CONTROL CENTRES**

	DESCRIPTION	UNIT	SPECIFIED	OFFERED
	This data sheet is applicable to the Motor Control Centres or Kiosks			
1	GENERAL			
1.01	Kiosk Manufacturer			
1.02	Tested with Stated Deviations to SANS 1973-1	Yes/No		
1.03	Type Test Certificate Required	Yes / No		
1.04	Control Voltage	230V/ 24VDC		
1.05	Compartment type	Fixed pattern/ withdrawabl e	Fixed pattern	
2	CONSTRUCTION REQUIREMENTS			
2.01	Steel Work Manufacturer			
2.02	Form of Internal Separation		1	
2.03	Material of Construction	2.00 Mild Steel/ Electro Galvanized/ Stainless Steel/ 3CR12	3CR12	
2.04	Ingress Protection (doors closed)	IP	66	
2.05	Method of Installation		Floor Standing	
2.06	Epoxy Powder Coated	Yes / No	Yes	
2.07	Colour of Assembly		Avocado Green	
2.08	Size of Panel	HxWxD	H <1500	
2.09	Spare Space Required	%	>=20	
2.10	Access	Back / Front / Side	Front & Rear	
2.11	Cable Entry	Top / Bottom	Bottom	
2.12	Doors / Removable Panels		Doors	
2.13	Door Locks	Yes / No	Yes	
2.14	Door Locks - Type		Square key and lockable lock	
2.15	Door Locks - Material		Stainless Steel 316	
2.16	Hinges	Yes / No	Yes	
2.17	Hinges - Type		Perano	
2.18	Hinges - Material		Stainless Steel 316	
2.19	Stays at 95° Opening	Yes / No	Yes	
2.20	Incomer Section Required	Yes / No	Yes	
2.21	Essential Section Required	Yes / No	No	
2.22	UPS Section Required	Yes / No	No	
2.23	Corrosion protection		Epoxy coated HDG	
2.24	Gland Plates		Not painted; Alu for single core cables	
2.25	Estimated Weight	Kg		

	ELECTRICAL COMPONENTS	-		
3	Busbars			
3.01	Material		Copper	
3.02	Tinned	Yes / No	Yes	
3.03	Current Density	A/mm ²	<2 as per type test	
4	Moulded Case Circuit Breakers			
4.01	Manufacturer			
4.02	Type		Fixed	
4.03	Model			
4.04	Rated Current	A	As per Sdesign Schedules	
4.05	Service short-circuit breaking capacity (Ics)	kA	As per Sdesign Schedules	
4.06	Overload release		Thermal/ electronic	
4.07	Short-circuit release		Magnetic/ electronic	
5	Miniature Circuit Breakers			
5.01	Manufacturer			
5.02	Type			
5.03	Model			
5.04	Rated current	A		
5.05	Service Short-circuit breaking capacity (Ics)	KA		
5.06	Tripping Curve		C or as per SLD	
6	Fuse Switch-Disconnecter			
6.01	Manufacturer			N/A
6.02	Model			
7	High Rupture Capacity (HRC) Fuse Links			
7.01	Manufacturer			
7.02	Model			
8	Surge Arrestors			
8.01	Power Circuits - Manufacturer			
8.02	Power Circuits - Model			
8.03	Power Circuits - Rating	kA		
8.04	Remote Indication to PLC	Yes / No		
8.05	Control Circuits - Manufacturer			
8.06	Control Circuits - Model			
8.07	Remote Indication to PLC	Yes / No		
9	Contactors			
9.01	Manufacturer			
9.02	Model			
9.03	Contactor rating		AC3	
9.04	Coordination		Type 2	
10	Overload Relays			
10.01	Manufacturer			
10.02	Type			
10.03	Model			
10.04	Rated Current	A		
10.05	Resetable from front of MCC	Yes / No	Yes	
10.06	HMI	Yes / No	No	

11	Miniature Relays			
11.01	Manufacturer			
11.02	Model			
12	Control switches and pushbuttons			
12.01	Manufacturer			
12.02	Model			
13	Indicating Lamps			
13.01	Manufacturer			
13.02	Model			
13.03	Type		LED	
14	Power Meter for Incomer(s)			
14.01	Manufacturer			N/A
14.02	Model			
14.03	Communication Protocol		Modbus/ Ethernet	
14.04	Harmonics Measurement	Yes / No		
14.05	Time of use measurement	Yes / No		
14.06	Bi-directional	Yes / No		
14.07	Datasheet provided with tender	Yes / No		
14.08	Data logging functionality	Yes / No		
15	Control-Circuit and auxiliary supply transformer			
15.01	Manufacturer			
	POWER OUTLETS	-		
16	Normal Switched Socket Outlet			
16.01	Manufacturer			
16.02	Type			
16.03	Ingress Protection	IP	65	
16.04	Faceplate Colour			
16.05	Mounting	Flush/recessed in power skirting	Flush on kiok	
16.06	SABS approved	Yes / No	Yes	
17	3 phase Industrial Switched Socket Outlets			
17.01	Manufacturer			
17.02	Type			
17.03	Ingress Protection	IP	65	
17.04	Faceplate Colour			
17.05	Mounting		Flush on Kiosk	
17.06	SABS approved	Yes / No	Yes	
18	SUPPLEMENTARY DETAILS			
Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified				
Name (Print): _____ Signature: _____.				

DATA SHEET No. DS-EE-0011 LV CABLES AND CABLE SUPPORTS

[illegible]

Regardless of any information provided in this technical data sheet, the equipment to be provided will comply with the specified

Name (Print): _____ Signature: _____.

CONTROL, INSTRUMENTATION, DATA CABLES AND JUNCTION BOXES

Name (Print): _____ Signature: _____

500748 Kouga Humansdorp Boreholes - Motor and Equipment Schedule									Document Number 500748_MES						Rev 0		Date 30-Jun-21		
Item No	Tag No	Description	Location	Length	Starter	Submersible (Y/N)	Volt	Ph	Rating	Unit	Supply Side Ratings				Typical Equipment Rating			Util. Factor	Standby Power
											S kVA	Amps	PF	Drive Eff.	Amps	PF	Eff.		
MAIN KIOSK 1 FEEDING BOREHOLES HD4 & HD1																			
1	MAIN-EK-01	TRF-01 Main Kiosk	Humansdorp	1	INCOMER	NO	400	3	63	A	35	51	0,74	-	-	-	-	-	-
2	HD4-EK	Borehole HD4 Kiosk	Humansdorp	180	FDR	NO	400	3	15	kW	20,3	29,3	0,84	1	29,3	0,84	0,88	1	NO
3	HD1-EK	Borehole HD1 Kiosk	Humansdorp	180	FDR	NO	400	3	11	kW	15,1	21,7	0,84	1	21,7	0,84	0,87	1	NO
BOREHOLE HD4																			
1	HD4-EK-IN	Borehole HD4 - Electrical Kiosk	Humansdorp	180	INCOMER	NO	400	3	40	A	20	29	0,74	-	-	-	-	-	-
2	HD4	Borehole HD4	Humansdorp	110	DOL	YES	400	3	15	kW	20,3	29,3	0,84	1	29,3	0,84	0,88	1	NO
3	HD4-P1	1 Phase SSO	Humansdorp	1	FDR	NO	230	1	1	kW	1,0	4,3	0,79	1	4,3	0,79	0,74	0	NO
4	HD4-PP1	3 Phase SSO	Humansdorp	1	FDR	NO	400	3	5	kW	7,9	11,4	0,81	1	11,4	0,81	0,78	0	NO
BOREHOLE HD1																			
1	HD1-EK-IN	Borehole HD4 - Electrical Kiosk	Humansdorp	180	INCOMER	NO	400	3	40	A	15	22	0,73	-	-	-	-	-	-
2	HD1	Borehole HD1	Humansdorp	110	DOL	YES	400	3	11	kW	15,1	21,7	0,84	1	21,7	0,84	0,87	1	NO
3	HD1-P1	1 Phase SSO	Humansdorp	1	FDR	NO	230	1	1	kW	1,0	4,3	0,79	1	4,3	0,79	0,74	0	NO
4	HD1-PP1	3 Phase SSO	Humansdorp	1	FDR	NO	400	3	5	kW	7,9	11,4	0,81	1	11,4	0,81	0,78	0	NO
MAIN KIOSK 2 FEEDING BOREHOLES HD3 & HD2C																			
1	MAIN-EK-02	TRF-02 main Kiosk	Humansdorp	1	INCOMER	NO	400	3	63	A	16,8	24,3	0,68	-	-	-	-	-	-
2	HD3-EK	Borehole HD3 Kiosk	Humansdorp	200	FDR	NO	400	3	4	kW	6,3	9,1	0,81	1	9,1	0,81	0,78	1	NO
3	HD2C-EK	Borehole HD2C Kiosk	Humansdorp	200	FDR	NO	400	3	7,5	kW	10,5	15,2	0,82	1	15,2	0,82	0,87	1	NO
BOREHOLE HD3																			
1	HD3-EK-IN	Borehole HD4 - Electrical Kiosk	Humansdorp	200	INCOMER	NO	400	3	40	A	6,3	9,1	0,63	-	-	-	-	-	-
2	HD3	Borehole HD3	Humansdorp	60	DOL	YES	400	3	4	kW	6,3	9,1	0,81	1	9,1	0,81	0,78	1	NO
3	HD3-P1	1 Phase SSO	Humansdorp	1	FDR	NO	230	1	1	kW	1,0	4,3	0,79	1	4,3	0,79	0,74	0	NO
4	HD3-PP1	3 Phase SSO	Humansdorp	1	FDR	NO	400	3	5	kW	7,9	11,4	0,81	1	11,4	0,81	0,78	0	NO
BOREHOLE HD2C																			
1	HD2C-EK-IN	Borehole HD2C - Electrical Kiosk	Humansdorp	200	INCOMER	NO	400	3	40	A	10,5	15,2	0,71	-	-	-	-	-	-
2	HD2C	Borehole HD2C	Humansdorp	110	DOL	YES	400	3	7,5	kW	10,5	15,2	0,82	1	15,2	0,82	0,87	1	NO
3	HD2C-P1	1 Phase SSO	Humansdorp	1	FDR	NO	230	1	1	kW	1,0	4,3	0,79	1	4,3	0,79	0,74	0	NO
4	HD2C-PP1	3 Phase SSO	Humansdorp	1	FDR	NO	400	3	5	kW	7,9	11,4	0,81	1	11,4	0,81	0,78	0	NO

PARTICULAR SPECIFICATION: PD

PD HEALTH AND SAFETY SPECIFICATIONS

The site-specific H & S Specifications compiled by Safe Working Practice are attached as Appendix A

C3.5: MANAGEMENT

C3.5.1 MANAGEMENT OF THE WORKS**C3.5.1.1 Applicable SANS standards**

As specified under Clause C3.4

C3.5.1.2 Particular / generic specifications

As specified under Clause C3.4

C3.5.1.3 Planning and Programming

Refer Clause 5.6 of the Conditions of Contract.

If the programme submitted by the Contractor in terms of Clause 5.6 of the Conditions of Contract has to be revised because the Contractor is falling behind in his programme, he shall submit a revised programme of how he intends to regain lost time to ensure completion of the Works within the period defined in Clauses 5.12 of the Conditions of Contract or within a granted extension of time.

Proposal to increase the tempo of work must incorporate positive steps to increase production either by more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Employer's Agent to take steps as set out in Clause 9.2 of the Conditions of Contract.

The approval of a programme by the Employer's Agent shall have no contractual significance other than that the Employer's Agent will be satisfied if the work is carried out according to the programme. The said approval shall not limit the right of the Employer's Agent to instruct the Contractor to vary the programme if necessary.

C3.5.1.4 Sequence of the works

To be determined by the Contractor.

C3.5.1.5 Software application for programming

Not applicable.

C3.5.1.6 Methods and Procedures

The Works shall be executed in terms of the various and applicable specifications, the general health and safety specifications and subsequent health and safety plan, the Conditions of Contract as well as the various clauses within the Scope of Work.

C3.5.1.7 Quality plans and control

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

C3.5.1.8 Environment

The Contractor shall, for the duration of the contract, take appropriate measures to control the dust and soil movement which may arise due to his operations.

C3.5.1.9 Accommodation of traffic on public roads occupied by the Contractor

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

Work shall be undertaken in accordance with the S.A. Road Traffic Signs Manual and Road Signs Note No. 13, Roadwork (CSRA-CUTA Road Traffic Signs Sub-Committee).

C3.5.1.10 Recording of weather

Refer C3.4.10.

C3.5.1.11 Format of communications

All contractual communication shall be in writing.

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

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

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

C3.5.1.12 Key personnel

Key personnel shall be on site at all times to control and supervise construction activities.

C3.5.1.13 Management meetings

The Contractor shall have regular site management meeting to coordinate and manage the Works.

Monthly Contract meeting shall be held on site. This meeting shall be chaired by the Employer's Agent.

C3.5.1.14 Forms for contract administration

The Employer, the Contractor and the Employer's Agent shall operate and maintain their own individual contract administration systems.

C3.5.1.15 Electronic payments

The Contractor must ensure that all interim payment certificates are accompanied by a Tax Invoice, with the Contractor's and the Employer's VAT Registration numbers printed thereon, to ensure

timeous payment of the certificate. Contractors must allow 30 days from date of invoice for the payment to be effected.

Contractors wishing to be paid electronically must ensure that their correct banking details are also printed on their Tax Invoice.

C3.5.1.16 Daily records

A complete set of daily records indicating labour and plant on site, weather, work performed and any safety incidents, is to be kept on site and must be available for perusal by the Employer's Agent at all times.

C3.5.1.17 Bonds and guarantees

As specified elsewhere.

C3.5.1.18 Payment certificates

As specified elsewhere.

C3.5.1.19 Permits

Not applicable.

C3.5.1.20 Proof of compliance with the law

As specified elsewhere.

C3.5.1.21 Insurance provided by the employer

As specified elsewhere.

C3.5.2 HEALTH AND SAFETY

The Contractor shall comply with the Employers health and safety specifications as specified in Particular Specification PD.

C3.5.2.1 Health and safety requirements and procedures of the employer

- (a) In terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as the Act, the following arrangements and procedures shall apply between the Contractor and the Employer to ensure compliance by the Contractor with the provisions of the Act:
 - (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act.
 - (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with.
 - (iii) The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and

prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations.

- (iv) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor.
- (v) The Contractor shall be obliged to report forthwith to the Employer and Employer's Agent any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Employer's Agent, of such investigation, complaint or criminal charge.
- (vi) The Contractor shall furthermore, in compliance with Constructional Regulations 2014 (Notice No 10113, dated 7 February 2013) to the Act acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 5(1)(b) of the Construction Regulation 2014, and prepare a suitably and sufficiently documented coherent site specific health and safety plan as contemplated in regulation 7(1)(a) of the Construction Regulation 2014 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted for approval, to the Employer or his agent, within 14 days of the Commencement Date and shall be implemented and maintained from the commencement of the Works. The Contractor shall at all times be responsible for full compliance with the approved plan as well as with the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.
- (vii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to monitor that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Employer's Agent, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified.
- (viii) The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the C3.4: Construction, the Bill of Quantities, the Drawings, and in the Employers' health and safety specification (regulation 5(1) of the Construction Regulations 2014).

Payment items are included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

C3.5.2.2 Protection of the public

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

C3.5.2.3 Barricades and lighting

As specified elsewhere.

C3.5.2.4 Traffic control on roads

As specified elsewhere.

C3.5.2.5 Measures against disease and epidemics

As specified elsewhere.

C3.5.2.6 Aids awareness

Not applicable.

THE CONTRACT

PART 4 (OF 4): SITE INFORMATION

C4.1	Scope	277
C4.2	Nature of ground and sub-soil conditions	277
C4.3	Finishing-off of the Site	277

C4.1 **SCOPE**

For the purposes of the Contract it will be deemed that, prior to submitting his Tender, the Contractor has acquainted himself fully with the information and data provided within the specifications.

The Contractor shall have no claim against the Employer in respect of geotechnical or subsurface conditions encountered during the course of the Contract.

C4.2 **SUB-SOIL CONDITIONS**

No Geotechnical Investigation was done.

Material on site is expected to vary between sandy material and hard rock. The latter material should be excavatable by using an excavator.

C4.3 **FINISHING-OFF OF THE SITE**

The site shall be finished-off in accordance with the specifications and to the satisfaction of the Employer's Agent.

APPENDIX A

HEALTH & SAFETY SPECIFICATIONS

APPENDIX B

TENDER DRAWINGS

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- 500748-PH04-DRG-WR-0003 - Humansdorp Phase 4 Layout & Longitudinal Sections (Sheet 2 of 4)
- 500748-PH04-DRG-WR-0004 - Humansdorp Phase 4 Layout & Longitudinal Sections (Sheet 3 of 4)
- 500748-PH04-DRG-WR-0005 - Humansdorp Phase 4 Layout & Longitudinal Sections (Sheet 4 of 4)
- 500748-PH04-DRG-WR-0006 - Humansdorp Phase 4 Typical Water Details (Sheet 1 of 2)
- 500748-PH04-DRG-WR-0007 - Humansdorp Phase 4 Typical Water Details (Sheet 2 of 2)
- 500748-PH04-DRG-WR-0008 – N2 Wayleave Application
- 500748-PH04-DRG-WR-0009 – R330 Wayleave Application



safe working practice
OCCUPATIONAL HEALTH AND SAFETY GROUP

Project Health and Safety Specification

In terms of Construction Regulations 2014

Project Client

KOUGA LOCAL MUNICIPALITY

Description of Project Works

HUMANSDORP BULK WATER SUPPLY SCHEME

Project Location

**KOUGA LOCAL MUNICIPALITY HANKEY:
APPROXIMATELY 1 KM NORTH OF THE N2
ON THE R330 AND 3 KM NORTH OF
HUMANSDORP
ON THE R330**

Preparation Date

14 JUNE 2021

Project Health and Safety Specification developed by:

Safe Working Practice
Tel: 0860 111 540
Fax: 086 672 4991
Email: info@safepractice.co.za



PROJECT HEALTH AND SAFETY SPECIFICATION

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1.0 SPECIFIC PROJECT INFORMATION

1. 1 INTRODUCTION AND DEFINITIONS
--

THE REQUIREMENTS OF THE CONSTRUCTION REGULATIONS 2014 (AND GUIDANCE NOTES OF 2017) HAVE BEEN IN EFFECT SINCE 7TH AUGUST 2014. THE REGULATIONS PLACE LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THE REGULATIONS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND OTHER ASSOCIATED HEALTH AND SAFETY REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

PLEASE NOTE THAT THE TERMS "CONTRACTOR" AND "PRINCIPAL CONTRACTOR" HAVE THE SAME MEANING AS THAT IN THE CONSTRUCTION REGULATIONS AND ARE USED INTERCHANGEABLY IN THIS DOCUMENT, I.E., REFERENCES TO "CONTRACTOR" REFER TO PRINCIPAL CONTRACTOR AND/OR CONTRACTOR AS THE REGULATIONS PERTAIN TO THEIR FUNCTIONS.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to work on site. Compliance to the requirements of the Occupational Health and Safety Act 1993 is an additional requirement of this Health and Safety Specification and is part of the Contractor's responsibility. The Client, and/or their agents, will monitor that all Contractors comply with the requirements of such legislation.

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO SAFETY AGENT, WHERE SO APPOINTED.

Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:

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

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

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

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

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

"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration, and management of resources on a construction site;

"construction site" means a workplace where construction work is being performed;



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

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

"construction work" means any work in connection with -

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

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

"contractor" means an employer who performs construction work;

Note:

a) Includes organisations and or self-employed person that contracts with a client, principal contractor, or a contractor to carry out construction work.

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

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

"designer" means a competent person who-

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

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimise human well-being and overall system performance;

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

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

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

"falsework" means a combined system of formwork and support work;

"formwork" means temporary or permanent shutters used to form wet concrete into elements of a structure, and includes both horizontally and vertically placed shutters;

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

"structure" means-

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



"support work" means the temporary structure erected to support the formwork before the casting of a concrete element of a structure.

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

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

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

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

Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings, and reports):

Tender documents Drawings

IMPORTANT NOTE:

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

1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION
--

Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents, and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has arranged for the preparation of this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract.

Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.

IMPORTANT NOTE:

Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.

Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate resource in their tender submission to comply with all legislative requirements.

Failure to comply with the requirements of this Safety Specification will result in severe sanction and the severity of the sanction will depend on the severity of the noncompliance.



The Contractor's personnel will be responsible for the auditing of the implementation of the Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will arrange for Health and Safety audits to be conducted on site on their behalf to monitor health and safety compliance by contractors.

1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

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

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities. Please note that a detailed OHS bill of quantities must be provided by the contractor on all Construction Work Permit projects. The Bill of Quantities will form part of the Construction Work Permit application presented to Department of Labour for approval.

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

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

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

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

1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

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

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

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

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



1.4.1 Client Duties

In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to “definitions” section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

All references to “Client” will apply to their appointed “Safety Agent”, where so appointed, in this Health and Safety Specification.

The Client must:

- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented, and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the Client to enable each of those contractors to comply with the regulations
- Ensure, before work commences, that every principal contractor is registered and in good standing with the compensation fund, or with a licensed compensation insurer as contemplated in the Compensation for Occupational injuries and Diseases Act, 1993 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor’s safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor’s health and safety plan is implemented and maintained
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor’s health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the Client requires additional work to be performed as a result of a design change or error in construction due to the actions of the Client, the Client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the Client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations
- Where the Client has appointed a Safety Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.



1.4.2 Designer Duties

It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to "definitions" section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.

Please note that the designer of temporary works must ensure that:

- all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- the designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- all drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- the loads caused by the temporary works and any imposed loads are clearly indicated in the design.



1.5 PROJECT DIRECTORY		
Project Client	Kouga Municipality 33 Da Gama Road Jeffreys Bay	Tel: 042 200 8619 e-mail: tba
Contact Person	C du Plessis	Cell: tba
Project Manager	Kouga Municipality	Cell: 067 107 9325
Contact Person	Eddie Oosthuizen	e-mail: eddieo@kouga.gov.za
Consulting Engineer	ZUTARI	Cell: 084 581 9964
Contact Person	Johan van der Mescht	e-mail: Johan.vandermescht@aurecongroup.com
Construction Safety Agent	Safe Working Practice	Tel: 0860 111 540 Cell: 071 686 5346 / 061 485 5807
Contact Person	Dawid Naude Stiaan Burger	e-mail: dawid@safepractice.co.za stiaan@safepractice.co.za

OTHER PARTIES DIRECTORY	
Department of Labour for submission of Annexure 2: Notification of Construction Work Eastern Cape– Ms L Gwam	Tel: 041 506 5000 e-mail: linda.gwam@labour.gov.za
Department of Labour 1162134 Govan Mbeki Avenue Port Elizabeth	Tel: 041 506 5000/1 e-mail: linda.gwam@labour.gov.za



Telecommunications Contractor to refer all queries on location and nature of existing services to the Project Manager / Client, etc. OR Contractor to apply for and refer to wayleave information from service providers for the nature and location of services. Refer all queries Project Manager. Company: Telkom Contact Name: tba	 Tel: 0800 200 000 / 10210
Water Company: Kouga Municipality Contact Name: Eddie Oosthuizen	 e-mail: eddieo@kouga.gov.za Cell: 067 107 9325
Electricity Company: Kouga Municipality Contact Name: Eddie Oosthuizen	 e-mail: eddieo@kouga.gov.za Cell: 067 107 9325
COVID-19 Hotlines National Coronavirus Hotline Provincial Coronavirus Hotline Eastern Cape	 Tel: 0800 029 999 Tel: 043 707 6300(per Province)

1.6 PROJECT DETAILS

Description of Works

This description of the works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

- Supply & install 4 x borehole pumps (Grundfos or similar approved)
- Supply & install the borehole rising pipe and electrical cable in the borehole shaft at each of the 4 sites.
- Construct 4 x borehole chambers, complete with pipework & fittings (see sketch attached)
- Construct a Ø200 mm uPVC pumping main from the boreholes (located to the north of the N2) to the Humansdorp WTW over a distance of 4 km.
- Provide an ESKOM connection in close proximity to the 4 x borehole sites, complete with cabling to each borehole.
- Install a small electrical kiosk at each borehole to accommodate the electrical switchgear for the borehole pump.
- Horizontal drilling underneath the N2 (to insert a sleeve) over a distance of about 100 m.
- Horizontal drilling underneath the R330 (to insert a sleeve) over a distance of about 60 m.
- Removal of thick alien vegetation (black wattle) along the pipeline route.



Anticipated Construction Duration 6 Months
Provisional Start Date 4 June 2021
Provisional Completion Date 26 November 2021
Construction Work Permit Required for the Project? No
1.7 EXISTING ENVIRONMENT
Hazards particular to this project by virtue of location: • Snakes, poisonous insects and plants. Road traffic accidents as construction and other vehicles will be turning off and onto the R330 Main Road to get access to the site. • Residential areas – community unrest, road and pedestrian movement • Various active / live services inclusive of electricity, water, sewerage and telecommunication.
Overhead, Above Ground and Underground Services crossing the site: Overhead: Overhead power lines Underground: Live services inclusive of electricity, water sewerage and telecommunication. Ground level: Tar / dirt roads, fencing, houses and street furniture Service Drawings available: Yes Wayleaves required: Yes if and where required Permits required: When tying into existing services Isolations required: When tying into existing services
Existing structures on site and surrounding land use (with a significant impact on Health & Safety): • Reservoirs, waterlines, pump stations and electrical sub stations for existing water lines. Farming activities. • Municipal services in build up area including water, electrical and telecommunication services underground and or overhead
Existing ground conditions and ground survey report: n/a
Existing Traffic Systems Condition: Tar / dirt roads Restrictions to access: None Speed restrictions: 60 km/h or as per temporary road traffic safety signs by contractor in work areas



1.8 AVAILABLE DRAWINGS

Refer to tender documentation.

1.9 PROJECT HEALTH AND SAFETY REQUIREMENTS

Significant health and safety hazards identified by Client, Designer and Safety Agent:

Confined Spaces
Contaminated Land
COVID-19
Excavations
Explosive use -possible
Fire
Flammable Liquids / Gas
Fragile Materials
Hazardous Substances
Members of Public
Night Work
Overhead Services (Working near)
Road Working – in or next to (including Traffic Management)
Snakes
Underground Services
Working at Height
Working with Effluent

Other construction hazards that the contractor can reasonably expect are as follows:

Bricklaying
Brush cutting
Chainsaw Use
Compacting and Filling
Compactor Operations
Cutting Off Disc
Electric Tools and Electrical Installations
Hand tools
Lifting Operations
Manhole Rings and Pipes Storage
Manual Handling of General Items
Mobile Crane
Noise and Dust
Painting
Plant/Vehicle and Equipment Operation
Plastering
Plumbing
Scaffold Erection / Dismantling
Site Strip
Steel Erection
Steel Fixing
Temporary Work (include False Work, Formwork, Support Work Scaffold and Shoring)
Troxler Use
Horizontal drilling

NOTE: Please refer to end of this Health and Safety Specification for the baseline risk assessment for these hazards and risks.



ACTIVITIES REQUIRING APPROVED METHOD STATEMENTS (FOR HEALTH AND SAFETY & COVID-19)

Site establishment
Excavations
Working at Height
Member of the public

ACTIVITIES REQUIRING PERMITS (FOR HEALTH AND SAFETY PURPOSES)

Permit to Dig: No

Permit to Enter Excavations: Yes, if deeper than 2 meters

Road Works Permit: n/a

Permit to Work with Electricity: When cutting into existing services

Confined Space Permit: n/a

Hot Works Permit: n/a

Permit to Work under Power Lines: n/a

Blasting: Yes, If Blasting Is Required

Client issued permit for work in restricted areas: n/a

Temporary Works: yes

CONTRACTOR SAFETY OFFICER PROVISION

Records of safety audits undertaken by the Contractor's Safety Officer must be kept on site in the safety file and nonconformances reported by the Safety Officer to the Contractor's management team. All nonconformances identified by the Safety Officer and client's safety agent must be investigated and corrective action taken by the Contractor to prevent re-occurrence.

Please note that as from 7th August 2018 the safety officer must be professionally registered with the SACPCMP. Proof of registration with the SACPCMP must be provided.

If registered as a Candidate proof of mentorship and weekly visits by mentor must be available on site.

The requirement for this site is that a full time / part time Safety Officer be appointed by the Contractor. Part time Safety Officer must visit site at least weekly/fortnightly/monthly.

MEDICAL CERTIFICATE OF FITNESS (ANNEXURE 3)

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template.



MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate competent person must be appointed by the principal contractor. Proof of an all-inclusive assessment by the Principal Contractor of the Construction Manager's Competency in construction management and health and safety competency must be available in the Safety File.

The Construction Manager, Alternate Construction Managers, Assistant Construction Managers, and designated construction supervisor/s must, as a minimum, have training in Legal Liability, Construction Regulation 2014 and the OHS Act and Regulations.

TRAFFIC MANAGEMENT AND TRAFFIC SAFETY OFFICER PROVISION

The Traffic Management Plan must be approved by the Project Manager and, as required, the Traffic Chief as per the National Road Traffic Act, No. 93 of 1996. The Traffic Safety Officer must have training as per Unit Standard 14561 or similar.

ENVIRONMENTAL CONDITIONS

Contractor must take into account adverse weather conditions on site activities and implement control measures to mitigate risk. This includes risk of exposure to excessive heat, cold, rain, lightning and wind. The open nature of the site works will not preclude any of the above.

ARRANGEMENTS FOR ACCESS, PARKING, DELIVERIES, ETC.

Access to site by Construction Vehicles: Via available road networks

Access to site by Construction Workers and Visitors: Via available road networks

All service providers must sign a 37.2 Mandatory Agreement and must be inducted before they can be allowed on site.

ARRANGEMENTS FOR SITE CAMP, ABLUTIONS AND YARD, INCLUDING FOR COVID-19

Site camp location and set up

- **Restrictions / requirements:** }
 - **Storage areas:** }
 - **Security:** }
- Contractor to advise in consultation
with Engineer / Professional Team

Ablutions and Welfare Arrangements

Contractor to supply ablutions and facilities in line with the Construction Regulations 2014, refer to section 2.31 of this health and safety specification regarding the below. Toilets should be provided with built in facilities for hand washing. Please note further that COVID-19 control measures form an important part of ablutions provision on site ref soap and water/hand sanitiser, signage, etc:

- **Toilets:** }
 - **Washing facilities:** }
 - **Drinking Water:** }
 - **Shelter:** }
 - **Showers:** }
- Contractor to provide as per Regulations
- Contractor to provide as per Regulations



Mobile site facilities requirements:

A camping toilet/mobile toilet will be required for sites that cannot facilitate a permanent location for ablution units and must be available for each gender per location.

The use of a camping toilet must be prepared and setup correctly with additional anchors and available toiletries prior to each working day and to be first priority when changing location of works along a set working path.

Teams are to ensure that the toilets are cleaned correctly and suitable for easy and hygienic uses and recorded on a daily register.

PROTECTION OF SITE AGAINST UNAUTHORISED ACCESS BY PUBLIC

Excavation Fencing: Note that excavations accessible to public, or adjacent to public roads / thoroughfares, must have (1) barrier / fence of at least 1m in height, and (2) warning illuminants at night or when visibility is poor, or have other suitable precautionary measures if of both these are not practicable.

General Fencing of Site: Note that construction sites in built up areas adjacent to public walkway must be fenced off and have controlled access points with the correct signs to indicate the site office for any relevant enquiries.

Warning Notices: tba

Look Outs: tba

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Client requires the Contractor to ensure that employees (and others under his/her control) wear the following minimum PPE:

Overalls: Yes

Safety Harnesses: When Working At Height

Hard Hats: No

Reflective Vests: Yes

Goggles / gloves / ear defenders / respiratory protection: As per work requirement

Safety Footwear: Yes

Specialist Equipment (e.g. for confined Spaces): When needed

COVID-19 PPE:

Disposable Gloves: n/a

Disposable Overall: n/a

Respiratory Protection (i.e. any face mask endorsed by Department of Labour): Yes

Eye Protection (i.e. goggles or face shield that fully covers the front and side of the face):
n/a



HAZARDOUS SUBSTANCES

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

- Hand sanitizer
- Glue
- Petrol
- Diesel
- Paint
- Cleaning chemicals
- Turps
- Thinners
- Cement and cementitious products
- Dust

1.10 INTERFACE AND RESTRICTIONS BY CLIENT

Contractor must note that the following Client activities will continue during construction:

- Communal farming activities
- Supply of municipal and telecommunication services
- Traffic of vehicles and pedestrians in build up areas

The following Client safety rules and/or requirements are to be observed:

- All workers are to receive induction prior to commencement of work on site.
- Other safety rules and requirements to be advised at induction.
- Please also refer to tender document.

Restrictions on times, access or other restrictions by Client

- Please refer to tender document.
- Other restrictions may be advised at induction.

1.11 Project Close Out

The Health and Safety files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project in the form of a consolidated safety file. The following list is an example of what should be included but is not exhaustive. The Safety Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are responded to. Documentation would include all health and safety related records from the start of the project. All records to be in hard copy or electronic format and submitted to the Safety Agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.

Consolidated Health and Safety close out file requirements include:

- Health and safety specification (most recent version)
- Principal Contractor's health and safety plan/s
- Site safety organograms
- Legal appointments
- Notification to Department of Labour of commencement of work / Construction Work Permit
- Workman's Compensation Letters of Good Standing for the project
- Full safety files for all contractors as well as their close out reports



- List of all contractors who worked on site
- Letters of safety plan approval of contractors by the Principal Contractor
- Mandatory agreements (section 37.2 agreements)
- Incident and accident records / Occupational Disease records
- Contractor Nonconformance records
- Safety agent's audit reports
- Safety Officer reports
- Method Statements
- Risk assessments
- Safe work procedures
- Medical surveillance certificates of fitness. Medical records are to be kept according to the Occupational Health and Safety Act, as amended.
- All temporary works drawings (suspended beams/scaffolds, etc.)
- Copies of test results, policies, and procedures for environmental monitoring (silica, noise, dusts, etc.)
- Detailed registers of all material used
- Copies of all Checklists completed

1.12 SAFETY FILE RETURN TO CLIENT

The consolidated Health and Safety Files for the Project is to be handed over by the Principal Contractor to the Client upon Project Completion in either hard copy or electronic format.



2.0 FURTHER REQUIREMENTS

2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the Client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the Client's documented health and safety specifications, *which* plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the Client, the Client's Safety Agent, or a Contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
 - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - appoint each contractor in writing for the part of the project on the construction site
 - take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
 - ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
 - stop any contractor from executing construction work which is not in accordance with the Client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the Client, or the Client's Safety Agent;



- hand over a consolidated health and safety file to the Client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the Client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the Client, the Client's Safety Agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

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

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

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

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

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

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



2.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor. Proof of all-inclusive assessment of the Construction Manager's Competency in construction management and H & S competency must be available in the Safety File. The Construction Manager must, as a minimum, have a Construction Regulation course. No contractors may be left unsupervised on site by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the Client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site. Proof of all-inclusive assessment of the Construction Supervisor's competency in construction supervision and H&S competency must be available in the Safety File. The Construction Supervisor must, as a minimum, have a supervision course as per Unit Standard 262845 (Civil Engineering), 119080 (Building Construction) and 262884 (Civil Engineering).

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.



2.3 Notification of Intention to Commence Construction Work

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

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

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

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

2.4 Construction Work Permit – n/a

A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work on projects that will –

1. exceed 365 days and will involve more than 3600 person days of construction work; or
2. the tender value limit is grade 7, 8 or 9 of the Construction Industry Development Board (CIDB) grading.
 - Grade 7 = R60 000 000
 - Grade 8 = R 200 000 000
 - Grade 9 = No limit

A client may appoint a Construction Health and Safety Agent or Construction Health and Safety Manager to apply for this permit from the Provincial Director and construction work may not commence until the permit has been issued by the Provincial Director.

A copy of this permit will be required to be kept in the principal contractor's safety file, and the site specific number issued by the Provincial Director must be displayed at the site entrance.

A client may appoint a Construction Health and Safety Agent, or Construction Health and Safety Manager based on the scope and risk profile of construction work to represent him/her on matters of health and safety. Provided that, where the question arises as to whether a Construction Health Safety Agent or a Construction Health and Safety Manager is necessary, the decision of an inspector is decisive.

The following minimum documentation will be required during the permit application process:

- Principal Contractor's Health and Safety Plan CR 5(1)(m)
- Baseline Risk Assessment CR 5(1)(a)
- Appointed Principal Contractor's Letter for Good Standing as per CR 5(1)(j)
- Issue Register signed by Designer CR 5 (1)(c)
- Issue Register signed by Principal Contractor
- Declaration signed by Designer CR 5(1)(d) and CV
- Principal Contractor made adequate provision for the cost of health and safety measures (Bill of Quantities) CR 5(1)(g)
- Proof of Principal Contractor's competency and resources to carry out the construction work safely CR 5(1)(h)
- Appointment Letter for Construction Manager, CV, Certificates and List of projects
- Appointment Letter of Safety Officer & Safety Officer's Registration for SACPCMP



- Principal Contractor's Appointment Letter CR 5(1)(k), Company Profile and CIDB grading

After approval of the Construction Work Permit any changes made to the appointed persons on the annexure 1 must be submitted to Department of Labour for approval before the appointed persons are allowed to commence with their tasks.

PLEASE NOTE THAT THE CONSTRUCTION MANAGER (8(1)) NAMED ON THE CONSTRUCTION WORK PERMIT MUST BE THE SAME PERSON THAT ACTS AS THE CONSTRUCTION MANAGER ON SITE. IF THIS WILL NOT BE THE CASE FOR SOME REASON THEN THE SAFETY AGENT MUST BE NOTIFIED OF THE CHANGE BY THE PRINCIPAL CONTRACTOR AT LEAST 7 DAYS BEFORE THE CHANGE IS MADE SO THAT THE SAFETY AGENT CAN AMEND THE CONSTRUCTION WORK PERMIT APPLICATION AND ADVISE THE DEPARTMENT OF EMPLOYMENT AND LABOUR ACCORDINGLY.

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

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

2.6 Competency for Contractor's Responsible Persons

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

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

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

2.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations. The Policy must be communicated to all employees and proof thereof must be available in the Safety File.

2.9 Health and Safety Organogram

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



2.10 Risk Assessments

Baseline Risk Assessment

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

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

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

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

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

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

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

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the Client, Client's Safety Agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member.

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

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

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

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

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors, and Contractors;



- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

2.11 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The Safety Representative(s) must be democratically nominated, elected, and appointed in writing. The Health and Safety Representative(s) shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. The Safety Representative(s) shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents, and non-conformances. The Safety Representative(s) must be (a) full time employee(s) who is/are acquainted with conditions and activities at that workplace or section thereof. The Safety Representatives must have Safety Representative training and must be capable of performing their duties.

2.12 Health and Safety Committee

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

PLEASE NOTE THAT THE SAFETY AGENT MAY REQUIRE THAT THE PRINCIPAL CONTRACTOR CONVENES A SAFETY COMMITTEE MEETING ON SITE IN THE INTERESTS OF HEALTH AND SAFETY ON SITE. SUCH COMMITTEE MEETING MAY REQUIRE ATTENDANCE OF CONTRACTORS SAFETY OFFICERS/SAFETY REPRESENTATIVES, CONSTRUCTION SUPERVISION AND THE SAFETY AGENT.

2.13 Medical Certificate of Fitness

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

Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.14 Health and Safety Training

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

2.14.1 Induction

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



2.14.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health and safety file as evidence of training.

2.15 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence. All training must be conducted by an accredited training provider and the certificates must display the applicable unit standards and the expiry dates thereof.

2.16 General Record Keeping

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

2.17 General Inspection, Monitoring and Reporting

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

2.18 Emergency Procedures

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

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

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

2.19 First Aid Box and First Aid Equipment

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

- First Aid box/es must be adequately stocked at all times, accessible and be controlled by a qualified First Aider.
- Perishables to be checked and replaced when expired.
- Stock per content list as per the General Safety Regulations Annexure.
- Signage to be in place.
- To be numbered and sealed with name of first aider on or above the First aid box.



- Dressing logbook to be available in the first aid box.
- If more than 5 employees are present, there must be a first aid box available.
- Register to be checked by a Competent person.

If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

2.20 Accident / Incident Reporting and Investigation

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

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

2.21 Hazards and Potential Situations

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

2.22 Occupational Health and Safety Signage

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

2.23 Management of Contractors by Principal Contractor

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

2.24 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

2.25 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

- the proper storage of materials and equipment;



- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and
- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

2.26 Construction Vehicles and Mobile Plant

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

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
 - has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
 - has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water, or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm;
- are equipped with fire extinguishers (2.5 – 4.5 kg); and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms, or similar appendages, fully lowered, or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set,



- and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material, and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working, or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.
- all plant and vehicles are fitted with amber rotating beacons and reverse alarms.
- ALL construction site vehicles must be inspected daily especially if it has dangerous "items" (fuel, explosives, etc.) on vehicle, completed inspection registers must also be available for inspection.
- the vehicles must resemble the original manufacturer's product. Levers, alarms, and amber lights to be fitted to construction vehicle for notification of vehicle.
- fire extinguishers, signage, and licence disc to be correctly mounted and displayed.
- when the vehicle is stationary no key to be left in or on vehicle or plant.
- Drip tray must be present when stationary.

2.27 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied, or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids



- proper containers are to be used for fuel. Marked and labelled as per the content.
- diesel on site; more than 800 litres must have a certificate, fire safe certificate. Locked in a ventilated, secure area with a drip tray and have a designated, responsible person to use it.

2.29 Water environments – n/a

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

- preventing persons from falling into water; and
- the rescuing of persons in danger of drowning.

A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

2.30 Fire precautions on Construction Sites

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

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids, and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
 - only suitably protected electrical installations and equipment, including portable lights, are used;
 - there are no flames or similar means of ignition;
 - there are conspicuous notices prohibiting smoking;
 - oily rags, waste, and other substances liable to ignite are without delay removed to a safe place; and
 - adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting, and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
 - persons to be evacuated speedily without panic;
 - persons to be accounted for; and
 - plant and processes to be shut down; and
- a siren is installed and sounded in the event of a fire.

2.31 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- Toilets to be within walking distance
- Hygiene registers to be completed
- Proof of safe disposal of effluent/waste disposal certificates to be obtained



- changing facilities for each sex;
- and sheltered/shaded eating area.
- Protection from the Elements and raised off the ground.
- Every employer shall provide sanitary facilities at the workplace in accordance with the provisions of Parts F, P and Q of the National Building Regulations.
- Sufficient clean water for all employees. 500ml to each employee every hour.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.32 Fall protection

The Contractor must:

- designate a competent person to be responsible for the preparation of a fall protection plan
- ensure that the fall protection plan contemplated above is implemented, amended where and when necessary and maintained as required; and
- take steps to ensure continued adherence to the fall protection plan.

A fall protection plan contemplated above must include-

- a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- a programme for the training of employees working from a fall risk position and the records thereof;
- the procedure addressing the inspection, testing, and maintenance of all fall protection equipment; and
- a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

A contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

A contractor must ensure that all unprotected openings in floors, edges, slabs, hatchways, and stairways are adequately guarded, fenced, or barricaded or that similar means are used to safeguard any person from falling through such openings;

Also that no person is required to work in a fall risk position, unless such work is performed safely as contemplated in above and fall prevention and fall arrest equipment are approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and securely attached to a structure or plant, and the structure of plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and person who could fall, and fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

2.33 Temporary works

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

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

A contractor must ensure that-

- all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that



may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;

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

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

2.34 Excavation

A contractor must-

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

A contractor who performs excavation work-

- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where-



- the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
- such an excavation is in stable material: Provided that-
 - permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
 - where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
- must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
- must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
- must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six metres from the point where any worker within the excavation is working;
- must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
- must ensure that every excavation, including all bracing and shoring, is inspected-
 - daily, prior to the commencement of each shift;
 - after every blasting operation;
 - after an unexpected fall of ground;
 - after damage to supports; and
 - after rain,by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the Client, the Client's Safety Agent, any other contractor or any employee;
- must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –
 - adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and
 - provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
- must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;
- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosive's legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

2.35 Demolition Work – n/a

A contractor must appoint a competent person in writing to supervise and control all demolition work on site.

A contractor must ensure that before any demolition work is carried out, and in order to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried



out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed by that person.

During a demolition, the competent person contemplated in above must check the structural integrity of the structure at intervals determined in the method statement contemplated in above, in order to avoid any premature collapses.

A contractor who performs demolition work must with regard to a structure being demolished, take steps to ensure that-

- no floor, roof or other part of the structure is overloaded with debris or material in a manner which would render it unsafe;
- all reasonably practicable precautions are taken to avoid the danger of the structure collapsing when any part of the framing of a framed or partly framed building is removed, or when reinforced concrete is cut; and
- precautions are taken in the form of adequate shoring or other means that may be necessary to prevent the accidental collapse of any part of the structure or adjoining structure;
- ensure that no person works under overhanging material or a structure which has not been adequately supported, shored, or braced;
- ensure that any support, shoring, or bracing contemplated above, is designed and constructed so that it is strong enough to support the overhanging material;
- where the stability of an adjoining building, structure or road is likely to be affected by demolition work on a structure, take steps to ensure the stability of such structure or road and the safety of persons;
- ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of demolition work that may affect any such service, take the steps that are necessary to render circumstances safe for all persons involved;
- cause every stairwell used and every floor where work is being performed in a building being demolished, to be adequately illuminated by either natural or artificial means;
- cause convenient and safe means of access to be provided to every part of the demolition site in which persons are required to work; and
- erect a catch platform or net above an entrance or passageway or above a place where persons work or pass under or fence off the danger areas if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe where there is a danger or possibility of persons being struck by falling objects.

A contractor must ensure that no material is dropped to any point, which falls outside the exterior walls of the structure, unless the area is effectively protected.

No person may dispose of waste and debris from a high place by a chute unless the chute-

- is adequately constructed and rigidly fastened;
- if inclined at an angle of more than 45 degrees to the horizontal, is enclosed on its four sides;
- if of the open type, is inclined at an angle of less than 45 degrees to the horizontal;
- where necessary, is fitted with a gate at the bottom end to control the flow of material; and discharges into a container or an enclosed area surrounded by barriers.

A contractor must ensure that every chute used to dispose of rubble is designed in such a manner that rubble does not free-fall and that the chute is strong enough to withstand the force of the debris travelling along the chute.

A contractor must ensure that no equipment is used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed loads.

Where a risk assessment indicates the presence of asbestos, a contractor must ensure that all asbestos related work is conducted in accordance with the Asbestos Abatement Regulations, 2020.



Where a risk assessment indicates the presence of lead, a contractor must ensure that all lead related work is conducted in accordance with the Lead Regulations, 2001.

Where the demolition work involves the use of explosives, a method statement must be developed in accordance with the applicable explosives legislation, by an appointed person who is competent in the use of explosives for demolition work and all persons involved in the demolition works must adhere to demolition procedures issued by the appointed person.

A contractor must ensure that all waste and debris are as soon as reasonably practicable removed and disposed of from the site in accordance with the applicable legislation.

2.36 Tunnelling – n/a

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

2.37 Scaffolding – n/a

A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work as per the SANS 10085 of 2004.

A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act and SANS 10085. Scaffold must be;

- Level and balanced upon the correct footing such as base jacks, U-Jacks, and mobile wheels
- Have the correct Ledgers and bracing methods to secure the frames and Standards
- To be fully boarded with the correct edge protection on both the 0.500m and 1 metre height per working platforms.
- Working platforms to be in accordance with the Tables 4 and 5 of the SANS 10085 for weight restrictions
- Have the correct access that is fitted within the scaffold and grants access to the working platforms and must be fitted with a trap door system.
- Secured with fastening methods such Reveal and fixed ties according to table 7 of SANS 10085. Buttresses to be used when required.
- signage must be displayed to indicate if the scaffold is safe or unsafe to use.
- Trestles to be built in accordance to section 10.16.1 of the SANS 10085 and safety requirements to be met by the scaffolding inspector and scaffold supervisors on site.

2.38 Bulk mixing plant

A contractor must ensure that the operation of a bulk mixing plant is supervised by a competent person who has been appointed in writing and is –

- aware of all the dangers involved in the operation thereof; and
- conversant with the precautionary measures to be taken in the interest of health and safety.

No person supervising or operating a bulk mixing plant may authorize any other person to operate the plant unless that person is competent to operate a bulk mixing plant.

A contractor must ensure that the placement and erection of a bulk mixing plant complies with the requirements set out by the manufacturer and that such plant is erected as designed.

A contractor must ensure that all devices to start and stop a bulk mixing plant are provided and that those devices are placed in an easily accessible position and constructed in a manner to prevent accidental starting.



A contractor must ensure that the machinery and plant selected is suitable for the mixing task and that all dangerous moving parts of a mixer are placed beyond the reach of persons by means of doors, covers or other similar means.

No person may remove or modify any guard or safety equipment relating to a bulk mixing plant, unless authorized to do so by the appointed person.

A contractor must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with when entering any silo.

A contractor must ensure that a record is kept of all repairs or maintenance to a bulk mixing plant and that the record is available on site to an inspector, the Client, the Client's Safety Agent, or any employee.

2.39 Rope Access Work – n/a

A contractor must –

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

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

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

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

2.40 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.



- Training with regards to these regulations was given.

The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

2.41 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
 - Engineering methods considered
 - Admin control (number of employees exposed) considered
 - Personal protective equipment considered/decided on
- Describe how records are going to be kept for 40 years.

2.42 Explosives and Blasting – n/a

The Contractor shall ensure that the use of explosives and blasting (where required) be undertaken by a specialist contractor or a Contractor with proven track record in the type of work to be performed.

The Contractor may only use explosives for work purposes where the following conditions in place:

- Explosives Regulations to be complied with in all respects.
- Contractor must be in possession of a Blasting Licence
- Blasting permit to be obtained
- Permit to transport explosives to be obtained
- Method statement to be drawn up and approved by professional team
- Municipal authorities may require advance notice of planned use of explosives
- Contractor must notify Provincial Director of Department of Labour on Annexure 2 at least 7 days prior to blasting taking place
- Contractor must have Workman's Compensation and appropriate insurances in place

2.43 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision to keep adequate quantities of appropriate, SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.



2.44 Asbestos – n/a

The Contractor shall ensure that all asbestos work is done only by registered "Asbestos Contractor" as prescribed by the Asbestos Abatement Regulations, 2020. The Contractor shall submit an Asbestos Certificate from Department of Labour which refer to the prescribed requirements. The Contractor shall notify The Client if there are any asbestos materials to be used on site.

"asbestos clearance certificate" means a written document verifying that the regulated asbestos fibre concentration in the air meets the clearance indicator;

"type 1 asbestos work" means:

(a) painting of asbestos cement products in a manner that does not require surface preparation and does not cause the release of asbestos fibres; or

(b) the removal of less than 10 square metres of asbestos cement products or equivalent gutters and piping or asbestos insulating board, where removal work may not be repeated on the same site within a period of six months; and does not require registration as a registered asbestos contractor with the chief inspector;

"type 2 asbestos work" means:

(a) the repair or encapsulation of asbestos cement products in a manner that does not require surface preparation; or

(b) the removal of asbestos cement products or asbestos insulating board; and, requires registration as a type 2 registered asbestos contractor with the chief inspector;

"type 3 asbestos work" means:

(a) the removal, repair or encapsulation of any asbestos and asbestos-containing material; and, requires registration as a type 3 registered asbestos contractor with the chief inspector;

Besides the requirements listed above, should asbestos be identified as a hazard at the workplace, the contractor must, as per AAR 2020, include the following in the health and safety plan/file and must be implemented on site:

- An asbestos risk assessment must be carried out, as far as is reasonably practicable, immediately by a competent person and thereafter at intervals not exceeding 24 months.
- If asbestos-containing materials are identified a written asbestos management plan for the workplace must be prepared by a competent person.
- Train Employees, visitors and persons who may have incidental asbestos exposure to asbestos.
- The Chief Director: Provincial Operations must be notified as per the Annexure 2 when asbestos work will be done, at least seven days prior to commencement of work.
- The contractor may only undertake the type of asbestos work for which they are registered by the chief inspector.
- Must appoint an occupational health and safety representative as contemplated in section 17 of the Act.
- Submit the approved plan of work to the Chief Director: Provincial Operations at least seven days prior to commencement of asbestos work.
- Appoint an asbestos removal supervisor for each asbestos work site.
- Adhere to the repair or removal methodology and associated control measures provided in the plan of work approved for that specific asbestos work.
- Ensure that the employee medical and training records are available on site for inspection and validation.
- Keep employee information for a minimum period of 50 years.
- For type 2 and type 3 asbestos work, ensure that air monitoring is in place.
- All asbestos contractor employees must be put under medical surveillance.
- Close off all asbestos containing or affected areas.
- The contractor must provide the required PPE, washing facilities and decontamination facilities as per the type of asbestos work.



- A document must be obtained from the asbestos disposal site for all asbestos waste removed from the workplace; all asbestos waste is disposed of only on sites specifically designated for this purpose
- When all asbestos is removed an inspection must be done by and approved inspection authority and an asbestos clearance certificate issued.
- Comply with the Prohibitions in regulation 24.

2.45 Pressure Vessels (Including Gas Bottles)

The Contractor shall comply with Pressure Vessel Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where pressure vessels are used, as applicable;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers).
- Under pressure vessels to have the following in place;
 - Service date
 - Seals on valves with no leaks and not broken
 - flash arrestors
 - Should be stored and chained together
 - Oxygen / Acetylene bottles to have clips
 - Signage to be visible
 - Gauges in working condition and be visible
 - Permits for use
 - Pressure equip Regs 6. (1) The user shall ensure that the pressure equipment is operated and maintained within its design and operating parameters.

2.46 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

Safety signage shall be posted up in all areas where fire extinguishers are located.

2.47 Lifting Machinery and Tackle

The Contractor shall ensure that lifting machinery and tackle is inspected before use and on a monthly basis. The Contractor shall have lifting machinery and tackle inspector who will inspect the equipment at intervals required by the Driven Machinery Regulations, taking into account that:

- All lifting machinery and tackle have a safe working load clearly indicated
- Regular inspection and servicing is carried out
- Records are kept of inspections and of service certificates
- Thorough examinations are carried out by competent personnel at the frequencies required by legislation
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use
- Forklift to be inspected every year and lift plan every 2 years
- Load test certificate to be no older than 6 months
- Sufficient props to be used and max weight to be displayed
- Slings to be checked with regard to integrity, chains, serial numbers, checked for tears, cuts links and all other materials
- Hooks to be oiled, not in a fixed position and closed to prevent materials from slipping/falling off
- Lifting equipment must be used for the scope of work carried out



2.48 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.49 General Machinery

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

2.50 Portable Electrical Tools

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.

The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.51 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

2.52 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from onsite activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

2.53 Night Work – n/a

The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.

2.54 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.



2.55 Occupational Health

Exposure of workers to occupational health hazards and risks are quite common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin (pores) e.g. painting or use of thinners.

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.

All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

2.56 Suspended Platforms – n/a

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

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

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

A contractor making use of a suspended platform system must submit a copy of the certificate of system design, including a copy of the operational design calculations, sketches and test results, to the provincial director before commencement of the use of the system and must further indicate the intended type of work that the system will be used for.

A contractor must submit a copy of the certificate of system design as per regulations for every new project.

A contractor must ensure that the outriggers of each suspended platform-

- are constructed of material of adequate strength and have a safety factor of at least four in relation to the load it is to carry; and



- have suspension points provided with stop devices or other effective devices at the outer ends to prevent the displacement of ropes.

A contractor must ensure that-

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

A contractor must ensure that a suspended platform-

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

A contractor must cause-

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

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

A contractor must ensure that the suspended platform supervisor or the suspended platform inspector carries out a daily inspection of all the equipment prior to use, including establishing whether –

- all connection bolts are secure;
- all safety devices are functioning;
- all safety devices are not tampered with or vandalized;



- the total maximum mass load of the platform is not exceeded;
- the occupants in the suspended platform are using body harnesses which have been properly attached;
- there are no visible signs of damage to the equipment; and
- all reported operating problems have been attended to.

A contractor must ensure that all inspection and performance test records are kept on the construction site at all times and made available to an inspector, the Client, the Client's Safety Agent, or any employee upon request.

A contractor must ensure that all employees required to work or to be supported on a suspended platform are –

- medically fit to work safely in a fall risk position or such similar environment by being in possession of a medical certificate of fitness;
- competent in conducting work related to suspended platforms safely;
- trained or received training, which includes at least-
 - how to access and egress the suspended platform safely;
 - how to correctly operate the controls and safety devices of the equipment;
 - information on the dangers related to the misuse of safety devices; and
 - information on the procedures to be followed in the case of-
 - an emergency;
 - the malfunctioning of equipment; and
 - the discovery of a suspected defect in the equipment; and
 - instructions on the proper use of body harnesses.

A contractor must ensure that where the outriggers of a suspended platform are to be moved, only persons trained and under the supervision of the competent person effect such move, within the limitation stipulated in the operational compliance plan, and that the supervisor must carry out an inspection and record the result thereof prior to re-use of the suspended platform.

A contractor must ensure that the suspended platform is properly isolated after use at the end of each working day in such a manner that no part of the suspended platform presents a danger to any person thereafter.

2.57 Material Hoists

A contractor must ensure that every material hoist and its tower have been constructed in accordance with the generally accepted technical standards and are strong enough and free from defects.

A contractor must ensure that the tower of every material hoist is –

- erected on firm foundations and secured to the structure or braced by steel wire guy ropes, and extends to a distance above the highest landing to allow a clear and unobstructed space of at least 900 mm for over travel;
- enclosed on all sides at the bottom, and at all floors where persons are at risk of being struck by moving parts of the hoist, except on the side or sides giving access to the material hoist, with walls or other effective means to a height of at least 2100 mm from the ground or floor level; and
- provided with a door or gate at least 2100mm in height at each landing, and that door or gate must be kept closed except when the platform is at rest at such a landing.

A contractor must cause –

- the platform of every material hoist to be designed in a manner that it safely contains the loads being conveyed and that the combined mass of the platform and the load does not exceed the designed lifting capacity of the hoist;
- the hoisting rope of every material hoist which has a remote winch to be effectively protected from damage by any external cause to the portion of the hoisting rope between the winch and



- the tower of the hoist; and
- every material hoist to be provided with an efficient brake capable of holding the platform with its maximum load in any position when power is not being supplied to the hoisting machinery.

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

A contractor must cause a notice, indicating the maximum mass load which may be carried at any one time and the prohibition of persons from riding on the platform of the material hoist, to be affixed around the base of the tower and at each landing.

A contractor of a material hoist may not require or permit any person to operate a hoist unless the person is competent in the operation of that hoist.

No contractor may require or permit any person to ride on a material hoist.

A contractor must ensure that every material hoist-

- is inspected on daily basis by a competent person appointed in writing by the contractor and such competent person must have the experience pertaining to the erection and maintenance of material hoists or similar machinery;
- inspection contemplated above, includes the determination of the serviceability of the entire material hoist, including guides, ropes and their connections, drums, sheaves or pulleys and all safety devices;
- inspection results are entered and signed in a record book by a competent person, which book must be kept on the premises for that purpose;
- is properly maintained and the maintenance records in this regard are kept on site.

2.58 Explosive Actuated Fastening Device

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

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

A contractor must ensure that-

- only cartridges suited for the relevant explosive actuated fastening device, and the work to be performed, are used;
- an explosive actuated fastening device is cleaned and examined daily before use and as often as may be necessary for its safe operation by a competent person who has been appointed for that purpose;
- the safety devices of an explosive actuated fastening device are in good working order prior to use;
- when not in use, an explosive actuated fastening device and its cartridges are locked up in a safe place, which is inaccessible to unauthorized persons;
- an explosive actuated fastening device is not stored in a loaded condition;
- a warning notice is displayed in a conspicuous manner in the immediate vicinity wherever an explosive actuated fastening device is used; and
- the issuing and collection of cartridges and nails or studs of an explosive actuated fastening device



are-

- controlled and done in writing by a person having been appointed in writing for that purpose; and
- recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.

2.59 Confined Spaces

Confined space work must be closely monitored by a competent person appointed by the contractor, to include, but not restricted to, ensuring that the confined space is sufficiently ventilated prior to entry. Oxygen levels to be tested in confined space to ensure that it is safe for entry. Permit system to be in place to declare confined space safe for entry prior to entry. PPE must be worn (such as proper masks) if air supply is insufficient or not of sufficient quality.

Sufficient training must take place in use of all confined space monitoring and access equipment prior to any works commencing in such confined space. It is strongly recommended that a tripod and winch system be in place to afford easy access and egress and for emergency evacuation from the confined space (manholes and chambers). Please also refer to GSR5 on safety requirements for Work in Confined Spaces.

General safety Regulations 5.

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

(2) Where the provisions of sub regulation (1) cannot be complied with the employer or user of machinery, as the case may be, shall take steps to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when-- (a) subject to the provisions of sub regulation (3), the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and (b) the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.

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

(a) the provisions of sub regulation (2) (b) are complied with;

(b) any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);

(c) at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and

(d) effective apparatus for breathing and resuscitation of a type approved by the chief inspector is available immediately outside the confined space.

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

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



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

2.60 Alcohol and drugs (GSR 2)

1. A contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a site.
2. No employee shall be under the influence of or have in his or her possession or partake of or offer any other person intoxicating liquor or drugs.
3. An employer or a user, as the case may be, shall, in the case where a person is taking medicines, only allow such person to perform duties at the site if the side effects of such medicine do not constitute a threat to the health or safety of the person concerned or other persons at such site.

2.61 COVID-19 (PLEASE NOTE THAT THIS SECTION IS CONSTANTLY UNDER REVIEW)

This section is based on the requirements of Government Gazette No 43257 dated 29th April 2020, and the latest Disaster Management Act 2002.

The importance of the management and control of this virus by contractors on site is paramount.

For this reason no work is permitted on site until the contractor has submitted proposals in their safety plan to the safety agent and professional team on how the risk of COVID-19 transmission on site will be managed by the contractor (monitoring and implementation of control measures through administrative, physical and other control measure).

DEFINITIONS (Disaster management Act of 2002)

'adequate space' means not more than one person per one and a half metres of floor space;

'Alert Level' means the determination made under sub regulation 3(2);

'clinical case' means a patient that presents with clinical signs and symptoms of COVID-19;

'COVID -19' means the Novel Coronavirus (2019- nCov2) which is an infectious disease caused by a virus that has previously not been scientifically identified in humans, which emerged during 2019 and was declared a global pandemic by the WHO in 2020;

'Criminal Procedure Act' means the Criminal Procedure Act, 1977 (Act No 51 of 1977);

'enforcement officer' includes a member of the South African Police Service, the South African National Defence Force. metro police. traffic officers, immigration inspectors; and a peace officer as defined in section 1 of the Criminal Procedure Act;

'essential services' means the services listed in Annexure D;

'face mask' means a cloth face mask or homemade item that covers the nose and mouth, or another appropriate item to cover the nose and mouth;

'gathering' means any assembly, concourse or procession in or on -

- (a) any public road, as defined in the National Road Traffic Act, 1996 (Act No. 93 of 1996); or
- (b) any other building, place or premises. including wholly or partly in the open air, and



including, but not limited to, any premises or place used for any sporting, entertainment, funeral, recreational, religious, or cultural purposes; but excludes a workplace and a place of residence for those persons ordinarily residing at the residence;

'health protocols' means the COVID-19 health protocols determined by the Director General of Health;

'head of an institution' means the accounting officer of a public institution and the chief executive officer or the equivalent of a chief executive officer of a private institution;

'institution' means any public or private institution, including a sole practitioner and any other business owned and operated by a single person, that is engaged in the supply or distribution of a good or service as set out in the Table 1, or which regulates such supply or distribution, including professional regulatory bodies designated in directions made in terms of regulation 4 of the Regulations;

'isolation' means separating a sick individual with a contagious disease from healthy individuals that are not infected with such disease in a manner that aims to prevent the spreading of infection or contamination;

'national state of disaster' means the national state of disaster declared by Government Notice No. R. 313 of 15 March 2020;

'quarantine' means the restriction of activities or separation of a person, who was or may potentially have been exposed, to COVID-19 and who could potentially spread the disease to other non -exposed persons, to prevent the possible spread of infection or contamination to healthy individuals;

'the Act' means the Disaster Management Act, 2002 (Act No. 57 of 2002); and

'WHO' means the World Health Organisation.

Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several Coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered Coronavirus causes Coronavirus disease COVID-19.

COVID 19 is a viral pandemic that has and is causing a great deal of damage to human health, countries' economies and health systems and has led to lock downs, work stoppages and restriction of movement that threatens the existence of many jobs, as well as the way we conduct our normal working and social lives.

In response to the pandemic the government has passed legislation and guidance for employers and employees in the work environment.

People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets. This is why it is important to stay more than one meter away from a person who is sick.

Please refer to Annexure A for details on the criteria that must be considered in the contractor's safety plan response.



2.62 General Practices when Working at Heights

- No Homemade structures or ladders will be permitted on the project.
- Trestle tables are not to be fully extended and must be fully boarded, no drums to be used.
- Surroundings to be clear of rubble.
- Fall protection, fall prevention, and fall rescue plans to be in place and communicated to site employees.
- Ladders to be structurally sound and not broken and in accordance to GSR 13A.
- Only competent persons may be allowed to work at heights
- Correct personal protective equipment to be used (safety harness and lanyard) and edge protection / life lines to be used.
- Anchor points to be in place and determined by an engineer. Anchor points must be pull tested prior to use.
- GSR (6) 6. No employer shall require or permit any person to work in an elevated position and no person shall work in an elevated position, unless such work is performed safely from a ladder or scaffolding, or from a position where such person has been made as safe as if they were working from scaffolding.
- Construction regulation 10 of 2014 to be implemented when working at heights and to prevent any person from falling from heights.
- Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.63 Traffic Accommodation

All traffic signs must be displayed as per the traffic management plan drawings.

Size of signs used must be as per the traffic management drawings and all signs to be visible and in good condition.

- Traffic management Plan issued per Road and Traffic act (chapter 13). Must be approved by the Traffic Chief and professional team.
- Plans for signage deployment must be in order and must be placed correctly.
- Traffic management plan must be submitted and must be suitable for the tasks being performed.
- Traffic plan must be implemented and controlled by the sites Traffic safety officer and flag persons.
- Jersey barriers, where used, to be linked.
- No signs to be obstructed.
- STOP/GO structures must be protected against being struck by vehicles (e.g. new jersey barriers)
- Road marking buggies/vehicles must be protected by escort vehicles front and rear.
- Displayed traffic signs must be maintained in a daily register to be checked morning and evenings after works have been finalised.

Night work:

- Signage, traffic accommodation and personnel must be visible (reflective / illuminated).
- Certified, competent traffic officer and flag persons to be used during night operations.

Traffic Safety Officer must check signage daily and Engineer must sign it off daily.

2.64 Ventilation and Lighting in the Work Place

Every employer shall cause every workplace in his undertaking to be lighted in accordance with the illuminance values specified in the Schedule to the General Safety Regulations:



Provided that where specialised lighting is necessary for the performance of any particular type of work, irrespective of whether that type of work is listed in the Schedule or not, the employer of those employees who perform such work shall ensure that such specialised lighting is available to and is used by such employees.

The Contractor must ensure that:

- the average illuminance at any floor level in a workplace within five meters of a task is not less than one fifth of the average illuminance on that task;
- glare in any workplace is reduced to a level that does not impair vision;
- lighting on rotating machinery in such that the hazard of stroboscopic effects is eliminated; and
- luminaires and lamps are kept clean and, when defective, are replaced or repaired forthwith.

With a view to the emergency evacuation of indoor workplaces without natural lighting or in which persons habitually work at night, every employer shall, in such workplaces, provide emergency sources of lighting which are such that, when activated, an illuminance of not less than 0.3 lux is obtained at floor level to enable employees to evacuate such workplaces: Provided that where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance shall be not less than 20 lux.

The contractor must ensure that the emergency sources of lighting prescribed above:

- are capable of being activated within 15 seconds of the failure of the lighting prescribed by subregulation (1);
- will last long enough to ensure the safe evacuation of all indoor workplaces;
- are kept in good working order and tested for efficient operation at intervals of not more than three months; and
- where directional luminaires are installed, these are mounted at a height of not less than two meters above floor level and are not aimed between 10° above and 45° below the horizontal line on which they are installed.

The contractor must ensure that all rooms, stairways, passageways, gangways, basements, and other places where danger may exist through lack of natural light, to be lighted such that it will be safe.

The contractor must ensure that every workplace in his undertaking is ventilated either by natural or mechanical means in such a way that –

- the air breathed by employees does not endanger their safety;
- the time-weighted average concentration of carbon dioxide therein, taken over an eight-hour period, does not exceed one half per cent by volume of air;
- the carbon dioxide content thereof does not at any time exceed three per cent by volume of air;
- the prescribed exposure limits for airborne substances therein are not exceeded; and
- the concentration therein of any explosive or flammable gas, vapour or dust does not exceed the lower explosive limit of that gas, vapour, or dust.

2.65 Nuclear Density Gauge (Troxler)

The use of a Troxler on site must be in line with the SANS 3001 of March 2014. The SANS consists of 5 sections

The in-situ density of road construction materials is only determined in civil engineering using indirect methods such as the nuclear density gauge and sand replacement methods.

This method forms part of a set of methods used to operate nuclear gauges, and includes the following:

- a) administration, handling, and maintenance (see SANS 3001-NG1);
- b) validation of standard calibration blocks (see SANS 3001-NG2);
- c) calibration of a nuclear gauge (see SANS 3001-NG3);



- d) verification of a nuclear gauge (see SANS 3001-NG4):
- e) in situ density determination using a nuclear gauge (see SANS 3001-NG5)

When used Troxlers must be:

- Stored in a dedicated, lockable area and must have a warning signage displayed.
- Must only be transported in a dedicated vehicle with the required signage displayed and by an authorised employee that has been appointed in writing.
- Must have a Troxler Calibration Certificate in place.
- Must have a Troxler Technician Appointment on file and signed and proof of competency within the safety file.

2.66 Ergonomics Regulation of 2019

"competent person" in relation to ergonomics, means a person who– (a) has in respect of the work or task to be performed the required knowledge, training and experience in ergonomics and, where applicable, qualifications specific to ergonomics: provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and (b) is familiar with the Act and the applicable regulations made under the Act;

"ergonomic risk" means a characteristic or action in the workplace, workplace conditions, or a combination thereof that may impair overall system performance and human well-being;

"ergonomic risk assessment" means a programme, process, or investigation to identify, analyse, valuate and prioritise any risk from exposure to ergonomic risks associated with the workplace;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimise human well-being and overall system performance;

The ergonomics regulations will apply to any employer or self-employed person who carries out work at the workplace who may expose any person to an ergonomic risk in the work place and any designer, manufacturer, importer or supplier of machinery, plant, or work systems for the work place.

An employer must, before the commencement of any work that may expose employees to ergonomic risks, have an ergonomic risk assessment performed by a competent person.

The ergonomic risk assessment must be done at intervals not exceeding two years and must include the following;

- a complete hazard identification and all persons who may be affected by the ergonomic risk.
- how employees may be affected by the ergonomic risks;
- the analysis and evaluation of the ergonomic risks;
- the prioritisation of ergonomic risks.

An employer must review the relevant ergonomic risk assessment if:

- such assessment is no longer valid;
- control measures are no longer effective;
- technological or scientific advances allow for more effective control methods;
- there has been a change in –
 - the work methods;
 - the type of work carried out; or
 - the type of equipment used to control the exposure; and



- an incident occurs or medical surveillance reveals an adverse health effect, where ergonomic risks are identified as a contributing factor.

An employer must ensure that an employee is placed under medical surveillance, which is overseen by an occupational medicine practitioner, if–

- the ergonomic risk assessment referred to in regulation 6 indicates the need for the employee to be placed under medical surveillance; or
- an occupational health practitioner recommends that relevant employees must be under Medical surveillance, in which case the employer may call upon an occupational medicine practitioner to ratify the appropriateness of such recommendation.

An employer must ensure that the medical surveillance consists of–

- in the case of a new employee, an initial health examination before the employee commences employment or within 30 days of commencement of such employment;
- a periodic health examination informed by the ergonomic risk assessment, at intervals specified by an occupational medicine practitioner, but not exceeding two years; and
- an exit health examination informed by the ergonomic risk assessment.

♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦

Both the Client and the Contractor have a duty in terms of health and safety legislation to do all that is reasonably practicable to make members of the public and others being affected by the construction processes aware of possible risks and put preventative measures in place to mitigate the risks. The public and/or visitors shall go through a brief health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks.



OTHER HEALTH AND SAFETY SPECIFICATION REQUIREMENTS

The contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least weekly and before hazardous work is carried out	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by the employer (Contractor) covering: a) Health and Safety Representative Checklist b) Safety report from Safety Officer and Safety Agent
Health and Safety Reports	Monthly	Report covering: a) Incidents/Accidents and Investigations b) Non-conformance c) Health and Safety Training d) HIRA Updates e) Internal and External Audits
General Inspections	As per Health and Safety Specification and OHSA	Report on Health and Safety Specification and OHSA compliance: a) Scaffolding b) Lifting Machinery c) Excavation
General Inspections	Monthly	Covering: a) Firefighting Equipment b) Portable Electrical Equipment c) Ladders
Record keeping	Ongoing	Covering: a) General complaints b) Fines c) General incidents d) MSDS e) Surveillance Medicals f) Inspection Register g) Dept of Labour Notices
Permits	Before commencement with certain activities	As stipulated by the Health and Safety Specification and the OHSA / Construction Regulations

Key:

OHSA – Occupational Health and Safety Act, 1993



ANNEXURE A – REQUIREMENTS FOR THE SAFETY PLAN ASSESSMENT (INCLUDING COVID 19 REQUIREMENTS)

The Contractor must note that the information below is pertinent to the compilation of their safety plan response to this site-specific safety specification and it would be preferred if the Safety Plan is written in the order of the assessment documented below.

No	Item	Notes
1	Project Directory	Please state details of Project Client, Project Manager/Principal Agent, Safety Agent, Consulting Engineer, etc. (Name, address, contact details).
2	Contractors Directory	Please indicate if you will be using Contractors on this project, if yes, include their details, trade, and FEM details.
3	Other Parties Directory	Please indicate contact details for any services applicable (electricity, water, etc.) as well as Department of Labour and Emergency Services.
4	Project Safety Statement	The Project Safety Statement must be included in the Safety Plan.
5	Health and Safety standards for the project (OHS Act, construction regulations, basic conditions of employment, etc.)	Health and Safety standards must be included in the Safety Plan.
6	Project Particulars	Scope of works must be included in the Safety Plan. This is critical.
7	Existing environment – Structures and Surroundings, Services (Electrical, Water, Sewerage, etc.), Traffic Arrangements, Parking, Access to Site, Storage of Plant and Materials	Please include these items in the plan. The items must be Site Specific, the location of services and services that will be affected must be mentioned.
8	Management Structure for safety on the Project	A structured organogram with names of the responsible people must be included.
9	Appointed Persons, Supervision	The required appointments must be identified. A list of the appointed persons must be included in the Safety Plan.
10	Security Procedures	Please indicate if a security company will be appointed and include the contact information in the Safety Plan.
11	Registers list and inspection frequency	A list of the Inspection Registers that will be on file must be included in the Safety Plan.
12	Design Co-ordination	Please indicate your procedure for implementation of design changes by designer on the project, and the procedures for liaison and implementation of temporary works design on the project.
13	Contractor Co-ordination	Mention must be made of how Contractors will be co-ordinated on site to ensure that they work together and not adversely affected health and safety.



No	Item	Notes
14	Housekeeping, stacking and storage	Housekeeping policies and procedures must be included in the Safety Plan.
15	Waste Disposal Arrangements	Waste disposal arrangements procedures must be included in the Safety Plan.
16	Noise and dust control	Please indicate if any noisy operations (more than 85 decibels) will be carried out and what measures will be used to reduce noise exposure to workforce.
17	Training Requirements	Training requirements must be identified and recorded.
18	Plant and Equipment	A list of plant and equipment to be used on site must be included in the Safety Plan.
19	Safety Monitoring Arrangements	The name, contact details and SACPCMP registration status of the Safety Officer must be included in the Safety Plan. State how often the Safety officer will be on site (note safety specification requirement in section 1.7).
20	Information for Contractors	State how information will be given to Contractors on site.
21	Consultation/communication arrangements with Employees	State how information will be given to employees e.g. notice board.
22	Selection of Contractors Procedures	Principal contractor must state what health and safety procedures they will use to assess the competence and resources of their contractors on site.
23	Activities with risk to Health and Safety (Risk Assessment)	A Baseline Risk Assessment must be included in the Safety Plan, it must address the Risks identified in the Safety Specification as well as the risk of any other hazards that the Principal Contractor is aware of that are relevant to the site.
24	Hazardous Substances	Must be listed in the Safety Plan and addressed in the Risk Assessment.
25	First Aid and Medical Procedures	Please indicate name of first aider, position of first aid box, location of nearest medical facility and emergency numbers.
26	Fire and Emergency Procedures	List of emergency telephone numbers must be drawn up and included in the Safety Plan. The position of Fire Extinguishers, Assembly Point location, fire drill frequencies, numbers of fire marshals, etc.
27	Accident and Incident Reporting and investigation	State the Accident and Incident Reporting and investigation procedures of your company.
28	Welfare and Site Facilities	Elaborate on toilets and eating areas, water provision, COVID-19 ablution provision, how will workers be protected during wet weather conditions etc.
29	Site Rules	The Site Rules must be included in the Safety Plan.
30	Personal Protective Equipment	The necessity must be identified by Risk Assessments, the required PPE for site risks and COVID-19 control measures.
31	Health & Safety File arrangements	Please indicate arrangements for the return of the Health and Safety File to the safety agent at the end of the project.



No	Item	Notes
32	Method Statements/Safe System of Works	A list of Method Statements/Safe System of Works must be included in Safety Plan for all High-risk activities. PLEASE NOTE THAT THIS IS PARTICULARLY RELEVANT FOR COVID-19. NO WORK MAY COMMENCE UNLESS COVID-19 RISKS AND CONTROL MEASURES HAVE BEEN APPROVED BY THE PROFESSIONAL TEAM. REFER TO SECTION 2.61 OF THIS SAFETY SPECIFICATION.
33	Permits and wayleaves	List of activities that Principal Contractor anticipates will require permits and wayleaves (including those stated in the safety specification) to be included.
34	Fall Prevention and Protection Plan and Fall Rescue Plan	A copy of the Fall Prevention and Protection Plan, fall rescue plan and fall risk assessment must be included in the Safety Plan.
35	Demolition method statement	A copy of the Demolition Method Statement must be included in the Safety Plan.
36	Confined spaces	The Principal Contractors' procedures for managing access, egress and work in confined spaces must be specified in the Safety Plan. Includes permit procedures, air monitoring, PPE, etc.
37	Safety Representatives and Safety Committees	When a project has more than 20 employees a designated employee must be chosen by the labourers to represent them. A safety committee must be established if 2 or more safety representatives are appointed. Please note Safety Specification requirements regarding this section (section 2.12).
38	Have the significant hazards from the safety specification been addressed?	See section 1.9 of the Specifications and ensure practical measures have been detailed in the safety plan.
39	Safety File - Safety Policies in File and Signed by 16(1) CEO.	Safety Policies must be signed and explained to employees.
40	Safety File - A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.	A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.
41	Safety File - Signed copy of the 37.2 Mandatary Agreement	A 37.2 Mandatary Agreement needs to be signed between the Client and the Principal Contractor.
42	Safety File - Appointment letter from Client (as well as 5.1.K)	The Client must appoint the Principal Contractor in writing.
43	Safety File – Notification / Permit	A copy of the Annexure 2 Notification (and proof of submission) to Department of Labour must be available. This can be in the form of a Department stamp, email, or copy of Construction Work Permit.



CONTROL MEASURES THAT MUST BE INCLUDED FOR SAFETY PLAN SUBMISSION PURPOSES:

Issues that must be included by the contractor in their COVID-19 safety plan response should include arrangements for the following (please note that reference to contractors' employees / staff / workers / personnel on site must include control of their (sub)contractors, visitors and suppliers):

Workplace Plan - A plan must be developed by the contractor for the phased in return of employees to site. Please refer to the latest regulations and amendments, all persons who are able to work from home should do so.

Coordination on Site Relating to COVID-19 matters - The contractor must appoint a **manager** to address employees concerns and keep them informed re COVID-19.

Additionally, the contractor must **designate a COVID-19 compliance officer** (required of all industries, businesses, entities, both private and in the public sector). This compliance officer is responsible for overseeing the following:

- implementation of the workplace plan; and adherence to the standards of hygiene and health protocols relating to COVID-19 at the workplace;
- developing a plan for the phased in return of their employees to the workplace, prior to reopening the workplace for business, which plan must correspond with Annexure E of the Disaster Management Act 2002 (as amended April 2020) and be retained for inspection and contain the following information:
 - which employees are permitted to work;
 - what the plans for the phased-in return of their employees to the workplace are;
 - what health protocols are in place to protect employees from COVID-19; and
 - the details of the COVID-19 compliance officer;
 - phase in the return of their employees to work to manage the return of employees from other provinces, metropolitan and district areas; and
 - develop measures to ensure that the workplace meets the standards of health protocols, adequate space for employees and social distancing measures for the public and service providers, as required.

Transportation to Site - Procedures for Transportation of Workers to Site – employees should be advised that if using transport, passengers must wear a cloth mask to be allowed entry into the vehicle. Hand sanitisers must be made available, and all passengers must sanitise their hands before entering. Public transport vehicles must be sanitised on a daily basis. Please note that the government mandated limit on passengers per vehicle must be strictly adhered to.

Site access - Entry to site may only be through pre-arranged security controlled access points. Contractor must detail how will members of public be prevented from accessing site (risk of cross contamination between persons working on site and members of public).

Provision of Visitors Book for signing in and out of site. Records of all personnel entering site and their contact details must be kept.

Screening on Site - Contractor to advise how will personnel on site be screened on a daily basis for symptoms of COVID-19, including a symptom check as well as temperature assessment (digital thermometer). The contractor must describe their procedure for employees on site, suspected of having COVID-19 symptoms, refusing to undergo **medical** examination, prophylaxis, treatment, isolation, and quarantine. Sites with more than 500 employees must have testing facilities.

Risk assessment and safety procedure - Contractor must provide a written policy concerning the protection of it staff from COVID-19. Contractor must compile a COVID-19 risk assessment and safety procedures for the site. How will it be communicated to all on site and records kept thereof. The Risk



Assessments must include the identification of exposure levels, identification of “high contact” activities, the identification of vulnerable workers and special measures for their protection, including protection against unfair discrimination or victimization.

Safety Signage and Hotline Number - Contractor to implement placement of COVID-19 safety signage and hotline number at site entrance and on site, warning of hazards and advising control measures (see samples in Annexure to this document). Please note that signage must be representative of the local languages.

Communication Procedures - Contractor to describe comprehensive induction and toolbox talk procedures to include COVID-19. Toolbox talks should be conducted weekly on COVID-19 control measures and risks on site, include personal hygiene - manner of controlling coughing and sneezing on site - in elbow.

Emergency Procedure - Contractor must describe communication of COVID-19 symptoms and protocol that must be followed if person demonstrates symptoms, or is thought to have COVID-19 - symptoms of COVID-19 include cough, sore throat, shortness of breath or fever/chills (or $\geq 38^{\circ}\text{C}$ measured temperature), redness of eyes, also additional symptoms – body aches, loss of smell or loss of taste, nausea, vomiting, diarrhoea, fatigue, weakness or tiredness. Contractor must advise personnel on site of the symptom reporting procedure to site management of COVID-19 symptoms, and referral protocol for screening or testing if showing symptoms.

Emergency COVID-19 protocol that must be put in place by Principal Contractor must include:

- Sick workers may not enter workplace.
- If sick worker already on site then worker must be isolated in designated area for isolation on site, provided with FFP1 surgical mask and transported for self-isolation or for medical examination or testing at identified testing site.
- Worker placed on sick leave.
- On receiving their results, the employee and/or health professional supporting the employee should notify their workplace so that the employee is managed accordingly. The workplace should proactively take steps to obtain this information to avoid any delays in reporting.
- Assess the risk of transmission, disinfect area and workers workstation, refer exposed workers for screening, etc.
- Lodge claim with Workman's Compensation if infection occupationally acquired.
- Worker may only return to work after undergoing a medical evaluation confirming worker has tested negative for COVID-19.
- Worker must be closely monitored for symptoms on return to work.
- If worker has been diagnosed with COVID-19 the employer must notify Dept of Health and Dept of Employment and Labour

NOTE THAT: personnel on site, or presenting themselves to site who appear sick, or have symptoms associated with COVID-19 may not be allowed on site.

Welfare and Washing Facilities, Sanitising and Disinfection - Contractor must describe provision of soap and clean running water and sanitisers at site entrance and at other locations on site. Correct manner of washing / disinfecting hands, 20 second rule. Use of paper towels only. Disinfection of work surfaces and equipment control procedures required - carried out before work begins, regularly during day and after work ends. Toilets, common areas, door handles, shared electronic equipment and any other shared equipment must be regularly cleaned and disinfected, biometric systems disabled or made COVID-19 safe.

Hand sanitiser must contain 70% alcohol.

Employees working away from home should be provided with hand sanitiser by the employer.



COVID-19 PPE on Site - Contractor must describe controls for wearing of PPE on site, including wearing of cloth masks on site - people working and visiting site must be instructed on the correct way of wearing cloth masks, procedure for maintenance and replacement of cloth masks. Surgical masks and N95 masks should only be worn by frontline health workers, not site staff. Note that some surgical masks should be kept on site to give to persons exhibiting COVID-19 symptoms prior to being taken away for testing.

Employer is required to provide each employee with at least 2 cloth masks and must make appropriate arrangements for washing, drying and ironing of cloth masks.

Supervision and Monitoring on Site - Monitoring systems must be in place by Contractor to ensure compliance with safety protocols and identify infections among employees - supervision monitoring and enforcement - how will it be done by the contractor?

Ventilation on Site - How will ventilation and air quality be made safe on site.

Waste Management - Sufficient refuse bins must be on site for disposal of tissues, used PPE. Procedure for safe removal of contents of bins; used PPE, other detritus should be made in contractors safety plan.

Social Distancing Measures - Contractor must describe, so far as practicable how can numbers of workers be minimised on site at any one time (e.g.: through staff rotation, staggered working hours, shift systems, remote working arrangements or similar to achieve social distancing? (1.5m). Note that contractor must minimise contact between workers themselves and workers and public.

Depending on what is reasonably practicable, site must be arranged so that there is distance of at least 1.5m between workers and members of public or put physical barriers in place or provide workers with face shields or visors.

COVID-19 Investigation procedure - Contractor must describe how will they investigate the cause of COVID-19 infection (including control failure and risk assessment review, checking of PPE requirements, admin support to contact tracing implemented by Dept of Health).

Important notes:

If more than 500 employees in contractors employ the employer must submit this risk assessment and written policy re health and safety of employees from COVID-19 to Safety Committee and Department of Employment and Labour.

Monitoring by the Safety Agent will be strict - noncompliance with COVID-19 control measures will be reported immediately to the principal contractor for action purposes. If necessary, transgressors will be removed from site for re-induction, or a recommendation for permanent barring from site will be made.

As this is an ongoing medical crisis it is likely that control measures to prevent the spread of the virus will be updated by the government on a regular basis. Hence the measures in this section of the safety specification will be reviewed on an ongoing basis, as we receive updated information from the government.



ANNEXURE B – LEGAL APPOINTMENTS

The contractor shall make the following appointments, as required:

Chief Executive Officer (OSH Act 16(1))
Contract Director/Manager (OSH Act 16(2))
Construction Manager (CR 8(1))
Construction Supervisor (CR 8(7))
Assistant Construction Supervisor (CR 8(8))
Construction Safety Officer (CR 8(5))
Traffic Safety Officer
Safety Representative (where > 20 employees on site)
Temporary work Designer (CR 12(1))
Temporary work Supervisor (CR12(2))
Construction risk assessor (CR 9(1))
Excavation Supervisor (CR13(1)(a))
Demolition Supervisor (CR14(1))
Scaffold Supervisor (CR16(1))
Suspended Platform Supervisor (CR17(1))
Material Hoist Inspector (CR19(8)(a))
Material Hoist Operator (CR19(6))
Bulk Mixing Plant Supervisor (CR20(1))
Bulk Mixing Plant Operator (CR20(2))
Controller of Explosive Actuated Fastening Devices Nails, Cartridges or Studs Issue and Collection (CR21(2)(g)(1))
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
Controller of Temporary Electrical Installations (CR24(c))
Stacking Supervisor (CR28(a))
Fire Extinguishing Equipment Inspector (CR29(h))
Fall Protection Plan Developer (CR 10(1)(a))
Incident Investigator (OSH Act 9(2))
Competent Person – Confined Spaces (GAR 5(1))
COVID 19 – Compliance Officer and COVID 19 – Manager (to address employees concerns and keep them informed re COVID-19)



ANNEXURE C - BASELINE RISK ASSESSMENT FOR PROJECT

Irrespective of the risk presented on site, it will be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

	HAZARD	RISK	MINIMUM CONTROL MEASURES
1.	Confined Spaces	Suffocation Fumes	- Ensure that confined space is sufficiently ventilated - Wear personal protective equipment such as proper masks if air supply insufficient or not of sufficient quality - Test oxygen levels in confined space to ensure that is safe for entry - Ensure that emergency procedures in place
2.	Electrical Commissioning	Electric shock	- Personnel to comply with permits to work issued by Client - Personal protective equipment to be worn by employees to prevent electric shock - First aid treatment to be readily available - Only competent and trained persons may decommission or commission electrical equipment
3.	Electric Tools and Electrical Installations	Electric shock Fire	- Electric tools and installations to be in good condition - Inspect electric tools before use - Do not use electric tools in wet/damp conditions - Use personal protective equipment such as insulated gloves - Electrical installations register to be maintained, inspected by competent person
4.	Excavations (Working in and around)	Toxic fumes Collapse of trench walls/trapping Falling into excavation Collapse of adjacent structures	- Deep excavations / monitor air for toxic fumes - Prevent collapse by battering back sides to a safe angle or install temporary support - Protect vehicles from falling into excavations – provide barriers, signage, etc. as necessary - Beware of undermining of other structures (e.g. buildings, scaffolds) - Record excavation inspections by competent person on daily basis - Provide suitable means of access/egress in case of emergency. - Excavations formed by explosives must be accompanied by method statement approved by Client
5.	Fire	Injuries to workers, pedestrians, residents, road users, damage to property through fire	- No littering on site which could become fire hazard, maintain site in clean condition. - No fires to be lit on site. Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices
6.	Flammable Liquids and Gases (Use of)	Fire Explosion	- No littering on site which could become fire hazard, maintain site in clean condition. - Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices - Equipment must be in good condition, maintained - Personnel using substances must be trained in safe use and risks



	HAZARD	RISK	MINIMUM CONTROL MEASURES
7.	Fragile Materials	Persons or items falling through fragile materials	- All fragile materials to be identified and protected prior to work commencing. - Protection to include either covering the fragile materials or excluding activity. - Any coverings to be secured in place - The location of the fragile materials to be indicated by signage
8.	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	- Ensure: - Tool is correct for job - Tool is in good order and suitably sharp - Personnel must be competent/instructed in tool usage and tool safely - Lighting is sufficient - Access is safe, working platform is secure, leading edge is guarded - Operative is wearing all necessary PPE
9.	Hazardous Substances	Injuries to workers through use of hazardous substances, e.g. injuries to eyes, skin, etc.	- Use substances in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc.) - Know what First Aid measures are - Have welfare facilities available for washing of hands, etc.
10.	Hot Works	Burns to eyes or other parts of the body	- Personal Protective Equipment to include eye, skin, and hearing protection - Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. Dust can also be a problem and forced ventilation may be required.
11.	Lifting Operations	Falling material Crushing by materials Hand injuries to the slinger Toppling crane	- Check test certificate - Check examination certificate - Check inspection have been carried out - Check certificates for lifting equipment (chains, slings, shackles, etc.) - Ensure lifting gear is rated to carry load (SWL) - Ensure materials being lifted are properly packaged and slung. - Be aware that there should be a minimum clearance of 600mm between any slewing parts of a crane and any fixed installation to prevent being trapped. - Access to the work area during lifting operations is to be restricted to those involved with and trained in the work in hand. Do not allow members of the public to gain access to the area. - Only trained banksmen to be used. - The crane driver and the banksmen are to ensure that the signals given are clearly understood.
12.	Manhole Rings and Pipes Storage	Rolling of rings Collapse of pipes Crushing of persons Stock pile collapse	- Manhole rings must be stored flat to prevent them being rolled. - Banks of pipe stock piles are not to be broken until they are ready for use. - Personnel must stand to the side when breaking bands so as not to be hit by falling pipes. - Pipes must be wedged to prevent rolling



	HAZARD	RISK	MINIMUM CONTROL MEASURES
13.	Manual Handling of General Items	Muscular skeletal injuries if the load is too heavy or awkward Operative falling/ tripping Contamination from the substance being carried Fall of material being carried	- Personnel should be aware of safe manual handling techniques - Personnel to wear Personal Protective Equipment when carrying items, e.g. safety footwear and gloves. - Ensure good housekeeping against tripping/fall hazards. - Operative to get assistance if load too heavy- team lift if necessary. - Utilise mechanical lifting and carrying aids where possible. - Personnel to ensure access equipment, ladders will take weight of operative and load being carried. - Personnel to ensure item being carried is properly bonded or is not be liable to break apart whilst being manually handled.
14.	Members of Public – Protection of	Injury to member of public and road users from site works	- Barriers and signage to be in place - Workers must warn away any members of public from the works - Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public - Traffic turning into site – traffic management and signage as required. - Signage to be on road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible - Refer to plant risk assessment for details on plant safety precautions - NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PRIVATE HOMEOWNERS MUST BE AGREED.
15.	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	- Wear respiratory and hearing protection - Dampen down and minimise dust where possible.
16.	Overhead Services (Working near)	Contact with live services causing injury to personnel Damage caused to services	- Maintain safe clearance levels - Establish presence of any services via proper walk through survey of site and/or means of service drawings - Wear personal protective clothing - Ensure height of plant/vehicles does not compromise or exceed clearance levels for overhead services - Obtain information on clearance levels from service provider
17.	Plant or Vehicles and Equipment Operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	- Implement traffic protection measures - Trained and competent operators must be used - Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition. - Medical certificates of fitness required for construction plant. - Crossing of road by construction vehicles or machines must be limited to the practical minimum - Plant and vehicles must be fitted with amber rotating beacons and reverse alarms. - Wear appropriate protective clothing/equipment, e.g. goggles, gloves, ear defenders, etc. as appropriate.



	HAZARD	RISK	MINIMUM CONTROL MEASURES
18.	Site Strip	Overturning Vehicles	- Follow standard safety procedures - Only use trained and competent personnel - Ensure there is a suitable and safe means of access and egress - Ensure banksman used when required - Ensure all personnel wear suitable reflector vests as required
19.	Snakes	Snake bite	- Qualified first aider required for site who can treat snakebite - Snake bite kit to be on hand - Check area before working - Find out nearest hospital and get emergency telephone numbers.
20.	Steel Erection	Falls from height Falling components Contact injuries from falling lifting equipment	- Adhere to all general precautions for working at height (See risk assessment below) - Barrier off / exclude area below work - All lifting appliances to be examined and inspected - Inspection register in place and up to date - All personnel to be trained and competent and wear clipped on safety harnessed when working at height - Ensure that lifting equipment (slings, chains, shackles) test certificates are current and on site. - Competent persons only to connect loads and direct plant
21.	Steel Fixing	Back injuries caused by manual handling Eye injuries from tie wire Trips / falls Falling form height	- PPE must include safety boots and goggles - Manual handling training may be required - Care to be taken when working near overhead lines - Use only trained personnel - Provide safe means of access - Maintain and regularly inspect all lifting appliances and equipment - Cap starter bars to prevent injuries where feasible - Construct scaffold walk ways to cross reinforcing mesh, as required
22.	Temporary Works – shoring, scaffold, falsework, formwork	Collapse of form work	- Wear personal protective equipment such as gloves and goggles - Formwork must be built by trained person and also be inspected by competent person and results entered into register on site
23.	Underground Services	Striking of buried services	- Make all necessary enquiries to establish what services are in the area. Consult drawings and advice from service provider (e.g. Municipality or ESKOM) when planning work. - Assume all service to be live (Unless confirmation is received to confirm that services are isolated or otherwise made safe). Do not work near live services without authorisation from site management. - Comply with the requirements of the safe system of work for underground services. - Where available, locate services with a locator - Hand dig around services



	HAZARD	RISK	MINIMUM CONTROL MEASURES
24.	Working at Height	Personnel falling from height Falling debris Those beneath being injured	• All access equipment is properly constructed (inspections record must be maintained) • Only trained personnel construct, dismantle or control the access equipment • All access equipment must have full toe boards and guardrails - comply with SANS 10085 on erection, use and dismantling of scaffolding • No access equipment may be loaded above the level of the guardrail • No access equipment to be loaded above its safe working load • Where work involves leaning out on an open leading edge, then all personnel are to be fitted with full body harness. The harness must be connected at all times • All fall arrest equipment to be correctly maintained • Ensure if ladders are being used for access, they are either footed or tied. Also, the ladder must be set at the correct level of 1 in 4 or approximately 75°
25.	Include any other items not included in above into this section	Include any other items not included in above into this section	Include any other items not included in above into this section



ANNEXURE D - BASELINE RISK ASSESSMENT FOR PROJECT – COVID-19

It must be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the COVID 19 risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

No.	HAZARD	MINIMUM CONTROL MEASURES
1.	COVID-19 - Contracting COVID-19, person to person transmission	- Do not share tools / equipment, crockery/cutlery/towels/bedding or anything that can facilitate the spread of the virus. - Masks have not been proven to definitively protect against every contagion. However, masks prevent a person from unconsciously touching their eyes, nose and mouth, so they may offer a measure of protection. Masks are for single use only, not to be worn two days in a row. - Avoid touching your eyes, nose, and mouth and shaking hands with others. - Cough or sneeze into a tissue and dispose thereof safely into a bin provided. - Wash your hands frequently with soap and running water for no less than 20 seconds. If you have none available use a hand sanitizer with at least 70% alcohol. - Apply social distancing principles, stay at least 1.5m away from people/employees where possible. - Avoid crowds and gatherings. - Clean frequently touched objects/surfaces. - The following cleaning products can be used: Hypochlorite (e.g. Household Bleach) Alcohol (70%) Hydrogen Peroxide Phenolic Compounds Quaternary Ammonium Compounds

No.	ACTIVITY	HAZARD	MINIMUM CONTROL MEASURE
2.	Site Preparation	Site might be infected with COVID-19 contagion during lock down	- Inspect the site to assess conditions. Revise any policies, method statements for risks and hazards identified for review. - Decontaminate the site, in affected areas, ensure the availability of hand washing facilities and sanitizers, throughout the site, and at entrances. Ensure sanitising and hand washing facilities are available at ablution areas, common eating areas, offices, canteens, security
3.	Occupational Health	Older workers of 60+, workers with underlying auto-immune or chronic diseases are at increased risk of infection (note that workers may be symptom free but infected with COVID-19)	All workers are to be screened and have a valid certificate of fitness on return to work. A full questionnaire to be completed daily before entry on site, and those identified as high risk, or exhibiting flu like symptoms, must be separated and refused entry to site until declared symptom free by a medical practitioner.
4.	Labour	Underlying auto-immune or chronic diseases, socio-economic status, having to use public transport to get to work	- A full questionnaire to be completed daily before entry on site, and those identified as high risk, or exhibiting flu like symptoms, must be separated and refused entry to site until declared symptom free by a medical practitioner. - Daily temperature readings to be taken on entry to site; Induction, toolbox talks to be done daily on topics relating to COVID-19, personal hygiene and PPE. Strict enforcement on use of PPE - Public traffic must comply with government guidelines re wearing of masks and sanitising requirements.



No.	ACTIVITY	HAZARD	MINIMUM CONTROL MEASURE
5.	Transportation (Public and on Site)	Maximum allowed capacity exceeded; No facilities for sanitising vehicles and passengers; No additional protective measures available, e.g. face masks; Unlicensed drivers and operators	Selection and provision of transport services compliant with gazetted requirements; Policy and procedures and rules for travel, where possible to limit the use of public transport, or to arrange selective methods of transport, ongoing toolbox talks and supply of cloth masks to be worn when travelling or moving on and off site. Vehicle occupancy maintained at 70% capacity or less; Vehicles sanitised between trips; hand sanitiser provided for passengers.
6.	Social Distancing	Many construction tasks require more than 1 worker that will be required to work within the limit of 1,5m Access/Egress to and off site; Welfare facilities, Meeting areas	- Demarcation and spacing of queueing areas; segregation of queueing areas and public outside site perimeters; Meeting/eating areas large enough to maintain 1.5m distance at maximum occupancy. - Only essential workers to spend time on site, Staggered meeting/eating times, use of Zoom, Skype, Microsoft Teams for meetings where necessary. Individual, segregated facilities for safe keeping.
7.	Waste Management	Spreading of virus and contact with virus causing infection from handwashing, drying hands, cleaning equipment, disposal of contaminated waste and other related aspects	Establish and follow protocols for disposal of potentially infected waste (receptacles). Awareness through notices (posters) regarding correct procedures of waste disposal. Competent supervision and adequate awareness training required. Provide adequate supplies of material and consumables, provision of sealable disposal containers/bags through appropriate waste removal company. Provide adequate supply of paper towels. If contractors used ensure appropriate management.
8.	Signage	Unauthorised entry to site and work areas compromising workers health (contamination). Acts and behaviour that compromises worker	Installation of posters and signage with the site rules and protocols that need to be maintained at strategic points. Competent supervision and adequate awareness training required. Disciplinary steps to be taken against transgressors.
9.	Welfare Facilities	Spreading of virus and contact with virus causing infection	- Limiting of personnel on site to minimum number required to maintain control and management. Implement and maintain cleaning and disinfecting programme. - Site rules for social distancing to 1.5m. Use technology to avoid proximity between individuals where possible
10.	Use of Personal Protective Equipment	Risk of spread of droplet infection through coughing, sneezing when in close contact with other people	- No employee/ visitor will be allowed on site without a cloth mask. Adequate training must be provided in the correct use and disposal of these masks. Cloth masks must be washed and ironed. Where possible face shields should be used to protect mouth, nose and eyes. Regular cleaning of face shields required. - No sharing of PPE will be permitted. Adequate supervision required. COVID PPE does not replace conventional PPE.

ANNEXURE E - COVID-19 SITE SAFETY SIGNAGE





ANNEXURE F – GUIDELINES TO HEALTH AND SAFETY BILL OF QUANTITIES

DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				R	C
Preparation of principal contractor's site specific health and safety plan, safety file, risk assessments, fall prevention/protection plan, Annexure 2 notification to Dept of Labour, demolition method statement, other method statements requested to be prepared for safety reasons, permits, amendments to safety plan during course of project, traffic management / accommodation plans, and any other legally required health and safety documentation	Lump sum	Lump sum			
Provision of safety documentation required of the principal contractor for Construction Work Permit application by the safety agent of Dept of Labour, if applicable (note section 2.4 of this safety specification document)	Lump sum	Lump sum			
Provision of current workman's compensation cover for employees for the project, and ensuring that contractors appointed have such cover too	Lump sum	Lump sum			
Health and safety management of principal contractor's employees, visitors and contractors' employees on site.	Lump sum	Lump sum			
Provision of full time Construction Manager for site, provision of Alternate Construction Manager in absence of Construction Manager and provision of sufficient safety supervision on site	Lump sum	Lump sum			
Provision of full time/ part time SACPCMP registered Construction Health & Safety Officer for site (refer to safety specification for full time / part time requirement) and preparation of safety reports after each safety inspection	Lump sum	Lump sum			
Competence assessment, appointment and required competence and safety training of all principal contractor's legally required appointments for site	Lump sum	Lump sum			
Maintenance of principal contractor's plant and equipment on site so as to be in safe condition, including inspection registers, inspections by competent persons, thorough examination certificates, hand over certificates and related documentation	Lump sum	monthly			
Provision of general safety signage (e.g. first aid, firefighting, traffic safety, excavations, PPE, Assembly Point, noise zones, etc.)	Lump sum	monthly			



DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				R	C
Provision of medical certificates of fitness for employees on site (Annexure 3)	Lump sum	Lump sum			
Provision of personal protective equipment (PPE) by principal contractor to employees and, as applicable, visitors to site, incl. • reflective vests • hard hats • protective foot wear • hearing protection • respiratory protection • safety eyewear • gloves • overalls • Safety harnesses and lanyards • Sunblock • UV Protective clothing / hats / eye wear • Protective thermal wear (heat / wind / cold / rain) • Protective firefighting clothing • Arc flash and electrical protective clothing	Lump sum	Lump sum			
Provision of Fall Prevention and Protection Equipment including. • Rope • Lifelines & Self-Retracting Lifelines (SRL) • Anchor Points • Warning Lines & Area demarcation • Fall Arrest Accessories • Fall Rescue Equipment • Passive Fall Protection Equipment • Confined Space Rescue and Retrieval (In elevated work situations) • Etc.	Lump sum	Lump sum			
Provision of Confined Space work equipment & Training • Training • Air Monitoring Equipment • Ventilation Equipment • Entry Equipment • Personal Protective Equipment • Confined Space Rescue and Retrieval Equipment • Communication Equipment • Etc.	Lump sum	Lump sum			
Holding of safety meetings with safety representatives and safety officers on site on at least monthly basis	Lump sum	monthly			



DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
				R	C
Principal contractor construction safety management attendance at health and safety meetings called by client, professional team or safety agent	Lump sum	monthly			
Provision of site specific health and safety induction training for all on site	Lump sum	Lump sum			
Conducting of toolbox talks to employees on health and safety issues on a weekly basis	Lump sum	Lump sum			
Provision of sufficient First Aiders for site as per legal requirements	Lump sum	Lump sum			
Provision of First Aid Boxes for site as per legal requirements	Lump sum	Lump sum			
Provision of sufficient fire extinguishing equipment for site	Lump sum	Lump sum			
Fire drills on site at least 6 monthly basis for duration of project	Lump sum	Lump sum			
Provision of welfare facilities for site (drinking water, toilets, soap, means of drying hands, toilets paper, sheltered eating areas, etc.)	Lump sum	Lump sum			
Provision for safe disposal of waste, spill kits, safe housekeeping and storage practices	Lump sum	Lump sum			
Provision of leading edge protection, covers to prevent falls	Lump sum	Lump sum			
Provision of fencing at site camp and to protect excavations	Lump sum	Lump sum			
COVID 19 measures – provision of hand sanitiser, respiratory protection (as required), safety signage, formal and informal communication to all on site and any other measures necessary to contain and detect COVID 19 on site (refer to safety specification)	Lump sum	Lump sum			
Compilation of consolidated Safety File at Close Out stage and handover of file to safety agent in hard copy or digital format	Lump sum	Lump sum			
Supply of safety caps on all exposed re-bar	Lump sum	Lump sum			
Any other compliance item in site specific safety specification issued by project client/ safety agent with potential cost implication	Lump sum	Lump sum			
• Item 1					
• Item 2					
• Item 3					
• Item 4					
• Item 5					
Principal contractor's general compliance with respect to the Occupational Health and Safety Act, Construction and other health and safety Regulations apart from other provisions in this bill.	Lump sum	Lump sum			
SUMMARY TOTAL OHS COST PROVISION					

ANNEXURE G – SAFETY SPECIFICATION AND BASELINE RISK ASSESSMENT ISSUE REGISTER

Date of Original Safety Specification Compilation	Compiled By	Issue Date
14/6/2021	Dawid Naude	14/6/2021

Revision Summary	Revised By	Revision Date

Acknowledgement:

I, _____ representing
_____(Contractor), have satisfied
myself with the content of this Health and Safety Specification and shall ensure that our employees and
contractors on site comply with the requirements of this document, our safety documentation and
health and safety legislation.

Signature of Contractor
Date

Comments:
