land reform & rural development

Department:
Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

Tender/Contract No.: CONMP0012(2026/2027)
A Tender for Category 3GB OR higher CIDB Registered Contractors

APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M^2 FARMHOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE.

Name of Tenderer (Bidding Entity): _____

Provide full name i.e. (CC, Pty Ltd, JV, Sole Proprietor): _____

Name of duly authorised person: _____

Address of Tenderer: _____

_____

Tel. Number: _____

Cell number: _____

Fax number: _____

E-mail: _____

Receipt number: _____

National Treasury CSD Registration Number: _____

ISSUED BY:

Director: Supply Chain and Facilities Management Services
Department Land Reform and Rural Development
17 Van Rensburg Street, Bateleur Building
6th Floor, Block E
Nelspruit
1200
Tel:(013) 754 8000/8066

PREPARED BY:

Directorate: Rural Infrastructure Development
17 Van Rensburg Street, Bateleur Building
Nelspruit
1200
Tel: (013) 754 8116

land reform & rural development

Department:
Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

Tender/Contract No.: CONMP0012(2026/2027)
A Tender for Category 3GB OR higher CIDB Registered Contractors

THE TENDER

For the

APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M2 FARM HOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE.

.

CLOSING DATE: TUESDAY, 08 DECEMBER 2026
CLOSING TIME: 11:00AM

ISSUED BY:

Director: Supply Chain and Facilities Management Services
Department Land Reform and Rural Development
17 Van Rensburg Street, Bateleur Building
6th Floor, Block E
Nelspruit
1200
Tel:(013) 754 8000/8066

PREPARED BY:

Directorate: Rural Infrastructure Development
17 Van Rensburg Street, Bateleur Building
Nelspruit
1200
Tel: (013) 754 8116

CHECKLIST WHEN SUBMITTING BID PROPOSAL/DOCUMENT

Tender/Contract No.: CONMP0012(2026/2027)

APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M2 FARM HOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE. . .

A TENDER FOR CATEGORY 3GB OR HIGHER REGISTERED CONTRACTORS

Bids were only considered for acceptance (regarded as being responsive) if the below mentioned requirements were met:

Please indicate **YES** or **NO** ✓ Place a Tick in the appropriate column	**YES**	**NO**
(b) Evaluation for mandatory criteria Only those tenderers who are **registered with the CIDB**, or are capable of being so prior to the evaluation of submissions in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an **3GB** or Higher class of construction work, are eligible to submit tenders; Joint Ventures are eligible to submit tenders provided that they comply with all three of the following conditions: **Every member of a joint venture** is registered with the CIDB. **The lead partner** has a contractor grading designation of not lower than one level below the required grading designation of **3GB** or higher class of construction work. **The Combined contractor** grading designation calculated in accordance with the Construction Industry Development Board Regulations is equal to or higher than a Contractor designation determined in accordance with the sum tendered for a **3GB** or higher class of construction work, is eligible to submit tenders. **Tenderers are also requested to indicate their CRS number/s of the registered contractor/s as well as their Joint Venture partner/s (if applicable) in the tender document.**		
Attendance of the **Compulsory Tender Clarification meeting**.		
Form of Offer must be **fully** completed and signed by duly authorised person.		
VALID NHBRC CERTIFICATE		
Corrections in terms of price must not be made by means of a correction fluid such as Tippex or similar product. If correction fluid has been used on any specific item price, such item will not be considered. No correction fluid must be used in a Bill of Quantities where prices are calculated to arrive at a total amount. If correction fluid has been used the Tender as a whole will not be considered.		

In the event of mistakes having been made on the Form of Offer, it must be crossed out in ink at each and every price alteration on the form of offer and be accompanied by an initial at each and every price alteration.		
Letter of authorisation to sign the Form of Offer and where required in tender document. In the case of a **one-person** concern submitting a tender, this shall be clearly stated on the letter head. In the case of a **JOINT VENTURE** submitting a tender, include a resolution of **each company** of the Joint Venture **together** with a resolution by its members authorising a member of the Joint Venture to sign the documents on behalf of the Joint Venture." **i.e.,** the **Joint Venture must submit three Letters** of Authority as per the aforesaid Joint Venture requirement.		
Are all addenda issued complete and returned (if applicable)		
Professional Engineer/Technologist Bidder to submit valid proof or copy of registration certificate/privy seal and a detailed signed CV of the following professionally registered persons: Civil or Structural Engineer/Technologist registered with ECSA		
ADDENDA/ADDENDUMS All addendums must be completed, returned and submitted with the tender document(If applicable)		
Letter of good standing from Department of Labour (COIDA) The Tenderer is registered and in good standing with respect to Compensation for Occupational Injuries and Diseases Act (COIDA) with Department of Labour or with a licensed compensation insurer. The Tenderer must submit the letter of good standing for **Building and Construction** related projects. In the event of the Tenderer being a joint venture/consortium, the letter of good standing for **Building and Construction** related projects of the individual members must also be provided.		
Non mandatory Bidders must ensure compliance with their tax obligations. Bidders may submit printed TCS/CSD/SARS PIN together with their bid. In bids where a consortia/Joint Venture/sub-contractors are involved each party must submit a separate valid tax clearance certificate, SARS Pin, TCS or CSD printout.		
Tenderers are requested to adhere with colour identification of component documents must be undertaken in accordance with the provisions of SANS 10403 when binding the document for submission. SANS 10403 suggests that for ease of identification of the various sections, each section may be printed on different coloured paper or be separated with coloured paper. Where this is done, the colours for each subcomponent should be as indicated below (Document) layout.		

land reform & rural development
Department:
Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

DOCUMENT LAYOUT

SECTION	HEADING	COLOUR
PART 1: THE TENDER		
PART T1	**TENDERING PROCEDURES**	
	SECTION T1.1: TENDER NOTICE AND INVITATION TO TENDER	WHITE
	SECTION T1.2: TENDER DATA	PINK
	SECTION T1.2.1: CONDITIONS OF TENDER	PINK
	SECTION T1.2.2: TENDER DATA	PINK
	SECTION T1.2.3: CIDB STANDARD CONDITIONS OF TENDER	WHITE
PART T2	**RETURNABLE DOCUMENTS**	
	SECTION T2.1: LIST OF RETURNABLE DOCUMENTS	YELLOW
	SECTION T2.2: RETURNABLE SCHEDULES	YELLOW
PART 2: THE CONTRACT		
PART C1:	**AGREEMENT AND CONTRACT DATA**	
	SECTION C1.1: FORM OF OFFER AND ACCEPTANCE	YELLOW
	SECTION C1.2: CONDITIONS OF CONTRACT	YELLOW
	SECTION C1.3: AMPLICATIONS OF GCC	YELLOW
	SECTION C1.4: DATA PROVIDED BY CONTRACTOR	YELLOW
	SECTION C1.5: PRIORITY OF DCOUMENTS	YELLOW
	SECTION C1.6 PERFORMANCE GUARANTEE (PRO-FORMA)	YELLOW
	SECTION C1.7 RETENTION MONEY GUARANTEE	YELLOW
PART C2:	**PRICING DATA**	
	SECTION C2.1: PRICING INSTRUCTIONS	YELLOW
	SECTION C2.2: BILLS OF QUANTITIES	YELLOW
PART C3:	**SCOPE OF WORKS**	
	SECTION C3.1: DESCRIPTION OF WORKS	BLUE
	SECTION C3.2: ENGINEERING	BLUE
	SECTION C3.3: PROCUREMENT	BLUE
	SECTION C3.4: CONSTRUCTION	BLUE
	SECTION C3.5: MANAGEMENT	BLUE
	SECTION C3.6: ANNEXURES TO SCOPE OF WORK	BLUE
	ANNEXURE A: VARIATIONS TO STANDARDIZED SPECIFICATINS	BLUE
	ANNEXURE B: PARTICULAR SPECIFRICATIONS	BLUE
	ANNEXURE C: STANDARD FORMS TO BE USED DURING THE CONTRACT	BLUE
	ANNEXURE D: DRAWINGS	WHITE
PART C4:	**SITE INFORMATION**	GREEN

TABLE OF CONTENTS

Reference		Colour	Page No
Volume 1:			
THE TENDER			1
PART T1:	**TENDERING PROCEDURES**		3
	Section T1.1: Tender Notice and Invitation to Tender	White	4-7
	Section T1.2: Tender Data	Pink	8
	Section T1.2.1: Conditions of Tender	Pink	8
	Section T1.2.2: Tender Data	Pink	8-21
	Section T1.2.3: CIDB Standard Conditions of Tender	White	22-38
PART T2:	**RETURNABLE DOCUMENTS**		39
	Section T2.2: Returnable Documents	Yellow	40-44
PART C1:	**AGREEMENT AND CONTRACT DATA**		45
	Section C1.1: Form of Offer & Acceptance	Yellow	46-49
	Section C1.2: Contract Data	Yellow	50-64
PART C2:	**PRICING DATA**		65
	Section C2.1: Pricing Instructions	Yellow	66 -70
	Section C2.2: Bills of Quantities	Yellow	71-87
PART C3:	**SCOPE OF WORKS**		88-126
PART C4:	**SITE INFORMATION**		124

PART T1: TENDERING PROCEDURES

For a proposed contract between

Department of Land Reform and Rural Development
(the Employer)

and

(the Contractor)

for **APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M2 FARM HOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE. . .**

Documentation prepared by:

Department of Land Reform and Rural Development

SECTION T1.1: TENDER NOTICE AND INVITATION TO TENDER

FOR:

APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M2 FARM HOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE.

TENDER/CONTRACT NO.: CONMP0012(2026/2027)

INVITATION AND SCOPE OF WORK:

The proposed scope of work consists of the construction of 64m2 farm house, including plumbing work, septic tank, French drain, water supply pipeline, electrical installations and rooftop solar power installation at **PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT** in Emakhazeni local municipality under Nkangala district municipality in Mpumalanga province.

CONDITIONS:

Bidders shall be registered with the Construction Industry Development Board **(CIDB)** and should have a minimum CIDB Contractor grading of **3GB or higher**.

Preferential Procurement Policy Framework Act (PPPFA), Act no. 5 of 2000 and Preferential Procurement Regulation, 2022 will be applied. The **80/20** Preference Point system will be applied where a maximum of **Eighty (80)** tender adjudication points will be awarded for price and **Twenty (20)** points will be awarded for specific goals.

In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in Table 1 of SBD 6.1 form as may be supported by proof/ documentation stated in the conditions of this tender

NB: The department reserves the right to request bidders to submit their current Audited Financial Statement/s.

This tender is advertised on the National Treasury e-Tender Portal, the CIDB i-Tender system and on the Departmental website. Bid documents may be downloaded free of charge from the National Treasury e-Tender Portal; www.etenders.gov.za and the Department's website; www.dlrrd.gov.za .No physical documents will be sold by the department.

DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT Offices:

Director: Supply Chain and Facilities Management Services
Department Land Reform and Rural Development
17 Van Rensburg Street, Bateleur Building
6th Floor, Block E
Nelspruit
1200
Tel: (013) 754 8000/8066

Directorate: Rural Infrastructure Development
17 Van Rensburg Street, Bateleur Building
Nelspruit
1200
Tel: (013) 754 8116

A COMPULSORY TENDER CLARIFICATION MEETING will be held on:

Date: 24 NOVEMBER 2026 on TUESDAY

Venue: PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT (GPS Coordinates *Latitude S 25.761994° Longitude: E 30.146961°)*
Time: 11h00

NB: Officials from the Department (DLRRD) will be at N4 Dalmanuta offramp (Google Maps Search bar link https://maps.app.goo.gl/iJ5C5yaiAZm8Xosc9,) from 10H30 to 10H45, thereafter drive to Waaikraal farm to the site briefing.

The project site is located approximately 13 km southeast of Belfast, in the Mpumalanga province. Project site coordinates are as follows: *Latitude: S 25.761994° Longitude: E 30.146961°*

The lowest or any **TENDER WILL NOT NECESSARILY BE ACCEPTED, AND THE DEPARTMENT RESERVES THE RIGHT to accept the tender as a whole or in part.**

The closing date and time for the receipt of completed bid documents are **TUESDAY, 08 DECEMBER 2026 at 11h00.**

Tenders must remain valid for a period of **90 days** after the closing date for the submission of tenders, during which period a tender may not be amended or withdrawn and may be accepted at any time by the Department.

The original and completed bid document shall be placed in a sealed envelope clearly marked:

APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M2 FARMHOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE.

Tenders will be received on the closing date and time shown above. All tenders must be enclosed in sealed envelopes bearing the applicable tender heading and contract number, as well as the closing time and due date, and must be addressed to the **CHIEF DIRECTOR: SUPPLY CHAIN MANAGEMENT SERVICES, DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT** and must be submitted in the tender box situated at:

Department Land Reform and Rural Development
17 Van Rensburg Street, Bateleur Building
6th Floor, Block E
Nelspruit
1200

SUBMITTING OF TENDERS – PLEASE NOTE: Tenders can only be submitted in the Tender Box in Nelspruit.

No telephonic or any other form of communication relating to this bid will be permitted with any other staff by bidders other than with the named individuals stated below.

All enquiries regarding this bid must be directed to:

ENQUIRIES – TECHNICAL RELATED:

Mr Sydney Ndima
Tel: (013) 754 8116
E-mail: sydney.ndima@dlrrd.gov.za

ENQUIRIES – SUPPLY CHAIN MANAGEMENT RELATED:

Ms B Ramayimi
Department Land Reform and Rural Development
17 Van Rensburg Street, Bateleur Building
6th Floor, Block E
Nelspruit
1200
Tel: 013 754 8066
E-mail: Banele.Ramanyimi@dlrrd.gov.za

Bids will be opened in public. No late submissions will be considered. Telegraphic, telexed, facsimiled or e-mail submissions will not be accepted.

Failure to meet the mandatory requirements required in this Bid will result in the submissions being deemed null and void and shall be considered non-responsive.

TENDER/CONTRACT NO. CONMP0012(2026/2027)

CLOSING DATE: TUESDAY, 08 DECEMBER 2026 at 11:00AM

YOU ARE HEREBY INVITED TO TENDER TO THE GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA (DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT)

TENDERS RECEIVED LATE AFTER THE CLOSING TIME AND DATE WILL NOT BE ACCEPTED FOR CONSIDERATION.

SUBMIT ALL TENDERS ON THE OFFICIAL FORMS – DO NOT RETYPE.

The Tender documents **must** be deposited in the box which is identified as the tender box of the:

Department of Land Reform and Rural Development
17 Van Rensburg Street, Bateleur Building
6th Floor, Block E
Nelspruit
1200

SUBMITTING OF TENDERS – PLEASE NOTE: Tenders can only be submitted in the Tender Box in Nelspruit.

THE TENDER BOX OF THE OFFICE OF THE DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT IS OPEN 24 HOURS A DAY, 7 DAYS A WEEK. THE TENDER BOX WILL BE CLOSED AT 11H00 ON TUESDAY, 08 DECEMBER 2026, WHICH IS THE CLOSING TIME OF THE TENDER.

TENDERERS SHOULD ENSURE THAT TENDERS ARE DELIVERED TIMEOUSLY TO THE CORRECT ADDRESS

SUBMIT EACH TENDER IN A SEPARATE SEALED ENVELOPE

SECTION T1.2.1: CONDITIONS OF TENDER

The conditions of tender are the **Standard Conditions of Tender – August 2019** as contained in **Section T.1.2.3**.

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

Each item of data given below is cross-referenced to the clause in the **Standard Conditions of Tender August 2019** to which it mainly applies.

SECTION T1.2.2: TENDER DATA

The clause numbers in the Tender Data refer to the corresponding clause numbers in the Conditions of Tender.

The additional Conditions of Tender are:

Item		**Data**
C.1	**GENERAL**	**ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**
C.1.1	**Actions**	The Employer is the "Department of **DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT**". The term "bid" in the context of this standard is synonymous with term "tender".
C.1.2	**Tender Documents**	This document **(Volume 1)** in which are bound the Tendering Procedures, Returnable Documents, Agreements and Contract Data, Pricing Data, Scope of Works, Site Information, Tender Data and Drawings
C.1.3	**Interpretation**	Add the following new clause: "1.3.3" The tender documents have been drafted in English. The contract arising from the invitation of tender shall be interpreted and construed in English.
C.1.4	**Communication and Employer's Agent:**	
	The *Employer's Agent* is:	**Branch** : Rural Infrastructure Development **Contact** : **Mr Sydney Ndima** **Address** : Department Land Reform and Rural Development 17 Van Rensburg Street, Bateleur Building 6th Floor, Block E Nelspruit **Tel** : 013 754 8116 **E-mail** : sydney.ndima@dlrrd.gov.za

Item		Data
C.2	**TENDERER'S OBLIGATIONS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	
C.2.1	**Eligibility:**	Only those Tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, for a **3GB or Higher** Classes of construction work, are eligible to submit tenders. **Joint ventures are eligible to submit tenders provided that:** 1. Every member of a joint venture is registered with the CIDB; 2. The lead partner has a contractor grading designation in the **3GB or Higher** class of construction work; or **not lower than one level below** the required grading designation in the class of works construction works under consideration and posses the required recognition status; 3. 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 **3GB or higher** class of construction work or a value determined in accordance with regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations is eligible to submit tenders.
C.2.2	**Cost of Tendering:**	Add the following to the clause: "Accept that the Employer will not compensate the tenderer for any costs incurred in attending interviews in the office of the Employer or the Employer's Agent."
C.2.5	**Reference documents:**	The document "**General Conditions of Contract Third Edition 2015** published by the South African Institute of Civil Engineering. This document is obtainable separately, and Tenderers shall obtain their own copies." Tenderers, Contractors and Subcontractors shall obtain their own copies of this document for tendering purposes and for use for the duration of the Contract from the South African Institution of Civil Engineering, Private Bag X200, Halfway House, Midrand, 1685 and shall bear all expenses in this regard. **Occupational Health and Safety Act no. 85 and amendment act no. 181 of 1993** **Construction Regulations 2014** This document is obtainable separately and tenderers shall obtain their own copies. Standard Specification for Civil Engineering Construction (SANS 1200) This document is available separately from the South African Bureau of Standards and tenderers shall obtain their own copies.

Item		Data
C.2.7	**Clarification meeting:**	The arrangements for a **compulsory clarification meeting** are as stated in the Tender Notice and Invitation to Tender. **A COMPULSORY TENDER CLARIFICATION MEETING will be held on:** **Date: 24 NOVEMBER 2026 on TUESDAY** **Venue: PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT (GPS Coordinates *Latitude S 25.761994° Longitude: E 30.146961°)*** **Time: 11h00** **NB: Officials from the Department (DLRRD) will be at N4 Dalmanuta offramp (Google Maps Search bar link https://maps.app.goo.gl/iJ5C5yaiAZm8Xosc9,) from 10H30 to 10H45, thereafter drive to Waaikraal farm to the site briefing.** **The project site is located approximately 13 km southeast of Belfast, in the Mpumalanga province. Project site coordinates are as follows: *Latitude: S 25.761994° Longitude: E 30.146961°*** Tenderers must sign the attendance register/ list in the name of the tendering entity.
C.2	**TENDERER'S OBLIGATIONS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	
C.2.8	**Seek clarification:**	"Request clarification of the tender documents, if necessary, by notifying the Employer's Official or the Employer's Agent indicated in the Tender Notice and Invitation to Tender in writing at least **10 (Ten) working days** before the closing time stated in the foregoing notice and clause 2.15."
C.2.9	**Insurance:**	Add the following to the clause: "Accept that the submission of a Tender shall be construed as an acknowledgement by the Employer that he/she is satisfied with the insurance cover that the Contractor will have to effect Contract Works Insurance to be limited to the the Tender amount including VAT, and Public Liability to be limited to **R 5 000 000.00** under the contract **The Employer will not provide for any insurance as it will be provided for by the Contractor.**

Item		Data
C.2.11	**Alterations to documents:**	**Add the following to the clause:** **"In the event of mistakes having been made on the prices inclusive of VAT it must be crossed out in ink at each and every price alteration on the FORM OF OFFER and be accompanied by an initial.** Corrections in terms of price must not be made by means of a correction fluid such as Tipp-Ex or similar product.If correction fluid has been used on any specific item price, such item will not be considered. No correction fluid must be used in a Bill of Quantities where prices are calculated to arrive at a total amount. If correction fluid has been used the Tender as a whole will not be considered. **The Department will reject the bid if the above conditions are not adhered to.**
C.2.13	**Submitting a tender offer**	
	C.2.13.1	**Submit one tender offer only, either as a single tendering entity or as a member in a joint venture** to provide the whole of the works identified in the contract data and described in the scope of works. Each Tenderer is required to return the complete set of documents as listed in the Tender Data with all the required information supplied and completed in all respects.
	C.2.13.2	Return all returnable documents to the employer after completing them in their entirety, by writing legibly in non-erasable ink. Failure to adhere to this the bid will be disqualified.
	C.2.13.3	Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English.
C.2	**TENDERER'S OBLIGATIONS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	

Item		Data
	C.2.13.4	Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorised signatories liable on behalf of the tenderer. Add the following to the clause: "Only duly authorised signatories must sign the original and all copies of the tender offer where required in terms of 2.13.3. In the case of a **ONE-PERSON CONCERN** submitting a tender, this shall be clearly stated on the company letter head. In case of a **COMPANY** submitting a tender, include a copy of a resolution by its board of directors authorising a director or any other official of the company to sign the documents on behalf of the company. In the case of a **CLOSED CORPORATION** submitting a tender, include a copy of a resolution by its members authorising a member or any other official of the corporation to sign the documents on each member's behalf. In the case of a **PARTNERSHIP** submitting a tender, all the partners shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case proof of such an authorisation shall be included in the Tender. In the case of a **JOINT VENTURE** submitting a tender, include a resolution of **each company** of the Joint Venture **together** with a resolution by its members authorising a member of the Joint Venture to sign the documents on behalf of the Joint Venture." **i.e.** the **Joint Venture must submit three Letters** of Authority as per the aforesaid Joint Venture requirement. **Accept that failure to submit proof of Authorisation to sign the tender shall result in a Tender Offer being regarded as non-responsive.**
	C.2.13.5	Seal the tender offer and submit **ONLY** to the below mentioned address: The Employer's address for delivery of tender offers: **DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT** **17 Van Rensburg Street, Bateleur Building** **6th Floor, Block E** **Nelspruit** **Sixth Floor Tender Box** **<u>SUBMITTING OF TENDERS – PLEASE NOTE</u>: Tenders can only be submitted in the Tender Box in Nelspruit**
	C.2.13.6	A two-envelope procedure will NOT be followed.
	C.2.13.9	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
C.2	**TENDERER'S OBLIGATIONS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	

Item		Data
C.2.14	**Information and Data to be completed in all respects:**	Add the following to the clause: "Accept that the Employer shall in the evaluation of tenders take due account of the Tenderer's past performance in executing for similar works of comparable magnitude, and the degree to which he possesses the necessary technical, financial and other resources to enable him to complete the Works successfully within the contract period. Satisfy the Employer and Principal Agent as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, by furnishing details in **Section T2.2.8.** Accept that the Employer is restricted in accordance with clause 4.(4) of the **Construction Regulations, 2014,** to only appoint a contractor whom he is satisfied has the necessary competencies and resources to carry out the work safely.
C.2.15	**Closing time:**	The closing date and time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
C.2.16	**Tender offer validity:**	The tender offer validity period is **90** days. Add the following to the clause: "If the tender validity expires on a Saturday, Sunday or public holiday, the Tender Offer shall remain valid and open for acceptance until the closure of business on the following working day."
C.2.17	**Clarification of tender offer after submission**	The Tenderer shall provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of arithmetical errors by the adjustment of certain rates or items prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought,offered, or permitted.
C.2.18	**Provide other material**	The Tenderer shall provide, on request by the employer , any other materilal that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.
C.2.19	**Inspections, tests and analysis:**	The Tenderer must provide access during working hours to his premises for inspections on request.
C.2.20	**Submit securities, bonds and policies:**	If requested, submit for the employer's acceptance before formation of the contract, all securities,bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.
C.2	**TENDERER'S OBLIGATIONS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	

Item		Data
C.2.23	**Certificates:**	The following certificates/ information may be provided with the tender offer: a) Copy of Certificate of Incorporation (if tenderer is a Company), e.g. CM1, CM29, or CM44 b) Copy of Founding Statement (if tenderer is a Closed Corporation), e.g. CK1, or CK2 c) Copy of Partnership Agreement (if tenderer is a Partnership) d) Copy of Identity Document (if tenderer is a One-man concern) e) Copy of Deed of Trust (If a trust is involved). In cases where the tenderer has failed to submit any of the documents above with the tender, the Department reserves the right to, at any time after the closure of the tender, but before the award of the tender, request the tenderer to provide the outstanding documents within 7 (seven) working days from the date of notification.
ADD THE FOLLOWING NEW CLAUSES:		
"2.24	**Canvassing and obtaining of additional information by tenderers:**	Accept that no Tenderer shall make any attempt either directly or indirectly to canvass any of the Employers officials or the Employer's agent in respect of his tender, after the opening of the tenders, but prior to the Employer arriving at a decision thereon. No Tenderer shall make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders."
"2.25	**Awards to close family members of persons in the service of the state**	In order to adjudicate fairness or eligibility, the questionnaire for the declaration of interests in the tender of persons in service of state in **Section T2.2.6 – Form F** must be completed."
C.2	**TENDERER'S OBLIGATIONS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	

Item		Data
"2.26	**TAX**	Bidders must ensure compliance with their tax obligations. Bidders are required to submit their unique personal identification number (PIN) issued by sars to enable the organ of state to view the taxpayer's profile and tax status. Application for tax compliance status (TCS) or pin may also be made via e-filing. in order to use this provision, taxpayers will need to register with sars as e-filers through the website www.sars.gov.za. Bidders may also submit a printed TCS together with the bid. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate proof of TCS / PIN / CSD number. Where no tcs is available but the bidder is registered on the central supplier database (CSD), a csd number must be provided. **Bids received from bidders with a non-compliant tax status may be disqualified in the event of failing to update the Tax Status within 7 days.**
"2.27	**CSD –National Treasury Central Supplier Database (CSD) Registration**	Bidders must register on the central supplier database (CSD) to upload mandatory information namely: (business registration/ directorship/ membership/identity numbers; tax compliance status; and banking information for verification purposes)..
"2.28	**Local Labour**	It is a requirement of this contract that work be executed in such a manner so as to maximize the use of at least **80%** local unskilled labour intensive construction methods. It is mandatory for the contractor to allocate skilled lanour to 40% of NARYSEC youth in skilled labour if available in the local area.

Item		Data
"2.29"	**Specific Goals**	In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in the table below as may be supported by proof/ documentation stated in the conditions of this tender: In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of— (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system. **Specific goals for the tender and points claimed are indicated per the table below.** ***(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.*** ***Note to tenderers: The tenderer must indicate how they claim points for each preference point system.*)**

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system)	Percentage ownership equity (To be completed by the tenderer)	Number of point claimed (80/20 system) (To be complete by the tenderer)
I. Historically Disadvantaged Individuals (HDI)	8		
II. Who is female	5		
III. Who has a disability	2		
IV. Specific goal: Youth	2		
V. Specific goal: Locality (promotion of enterprises located **in Nkangala District Municipality Mpumalanga)**	3		

Item		Data
		• Historically Disadvantaged Individuals (HDI) – Attach copy of Identity Document (ID) and company registration document • Who is female- Attach copy of Identity Document (ID) and company registration document • Who has a disability – Attach a certified copy or original doctor's letter confirming the disability • Who is youth (A person that is not older than 35 years on the closing date of a bid) Attach copy of Identity Document (ID) and company registration document • Specific goal: Locality – promotion of enterprises located in a specific district) Ehlanzeni District Mpumalanga (a) a valid municipal services account (water, sanitation, rates and electricity) in the name of the bidder/s or active director/s or (b) a valid lease agreement from the lessor or (c) a letter on the letterhead of the ward councilor/traditional authority/council that must be signed, stamped and dated. **The Department will use the Central Supplier Database and documents submitted by the tenderer to verify the points claimed for specific goals.**
C.3	**THE EMPLOYER'S UNDERTAKINGS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	
C.3.1	**Respond to requests from the Tenderer:**	Replace the contents of the clause with the following: "Respond to a request for clarification received up to **ten (10) working days** before the tender closing time stated in the tender data and notify all Tenderers who drew procurement documents"
C.3.2	**Issue Addenda:**	If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until **ten (10) working days** before the tender closing time stated in the Tender Data. If , as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and,shall then notify all tenderers who drew documents.
C.3.3	**Return late tender offers**	Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

Item		Data
C.3	**THE EMPLOYER'S UNDERTAKINGS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER**	
C.3.4	**Opening of tender submissions:**	A two-envelope procedure will **NOT** be followed. The closing date and time for receipt of tenders is: **Tuesday, 08 December 2024 at 11h00.** Tenders will be received on the closing date and time shown, must be enclosed in a sealed envelope bearing the applicable tender heading and contract number, as well as the closing time and due date, and must be addressed to the: **DIRECTOR: SUPPLY CHAIN MANAGEMENT SERVICES:** **DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT**. Tenders **must** be submitted in the tender box situated **in NELSPRUIT:** **Department of Land Reform and Rural Development** **17 Van Rensburg Street, Bateleur Building** **6th Floor, Block E** **Nelspruit** **Sixth Floor Tender Box** **Only tenders submitted to this tender box will be opened/ considered.** **SUBMITTING OF TENDERS – PLEASE NOTE: Tenders can only be submitted in the Tender Box in NELSPRUIT.** **Clause 3.6, 3.7 and 3,8 from standard conditions of tender**
C3.6	**Non-disclosure**	Not to disclose 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.
C3.7	**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.

Item		Data
C3.8	**Test for responsiveness**	C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received: a) complies with the requirements of these Conditions of Tender, b) has been properly and fully completed and signed, and c) is responsive to the other requirements of the tender documents. C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer*'s* opinion, would: a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work, b) significantly change the Employer*'s* or the tenderer's risks and responsibilities under the contract, or c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified. Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.
C3.9.1	**Arithmetical errors, omissions and discrepancies**	a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in ***figures*** shall govern.

Item		DATA
C.3	THE EMPLOYER'S UNDERTAKINGS ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER	
C.3.11	**Evaluation of Tender offers:**	Tenders will be evaluated in terms of the evaluation criteria stipulated below: **(a) Evaluation for Mandatory criteria** **(b) Evaluation in terms of Functionality** **(c) Evaluation in terms of 80/20 specific goals point system as prescribed in the Preferential Procurement Regulations 2022.** **(a) Evaluation for mandatory criteria** • **Refer to Part T2 returnable schedule**

ITEM		DATA
C.3	THE EMPLOYER'S UNDERTAKINGS	ADDITION OR VARIATION TO STANDARD CONDITION OF TENDER

C.3.11 **Evaluation of Tenders:**

(b) Evaluation in terms of Functionality

Each of the evaluation criteria will be assessed in terms of the indicators/ values being:

0= No Information, 1 = Poor, 2 = Average, 3 = Good, 4 = Very good and 5 = Excellent.

Quality (functionality) will be scored on those tenders regarded as being responsive.

The **CRITERIA** to be applied in evaluating the proposal is set out in the table below:

Criterion	Weight	Value	Comment / Remarks
Successful completion of projects of a similar nature, scope and value (building and construction) accompanied by completion certificates(**Section T2.2.8:Form H**), signed and Stamped tenderer's performance evaluation form **(Section T2.2.19, Form S)** for the previously completed project as requirement to obtain a score.	**50**		
Relevant plant and equipment **(Section T2.2.7: Form G)**	**5**		
Experience of key personnel/Management structure (Attach signed CV's and certified copies of qualifications)			
Professional Civil/Structural Engineer or Technologist registered with ECSA With Minimum NQF level 7 qualification in Built Environment. (Section T2.2.10: Form J)	**20**		
Construction Health and Safety Officer with NQF level 6 qualification in Health and Safety or related studies registered with SACPCMP as CHSO or CHSM (**Section T2.2.10: Form J**)	**15**		
Site Foreman with NQF level 5 qualification in Built Environment **(Section T2.2.10: Form J)**	**10**		
Total	**100**		

The proposal will be evaluated individually on score sheets, by a representative evaluation panel according to the evaluation criteria indicated above. All service providers who scored less than **60 out of 100 points** for functionality will not be considered further.

FUNCTIONALITY EVALUATION SCHEDULE

No	Functionality Criteria – Tender Rating Matrix		A Tenderer rating (score 0-5)	B Weighting
1	Successful completion of projects of a similar nature, scope and value, accompanied by appointment letter, completion certificates(**Section T2.2.8:Form H**), signed and Stamped tenderer' s performance evaluation form **(Section T2.2.19, Form S)** for the previously completed project as requirement to obtain a score.	The tenderer has listed **5 or more Projects** relevant/similar completed/executed project in the past 7 years with completion certificates, appointment letter and Form S	5	**50 Points**
		The tenderer has listed **4 Projects** relevant/similar completed/executed project in the past 7 years with completion certificates, appointment letter and Form S	4	
		The tenderer has listed **3 Projects** relevant/similar completed/executed project in the past 7 years with completion certificates, appointment letter and Form S	3	
		The tenderer has listed **2 Projects** relevant/similar completed/executed project in the past 7 years with completion certificates, appointment letter and Form S	2	
		The tenderer has listed **1 Projects** relevant/similar completed/executed project in the past 7 years with completion certificates, appointment letter and Form S	1	
		The tenderer has not listed any relevant/ similar completed project(s) executed with completion certificates in the past 7 years and attached completion certificates	0	

Tenderers are required to demonstrate relevant past experience and competency.

Bidder must submit and/or attach project appointment letters, completion certificates, signed and stamped Tenderer' Performance Evaluation Form S for the previously completed project as requirement to obtain a score for each successfully completed general building project that is similar in nature, scope and value (**Section T2.2.8:Form H** and **T2.2.19 Form S).**

Tenderers are required to submit full details of, and reliable contactable references for relevant projects which were successfully completed.

Relevant projects must be of similar in scope, nature and size , completed within the last Seven (7) years.

Tenderers should have completed general building construction projects of similar nature,with minimum value of R 500,000.00 each in the last 7 years.

The employer reserves the right to verify projects before considering them.

NB: Failure to submit / attach appointment letters, completion certificates,and Form S Performace Evaluation Form(signed and stamped) for the projects will result in the bidder not being awarded the points.

(BIDDERS SHOULD MAKE COPIES OF FORM S AND HAVE IT COMPLETED BY THE PREVIOUS EMPLOYER FOR EACH PREVIOUSLY COMPLETED PROJECT SUBMITTED WITH ITS CORRESPONDING COMPLETION CERTIFICATE AND APPOINTMENT LETTER)

No	Functionality Criteria – Tender Rating Matrix		A Tenderer rating (score 0-5)	B Weighting
2	Relevant plant and equipment **(Section T2.2.7: Form G)**	Listed **five (5**) or more of the required plant and equipment with Proof of ownership / Commitment from plant hire company	5	**5 points**
		Listed **four (4)**of the required plant and equipment with Proof of ownership / Commitment from plant hire company	4	
		Listed **three (3**)or mere of the required plant and equipment with Proof of ownership / Commitment from plant hire company	3	
		Listed **two (2)** of the required plant and equipment with Proof of ownership / Commitment from plant hire company	2	
		Listed **one (1)** of the required plant and equipment with Proof of ownership / Commitment from plant hire company	1	
		No information provided	0	
		Minimum required list of relevant plant and equipment TLB X 1 Tipper truck X1 Grader X 1 Bakkie X1 Plate Compactor X 1 Hand operated roller X1		

Tenderers are required to demonstrate that they have necessary relevant equipment, facilities and plant to be used during construction and project implementation.

Failure to provide proof of ownership of resources or signed letter of committment and/or letter to hire as indicated on section T2.2.7, Form G , will result in the tenderer being scored zero

NB: Contractor will be awarded a point only for each type that serve specific function as listed above

No	Functionality Criteria – Tender Rating Matrix		A Tenderer rating (score 0-5)	B Weighting
3	Professional Civil/Structural Engineer or Technologist registered with ECSA With Minimum NQF level 7 qualification in Built Environment. (Section T2.2.10: Form J)	**NQF Level 7 or higher qualification** in the Built Environment with **more than 7 years' post qualification experience.**	5	**20 Points**
		NQF Level 7 or higher qualification in the Built Environment with **more than 6 up to 7 years' post qualification experience.**	4	
		NQF Level 7 or higher qualification in the Built Environment with **more than 4 up to 6 years' post qualification experience**.	3	
		NQF Level 7 or higher qualification in the Built Environment with **more than 2 up to 4 years' post qualification experience.**	2	
		NQF Level 7 or higher qualification in the Built Environment with less than 2 **years' post qualification experience.**	1	
		No CV/information submitted No minimum qualification	0	

Tenderers are required to demonstrate that they have the necessary resources and technical expertise to undertake and successfully complete the project.

The proposed **Professional Civil or Structural Engineer/Technologist** (Registered with **ECSA** valid proof or copy of registration certificate/privyseal to be attached) dealing with CV demonstrating experience of key personel in general building construction projects. The candidate must have a minimum of **NQF Level 7** or higher in **Built Environment**.

Tenderers are required to submit signed curriculum vitae and certified copies of qualifications for the key personnel proposed to be employed on the project.

Failure to provide valid proof of PrEng/Pr Tech Eng registration with ECSA, signed CV or CV with letter of consent by the owner of the CV as indicated on Section T2.2.10: form J, and copies of qualifications, will result in the bidder not be considered. These curriculum vitae should include specific details of past experience and competence in delivering key similar relevant project.

No	Functionality Criteria – Tender Rating Matrix		A **Tenderer rating (score 0-5)**	B **Weighting**
4	Construction Health and Safety Officer with NQF level 6 qualification in Health and Safety or related studies registered with SACPCMP as CHSO or CHSM (Section T2.2.10: Form J)	**NQF Level or higher qualification** in Health and Safety or related with **more than 5 years' post qualification experience.**	5	**15 Points**
		NQF Level 6 or higher qualification in the Health and Safety or related with **more than 4 up to 5 years' post qualification experience.**	4	
		NQF Level 6 or higher qualification in Health and Safety or related with **more than 3 up to 4 years' post qualification experience**.	3	
		NQF Level 6 or higher qualification Health and Safety or related with **more than 2 up to 3 years' post qualification experience.**	2	
		NQF Level 6 or higher qualification in the Health and Safety or related with less than 2 **years' post qualification experience.**	1	
		No CV/information submitted No minimum qualification	0	

The proposed **Construction Health and Safety Officcer/ Construction Health and Safety Manager** (Registered with **SACPCMP**, attach valid proof or copy of registration certificate/privyseal) with CV demonstrating experience of key personel in construction projects. The candidate must have a minimum of **NQF Level 6** or higher in **Health and Safety or related**.

Tenderers are required to submit signed curriculum vitae and certified copies of qualifications for the key personnel proposed to be employed on the project.

Failure to provide valid proof of CHSO/CHSM registration with SACPCMP, signed CV or CV with letter of consent by the owner of the CV as indicated on Section T2.2.10: form J, and copies of qualifications, will result in the bidder not be considered. These curriculum vitae should include specific details of past experience and competence in delivering key similar relevant project.

No	Functionality Criteria – Tender Rating Matrix		A **Tenderer rating (score 0-5)**	B **Weighting**
5	Site Foreman with NQF level 5 qualification in Built Environment **(Section T2.2.10: Form J)**	**NQF Level or higher qualification** in the Built Environment with **more than 7 years' post qualification experience.**	5	**10 Points**
		NQF Level 6 or higher qualification in the Built Environment with **more than 6 up to 7 years' post qualification experience.**	4	
		NQF Level 6 or higher qualification in the Built Environment with **more than 4 up to 6 years' post qualification experience**.	3	
		NQF Level 6 or higher qualification in the Built Environment with **more than 2 up to 4 years' post qualification experience.**	2	
		NQF Level 6 or higher qualification in the Built Environment with less than 2 **years' post qualification experience.**	1	
		No CV/information submitted No minimum qualification	0	

The proposed Site **Foreman** candidate must have a minimum of **NQF Level 5** or higher in **Built Environment** and the tenderer must attach CV to demonstrate the key personel's duration of experience.

Tenderers are required to submit signed curriculum vitae and certified copies of qualifications for the key personnel proposed to be employed on the project.

Failure to provide signed CV or CV with letter of consent by the owner of the CV as indicated on Section T2.2.10: form J, and copies of qualifications, will result in the bidder not be considered. The curriculum vitae should include specific details of past experience and competence in delivering key similar relevant project.

c) Evaluation in terms of 80/20 preference point system as prescribed in the Preferential Procurement Regulations 2022.

Apply the **80/20 Preference Point system** where a maximum of **Eighty (80**) tender adjudication points will be awarded for **price**. **Twenty (20) points** will be awarded for **specific goals** in terms of the Preferential Procurement Policy Framework Act (Act 5 of 2000) for and Preferential Procurement Regulation, 2022. See section **T2.2.2, Form B** for the Preference model.

Specific Goals

In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in section C2.29 above as may be supported by proof/ documentation stated in the conditions of this tender:

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

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

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

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system)	Percentage ownership equity (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
I. Historically Disadvantaged Individuals (HDI)	8		
II. Who is female	5		
III. Who has a disability	2		
IV. Specific goal: Youth	2		
V. Specific goal: Locality promotion of enterprises located in **Nkangala District Municipality** of **Mpumalanga Province**	3		

Bidders who wish to claim points in terms of table 2.12 below need to provide proof for each point claimed as guided below:

- .
  - Historically Disadvantaged Individuals (HDI) – **Attach copy of Identity Document (ID) and company registration document**
  - Who is female- Attach copy of Identity Document (ID) and company registration document
  - Who has a disability – **Attach a certified copy or original doctor's letter confirming the disability**
  - Who is youth (A person that is not older than 35 years on the closing date of a bid) **Attach copy of Identity Document (ID) and company registration document**
  - Specific goal: **Locality – promotion of enterprises located in a Nkangala District Municipality in Mpumalanga Province**
    a) a valid municipal services account (water, sanitation, rates and electricity) in the name of the bidder/s or active director/s **or**

b) a valid lease agreement from the lessor **or**
a letter on the letterhead of the ward councillor/traditional authority/council that must be signed, stamped and dated

C.3.13	**Acceptance of tender offer:**	A Tender Offer will only be accepted on condition that such acceptance is not prohibited in terms of Clause 44 of the Supply Chain Management Regulations published in terms of the Public Finance Management Act, 2003.
C.3.17	**Provide copies of the contract**	One signed copy of the contract shall be provided by the Employer to the successful Tenderer.

	ADDITIONAL CONDITIONS OF TENDER
The additional conditions of Tender are:	
	Compliance with Occupational Health and Safety Act 1993 Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2014 issued in terms of Section 43 of the Act. 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 **Contractor** shall submit, a detailed Health and Safety Plan in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations.
	Tenderers are to note that the Contractor is required to ensure that all Sub-contractorss or others engaged in the performance of the Contract also comply with the above requirements. The Contractor shall prepare and maintain a Health and Safety File in respect of the project, which shall be available for inspection on Site at all times and handed over to the Employer on Final Completion of the project. The Contractor is required to submit to the Employer the Occupational Health and Safety Agreement (included **in Part C1.4** of the Contract Document) and a letter of good standing from the Compensation Commissioner, or a licensed compensation insurer, within 14 days after the Commencement Date of the Contract.

CIDB STANDARD CONDITIONS OF TENDER

SECTION T1.2.3: CIDB STANDARD CONDITIONS OF TENDER

The conditions of tender are the Standard Conditions of Tender (August 2019) as contained in Annex C of the Construction Industry Development Board (CIDB) Standard for Uniformity in Engineering and Construction Works Contracts

TABLE OF CONTENTS

C.1 GENERAL……24

C.1.1 Actions ……24
C.1.2 Tender documents……24
C.1.3 Interpretation……24
C.1.4 Communication and Employer's agent……25
C.1.5 Cancellation and Re-Invitation of Tenders……25
C.1.6 Procurement Procedures……25

C.2 TENDERER'S OBLIGATIONS…… 26

C.2.1 Eligibility…… 26
C.2.2 Cost of tendering…… 26
C.2.3 Check Documents …… 27
C.2.4 Confidentiality and copyright of documents…… 27
C.2.5 Reference documents…… 27
C.2.6 Acknowledge addenda…… 27
C.2.7 Clarification meeting…… 27
C.2.8 Seek Clarification…… 27
C.2.9 Insurance…… 27
C.2.10 Pricing of the Tender offer…… 27
C.2.11 Alterations to documents …… 28
C.2.12 Alternative tender offers…… 28
C.2.13 Submitting a tender offer…… 29
C.2.14 Information and data to be completed in all aspects…… 29
C.2.15 Closing time…… 29
C.2.16 Tender offer validity…… 29
C.2.17 Clarification of tender offer after submission…… 29
C.2.18 Provide other material…… 29
C.2.19 Inspections, tests and analysis…… 30
C.2.20 Submit securities, bonds, policies, ect…… 30
C.2.21 Check Final draft…… 30
C.2.22 Return of other tender documents…… 30
C.2.23 Certificates…… 30

C.3 THE EMPLOYER'S UNDERTAKINGS…… 30

C.3.1 Respond to requests from the tenderer…… 30
C.3.2 Issue Addenda…… 30
C.3.3 Return late tender offers…… 30
C.3.4 Opening of tender submissions…… 31
C.3.5 Two-envelope system…… 31
C.3.6 Non-disclosure…… 31
C.3.7 Grounds for rejection and disqualification…… 31

C.3.8	Test for responsiveness……	31
C.3.9	Arithmetical errors, omissions and discrepancies……	32
C.3.10	Clarification of a tender offer……	32
C.3.11	Evaluation of tender offers……	32
C.3.12	Insurance provided by the Employer……	36
C.3.13	Acceptance of tender offer……	36
C.3.14	Prepare contract documents……	37
C.3.15	Complete adjudicator's contract……	37
C.3.16	Notice to unsuccessful tenderers……..	37
C.3.17	Provide copies of the contracts……	37
C.3.18	Provide written reasons for actions taken……	37

Annex C

Standard Conditions of Tender

C.1 General

Part T1. C.1.1 Actions

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

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

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

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

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

C.1.2 Tender Documents

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

Part T2. C.1.3 Interpretation

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

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

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

a) **conflict of interest** means any situation in which:

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

b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;
c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;

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

Part T3. C.1.4 Communication and employer's agent

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

Part T4. C.1.5 Cancellation and Re-Invitation of Tenders

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

a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;

b) funds are no longer available to cover the total envisaged expenditure; or

c) no acceptable tenders are received.

d) there is a material irregularity in the tender process.

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

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

Part T5. C.1.6 Procurement procedures

1. C.1.6.1 General

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

2. C.1.6.2 Competitive negotiation procedure

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

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

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

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

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

3. C.1.6.3 Proposal procedure using the two stage-system

A. C.1.6.3.1 Option 1

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

B. C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

Part T6. C.2.1 Eligibility

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

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

Part T7. C.2.2 Cost of tendering

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

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

Part T8. C.2.3 Check documents

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

Part T9. C.2.4 Confidentiality and copyright of documents

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

Part T10. C.2.5 Reference documents

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

Part T11. C.2.6 Acknowledge addenda

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

Part T12. C.2.7 Clarification meeting

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

Part T13. C.2.8 Seek clarification

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

Part T14. C.2.9 Insurance

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

Part T15. C.2.10 Pricing the tender offer

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

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

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

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

Part T16. C.2.11 Alterations to documents

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

Part T17. C.2.12 Alternative tender offers

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

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

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

Part T18. C.2.13 Submitting a tender offer

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

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

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

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

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

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

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

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

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

Part T19. C.2.14 Information and data to be completed in all respects

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

Part T20. C.2.15 Closing time

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

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

Part T21. C.2.16 Tender offer validity

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

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

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

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

Part T22. C.2.17 Clarification of tender offer after submission

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

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

Part T23. C.2.18 Provide other material

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

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

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

Part T24. C.2.19 Inspections, tests and analysis

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

Part T25. C.2.20 Submit securities, bonds and policies

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

Part T26. C.2.21 Check final draft

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

Part T27. C.2.22 Return of other tender documents

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

Part T28. C.2.23 Certificates

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

C.3 The employer's undertakings

Part T29. C.3.1 Respond to requests from the tenderer

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

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

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

Part T30. C.3.2 Issue Addenda

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

Part T31. C.3.3 Return late tender offers

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

Part T32. C.3.4 Opening of tender submissions

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

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

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

Part T33. C.3.5 Two-envelope system

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

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

Part T34. C.3.6 Non-disclosure

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

Part T35. C.3.7 Grounds for rejection and disqualification

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

Part T36. C.3.8 Test for responsiveness

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

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

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

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

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

Part T37. C.3.9 Arithmetical errors, omissions and discrepancies

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

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

a) the gross misplacement of the decimal point in any unit rate;
b) omissions made in completing the pricing schedule or bills of quantities; or
c) arithmetic errors in:

(i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or (ii) the summation of the prices.

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

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

a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

Part T38. C.3.10 Clarification of a tender offer

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

Part T39. C.3.11 Evaluation of tender offers

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

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

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

The activities associated with evaluating tender offers are as follows:

a) Open and record tender offers received
b) Determine whether or not tender offers are complete
c) Determine whether or not tender offers are responsive
d) Evaluate tender offers
e) Determine if there are any grounds for disqualification

f) Determine acceptability of preferred tenderer
g) Prepare a tender evaluation report
h) Confirm the recommendation contained in the tender evaluation report

4. C.3.11.1 General

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

Part T40. C.3.12 Insurance provided by the employer

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

Part T41. C.3.13 Acceptance of tender offer

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

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

Part T42. C.3.14 Prepare contract documents

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

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

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

Part T43. C.3.15 Complete adjudicator's contract

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

Part T44. C.3.16 Registration of the award

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

Part T45. C.3.17 Provide copies of the contracts

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

Part T46. C.3.18 Provide written reasons for actions taken

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

PART T2: RETURNABLE DOCUMENTS

SECTION T2.1: LIST OF RETURNABLE DOCUMENTS

THE TENDERER MUST SUBMIT THE FOLLOWING DOCUMENTS WITH THIS TENDER. IF THE DOCUMENTS ARE NOT INCLUDED IN THE DOCUMENT, THE DEPARTMENT WILL NOT CONSIDER THIS TENDER.

Clause referred to in Standard Conditions of Tender	Document
C.2.1	Tenderers shall provide their CRS Number of registered Contractor as well as JV Partner*. Recent printout from CIDB website indicating the CRS number will also be accepted. **NB: In cases where a bidder intends to form a Joint Venture, the CRS number/s must be filled in below i.e. the Lead partner and Joint Venture partner/s:** **<u>Tenderer/Leading JV Partner</u>** CRS Number: _____ Name of Company: _____ **<u>JV Partner</u>** CRS Number: _____ Name of Company: _____ **<u>JV Partner</u>** CRS Number: _____ Name of Company: _____ All contractors, even tendering in JV, must be registered with CIDB. The lead partner has a contractor grading designation in the **3GB or HIGHER** class of construction work; or **not lower than one level below the required grading designation in the class of works construction works under considerations and possess the required recognition status.** ***NB: Recent printout from CIDB website indicating the CRS number will also be accepted.**
C.2.7	Attendance of the Compulsory Tender Clarification meeting as stipulated.
C.2.11	"In the event of mistakes having been made on prices inclusive of VAT on the **FORM OF OFFER** it must be crossed out in ink at each and every price alteration and be accompanied by an initial". Corrections in terms of price must not be made by means of a correction fluid such as Tipp-Ex or similar product. If correction fluid has been used on any specific item price, such item will not be considered. No correction fluid must be used in a Bill of Quantities where prices are calculated to arrive at a total amount. If correction fluid has been used the Tender as a whole will not be considered. **The Department will reject the bid if the above conditions are not adhered to**
C.2.13.4	Only duly authorised signatories must sign the original and all copies of the tender offer where required in terms of 2.13.3. In the case of a **ONE-PERSON CONCERN** submitting a tender, this shall be clearly stated on the company letter head. In case of a **COMPANY** submitting a tender, include a copy of a resolution by its board of directors authorising a director or any other official of the company to sign

	the documents on behalf of the company. In the case of a **CLOSED CORPORATION** submitting a tender, include a copy of a resolution by its members authorising a member or any other official of the corporation to sign the documents on each member's behalf. In the case of a **PARTNERSHIP** submitting a tender, all the partners shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case proof of such an authorisation shall be included in the Tender. In the case of a **JOINT VENTURE** submitting a tender, include a resolution of each company of the Joint Venture together with a resolution by its members authorising a member of the Joint Venture to sign the documents on behalf of the Joint Venture." **i.e.** the **Joint Venture must submit three Letters** of Authority as per the aforesaid Joint Venture requirement. **Accept that failure to submit proof of Authorisation to sign the tender shall result in a Tender Offer being regarded as non-responsive.**
C3.8	Form of offer must be fully completed and signed by duly authorized person.
Additional mandatory requirement	**Letter of good standing from Department of Labour (COIDA)** The Tenderer is registered and in good standing with respect to Compensation for Occupational Injuries and Diseases Act (COIDA) with the Department of Labour or with a licensed compensation insurer. The Tenderer must submit the letter of good standing for **building and construction related projects.** In the event of the **Tenderer being a joint venture/consortium**, the letter of good standing for **building and construction related projects of individual members** of the joint venture/consortium **must** be provided.
	Professional Engineer/Technologist Bidder to submit valid proof or copy of registration certificate/privy seal and a detailed signed CV of the following professionally registered persons: Civil or Structural Engineer/Technologist registered with ECSA
	ADDENDA/ADDENDUMS All addendums must be completed, returned and submitted with the tender document(If applicable)
	VALID NHBRC REGISTRATION CERTIFICATE The tenderer must be registered and having a valid NHBRC certificate

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (*NAME OF DEPARTMENT/ PUBLIC ENTITY*)					
BID NUMBER:	**CONMP0012((2026/2027**)	CLOSING DATE:	**08 December 2026**	CLOSING TIME:	**11AM**
DESCRIPTION	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M2 FARM HOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE**				

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*

Department Land Reform and Rural Development
17 Van Rensburg Street, Bateleur Building
6th Floor, Block E
Nelspruit
1200
Sixth Floor Tender Box
SUBMITTING OF TENDERS – PLEASE NOTE: Tenders can only be submitted in the Tender Box in Nelspruit – MPUMALANGA

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**	
CONTACT PERSON	Mr. Banele Ramayimi	CONTACT PERSON	Sydney Ndima
TELEPHONE NUMBER	013 754 8066	TELEPHONE NUMBER	013 754 8116
E-MAIL ADDRESS	Banele.Ramanyimi@dlrrd.gov.za	E-MAIL ADDRESS	sydney.ndima@dlrrd.gov.za

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

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

*i) **ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?***	☐Yes ☐No [IF YES ENCLOSE PROOF]	*ii)**ARE YOU A FOREIGN BASED SUPPLIER FOR** THE GOODS /SERVICES /WORKS OFFERED?*	☐Yes ☐No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

PART B
TERMS AND CONDITIONS FOR BIDDING

1.	**BID SUBMISSION:**
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2.	**ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**
1.3.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4.	**THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).**
2.	**TAX COMPLIANCE REQUIREMENTS**
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3	APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6	WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7	NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

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

SIGNATURE OF BIDDER: ……

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

(Proof of authority must be submitted e.g. company resolution)

DATE: ……..

TABLE OF CONTENT

SECTION T2.2.1: FORM A: SCHEDULE OF PROPOSED SUBCONTRACTORS

SECTION T2.2.2: FORM B: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 (SBD 6.1)

SECTION T2.2.3: FORM C: RECORD OF ADDENDA TO TENDER DOCUMENTS

SECTION T2.2.4: FORM D: AUTHORITY OF SIGNATORY

SECTION T2.2.5: FORM E: STATUS OF CONCERN SUBMITTING TENDER

SECTION T2.2.6: FORM F: BIDDER'S DISCLOSURE (SBD 4)

SECTION T2.2.7: FORM G: SCHEDULE OF PLANT AND EQUIPMENT

SECTION T2.2.8: FORM H: SCHEDULE OF WORK CARRIED OUT BY THE TENDERER

SECTION T2.2.9: FORM I: CERTIFICATE OF TENDERER'S VISIT TO THE SITE

SECTION T2.2.10: FORM J: KEY-PERSONNEL/ SUPERVISORY AND MANAGEMENT STAFF

SECTION T2.2.11: FORM K: QUALITY MANAGEMENT SYSTEMS

SECTION T2.2.12: FORM L: COMPLIANCE WITH OHSA (ACT 85 OF 1993)

SECTION T2.2.13: FORM M: CSD SUPPLIER NUMBER AND TAX COMPLIANCE PIN

SECTION T2.2.14: FORM N: PRELIMINARY PROGRAMME

SECTION T2.2.15: FORM O: ESTIMATED MONTHLY EXPENDITURE

SECTION T2.2.16: FORM P: ALTERATIONS BY TENDERER

SECTION T2.2.17: FORM Q: SUPPLIER MAINTENANCE FORM

SECTION T2.2.18: FORM R: DECLARATION CERTIFICATE FOR LOCAL LABOUR PARTICIPATION

SECTION T2.2.19: FORM S: TENDERERS PERFORMANCE EVALUATION FORM

SECTION T2.2.20: FORM T: COMPULSORY ENTERPRISE QUESTIONNAIRE

SECTION T2.2: RETURNABLE SCHEDULES

SECTION T2.2.1: FORM A: SCHEDULE OF PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors for work in 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. The contractor is to obtain approval if he/she intends to change the submitted list of Subcontractors.

In Bids where subcontractors are involved each party must submit a separate proof of TCS / PIN / CSD number together with the bid. Where no TCS is available but the subcontractor is registered on the Central Supplier Database (CSD), a CSD number must be provided.

1. Will any portion of the contract be sub-contracted? Yes ☐ / No ☐

2. If yes, indicate:

   (i) The name of the proposed sub-contractor, the nature and extent of the work to be sub-contracted and the previous experience with the sub-contractor in the table below.

	Name and address of proposed Sub-contractor	Nature and extent of work	Previous experience with Sub-contractor
1.			
2.			
3.			
4.			

SUB-CONTRACTING

1. Will any portion of the contract be sub-contracted? Yes ☐ / No ☐

2. If yes, indicate:

   (i) What percentage of the contract will be Sub-contracted? ……%

   (ii) The name/s of the sub-contractor(s)? (1) ……

   (2) ……

   (3) ……

   (4) ……

(iii) The B-BBEE status level of the sub-contractor(s)? ……..

(iv) Whether the sub-contractor(s) is/are an EME? Yes ☐ / No ☐

Signature of person authorised to sign the tender: …….

Date: …….

SECTION T2.2.2: FORM B: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 (SBD6.1)

This preference form must form part of all tenders invited. It contains general informationand serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. DEFINITIONS

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of tender invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions;

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000); and

(f) "Historically Disadvantaged individuals" means a person historically disadvantaged by unfair discrimination on the basis of race: Provided that a person historically disadvantaged on the basis of race refers to Africans, Coloureds, Indians and people of Chinese descent who are South African citizens by birth or descent; or who became citizens of the Republic of South Africa by Naturalisation -

- Before 27 April 1994; or
- On or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date.

2. GENERAL CONDITIONS

2.1 The following preference point systems are applicable to invitations to tender:

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

2.2 To be completed by the organ of state

a) The applicable preference point system for this tender is the 80/20 preference point system.

b) 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

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

(a) Price; and

(b) Specific Goals.

2.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

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

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

2.6 Tenderers that fail to claim points for specific goals or that fail to fully complete the table in paragraph 2.12 below, will not be awarded points for specific goals.

2.7 Tenderers that make a calculation error when claiming points as per the table in paragraph 2.12 below, will not be awarded points for specific goals. Please take note of the examples on how to calculate points for specific goals as per paragraph 2.12 below.

2.8 Tenderers that fail to submit the correct SBD 6.1 form as issued by the Department Land Reform and Rural Development, will not be awarded points for specific goals.

2.9 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2.10 Tenderers who wish to claim points in terms of the table in paragraph 2.12 below need to provide proof for each point claimed as guided below:

2.10.1 Historically Disadvantaged individuals (HDI):

- **Attach a copy of Identity Document (ID) and company registration document.**

2.10.2 Who is female:

- **Attach a copy of Identity Document (ID) and company registration document.**

2.10.3 Who has a disability:

- **Attach a certified copy or original doctor's letter confirming the disability.**

2.10.4 Who is youth (a person that is not older than 35 years on the closing date of a bid):

- **Attach a copy of Identity Document (ID) and company registration document.**

2.11 The Department will use the Central Supplier Database and documents submitted by the tenderer to verify the points claimed for specific goals.

2.12 Specific goals for the tender and points claimed are indicated per the table below.

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

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

The specific goals allocated points in terms of this tender	**Number of points allocated (80/20 system)**	**Percentage ownership equity (To be completed by the tenderer)**	**Number of points claimed (80/20 system) (To be completed by the tenderer)**
I. HDI	8		
II. Who is female	5		
III. Who has a disability	2		
IV. Specific goal: Who is youth	2		
V. Specific goal: Locality **(Promotion of enterprises located in Nkangala District Municipality in the Mpumalanga Province)**	3		

The number of points claimed for specific goals, are calculated as follow:

(I) A maximum of 8 points may be allocated to tenderers who had no franchise in national elections before the 1983 and 1993 Constitution, on the following basis:

- **Percentage ownership equity** x 8 ÷ 100 = number of points claimed.

(II) A maximum of 5 points may be allocated for to tenderers who is female, on the following basis:

- **Percentage ownership equity** x 5 ÷ 100 = number of points claimed.

(III) A maximum of 2 points may be allocated to tenderers who has a disability, on the following basis:

- **Percentage ownership equity** x 2 ÷ 100 = number of points claimed.

(IV) A maximum of 2 points may be allocated to tenderers who are youth, on the following basis:

- **Percentage ownership equity** x 2 ÷ 100 = number of points claimed.

(V) A maximum of 3 points may be allocated to tenderers for locality, on the following basis:

- **Percentage ownership equity** x 3 ÷ 100 = number of points claimed.

2.13 It is important to note that failure by a tenderer to complete the table in paragraph 2.12 in full, will result in points for specific goals not to be allocated.

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 PREFERENCE POINT SYSTEMS

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

80/20

$$Ps = 80\left(1 + \frac{Pt - P\,min}{P\,min}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. POINTS AWARDED FOR PRICE

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

80/20

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in the table in paragraph 2.12 above as may be supported by proof/ documentation stated in the conditions of this tender.

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

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

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

then the organ of state must indicate the points allocated for specific goals for both the90/10 and 80/20 preference point system.

4.3 A consortium or joint venture may, based on the percentage of the contract value managed or executed by their members, be entitled to claim points in respect of specific contract participation goals.

4.4 A tenderer will not be awarded points for HDI if it is indicated in the tender documents that such a tenderer intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for the same number or more points for equity ownership.

4.5 A tenderer awarded a contract as a result of preference for contracting with, or providing equity ownership to a HDI, may not subcontract more than 25% of the value of the contract to a tenderer who is not a HDI or does not qualify for the same number or more preference for equity ownership.

5. SUB-CONTRACTING

5.1 Will any portion of the contract be sub-contracted?
(***Tick applicable box***)

YES		NO	

5.1.1 If yes, indicate:

i) What percentage of the contract will be subcontracted: ..... %

ii) The name of the sub-contractor: ……..

iii) Points claimed for HDI by the sub-contractor: .....……..

6. DECLARATION WITH REGARD TO COMPANY/FIRM

6.1. Name of company/firm: ……...

6.2. Company registration number: …….....

6.3. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

6.4. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

i) The information furnished is true and correct;

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

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered asa result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied;and

(e) forward the matter for criminal prosecution, if deemed necessary.

.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: .....

DATE: .....

ADDRESS: .....

.....

.....

.....

SECTION T2.2.3: C: RECORD OF ADDENDA TO TENDER DOCUMENTS

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

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

Attach additional pages if more space is required.

Signature of person authorised to sign the tender: .....

Date:

SECTION T2.2.4: FORM D: AUTHORITY OF SIGNATORY- EXAMPLE ONLY

Signatories for companies, closed corporations and partnerships must establish their authority **BY ATTACHING TO THIS FORM, ON THEIR ORGANISATIONS'S LETTERHEAD S T A T I O N E R Y**, a copy of the relevant resolution by their Board of Directors, Members or Partners, duly signed and dated. **PLEASE DO NOT COMPLETE THE BELOW EXAMPLE (TEMPLATE)**

An **EXAMPLE** is shown below for a COMPANY:

MABEL HOUSE (Pty) Ltd

By resolution of the Board of Directors taken on *20 May 2000, MR A.F JONES*

has been duly authorised to sign all documents in connection with Contract no CON 0005, and any contract which may arise therefrom, on behalf of *Mabel House (Pty) Ltd.*

SIGNED ON BEHALF OF THE COMPANY:	(Signature of Managing Director)
IN HIS CAPACITY AS:	Managing Director
DATE:	20 May 2000
SIGNATURE OF SIGNATORY:	Signature of *A.F Jones)*

As witnesses:

1. .....

2. .....

Example

Signature of person authorised to sign the tender: .....

Date: .....

N.B Joint Venture must submit 3 x Letters of Authority in line with clause C.2.13.4 – Tender Data

SECTION T2.2.5: FORM E: STATUS OF CONCERN SUBMITTING TENDER

1. GENERAL

State whether the tenderer is a company, a closed corporation, a partnership or a one-man concern. (Make an X in the appropriate space below)

Company ☐ Closed Corporation ☐ Partnership ☐

One-man concern ☐ Joint Venture ☐

2. INFORMATION TO BE PROVIDED

(Block letters)

2.1 If the tenderer is a Company:

(a) Affix a certified copy of the Certificate of Incorporation to this page.
(b) List the Directors.

2.2 If the tenderer is a Closed Corporation:

(a) Affix a certified copy of the Founding Statement to this page.
(b) List the Members.

2.3 If the tenderer is a Partnership:

List the partners.

2.4 If the tenderer is a One-man concern:

Provide the full name and ID number of the person.

2.5 If the tenderer is a Joint Venture:

(a) Affix a certified copy of the Founding Statement of each partner of the JV to this page.
(b) Affix JV agreement.

3. REGISTERED FOR VAT PURPOSES IN TERMS OF THE VALUE-ADDED TAX ACT, (Act Nr. 89 of 1991) (Make an X in the appropriate space below)

Yes ☐ / No ☐ Registration nr.: .....

Signature of person authorised to sign the tender: .....

Date: .....

SECTION T2.2.6: FORM F: BIDDER'S DISCLOSURE (SBD 4)

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest1 in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	**Identity Number**	**Name of State institution**

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

[1] the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.2.1 If so, furnish particulars:
……
……

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:
……
……

3 DECLARATION

I, the undersigned, (name)……. in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;
3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium2 will not be construed as collusive bidding.
3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the

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

Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

…… ……
Signature Date

…… ……
Position Name of bidder

SECTION T2.2.7: FORM G: SCHEDULE OF PLANT AND EQUIPMENT

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

(a) Details of major equipment that is owned by and immediately available for this contract.
Proof of ownership or must be attached.

Quantity	Description, size, capacity, etc.
1	

Attach additional pages if more space is required.

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

Proof of lease agreement must be attached or a letter of intent from a hiring company.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

Signature of person authorised to sign the tender: .....

Date: .....

SECTION T2.2.8: FORM H: SCHEDULE OF WORK CARRIED OUT BY THE TENDERER

The tenderer shall list in the spaces provided below the last **SEVEN YEARS (07)** similar nature contracts of similar scope, nature and size awarded to the contractor. This information shall be deemed to be material to the award of this tender.

NB: Bidders are required to attach completion certificates. Failure to submit / attach completion certificates for the projects will result in the bidder not being awarded points.

Employer (Name, Tel No, Fax No)	Consulting Engineer (Name, Tel No, Fax No)	Nature Of Work (Type of building works) Example steel frame structure, brickwork etc	Value Of Work	Year Completed
LIST COMPLETED PROJECTS IN THE LAST SEVEN YEARS (07)				

Signature of person authorised to sign the tender: ....

Date: .....

SECTION T2.2.9: FORM I: CERTIFICATE OF TENDERER'S VISIT TO THE SITE

This is to certify that I, ...

Representative of (Tenderer) .....

Of (address) .....

.....

.....

Telephone No: .....

Fax No: .....

Visited and carefully examined the Site on the ..... day of ..... 20 .....

In the company of (Engineer's representative) .....

Signature (Tenderer's Representative) .....

Signature (Engineer's Representative) .....

SECTION T2.2.10: FORM J: KEY-PERSONNEL/ SUPERVISORY AND MANAGEMENT STAFF

The Tenderer shall, submit the names of all management and supervisory staff that will be employed to supervise the Contract. **Please attach signed CV's and copies of qualification of the proposed key personnel.** The Tenderer shall also include an organogram of the project team and the company structure.

FAILURE TO ATTACH SIGNED CV'S AND COPIES OF QUALIFICATIONS WILL RESULT IN THE BIDDER NOT BEING AWARDED POINTS

		Weight
POSITION	**CIVIL/STRUCTURAL ENGINEER**	**20**
Name and Surname		
Is the proposed Professional Civil or Structural Engineer/|Technologist Registered as (PrEng/PrTech ECSA)	**YES / NO:** **ECSA REGISTRATION NUMBER:**	
Indicate the No. of Years of Experience in the Built Environment		
Formal Civil Engineering Qualifications: **(NQF Level 6) or higher**		
Currently Employed by Tenderer (Y/N)		
Signature		
POSITION	**CONSTRUCTION HEALTH & SAFETY OFFICER**	**15**
Name and Surname		
Is the proposed Construction Health and Safety Officer registered CHSO/CHSM **with SACPCMP.**	**YES / NO:** **SACPCMP REGISTRATION NUMBER:**	
Indicate the No. of Years of Experience in the Built Environment		
Formal Health and Safety Qualifications:**(NQF Level 5) or higher**		
Currently Employed by Tenderer (Y/N)		
Signature		
POSITION	**SITE FOREMAN**	**10**
Name and Surname		
Indicate the No. of Years of Experience in the Built Environment		
Formal Built Environment Qualifications: **(NQF Level 5) or higher**		
Currently Employed by Tenderer (Y/N)		
Signature		

Signature of person authorised to sign the tender: . .....

Date: .....

SECTION T2.2.11: FORM K: QUALITY MANAGEMENT SYSTEMS

Briefly describe the construction quality system incorporated by the tenderer in his organisation and which will be applicable to this Contract.

	Internal	External	Name of responsible Company /or Person (In case of Person give years' experience and qualification)

Signature of person authorised to sign the tender: ....

Date: .....

SECTION T2.2.12: FORM L: COMPLIANCE WITH OHSA (ACT 85 OF 1993)

Tenderers are required to satisfy the Employer and the Engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

1. Is the Contractor familiar with the OHSA (ACT 85 of 1993) and its Regulations? Yes ☐ / No ☐

2. Who will prepare the Contractor's Health and Safety Plan? (Section T2.2.18 – Form R) (Provide a copy of the person/s curriculum vitae/s or company profile). Yes ☐ / No ☐

   _____

3. Does the Contractor have a health and safety policy? (if yes, provide a copy). How is this policy communicated to all employees? Yes ☐ / No ☐

   _____

4. Does the Contractor keep records of safety aspects of each construction site? If yes, what records are kept? Yes ☐ / No ☐

   _____

5. Does the Contractor conduct monthly safety meetings? If yes, who is the chairperson of the meeting, and who attend these meetings? Yes ☐ / No ☐

   _____

6. Does the Contractor have a safety officer in his employment, responsible for the overall safety of his company?
   If yes, please explain his duties and provide a copy of his CV. Yes ☐ / No ☐

   _____

7. Does the Contractor have trained first aid employees? If yes, indicate, who. Yes ☐ / No ☐

   _____

8. Does the Contractor have a safety induction training programme in place? (If yes, provide a copy) Yes ☐ / No ☐

Signature of person authorised to sign the tender: ....

Date: .....

SECTION T2.2.13: FORM M: CSD SUPPLIER NUMBER AND TAX COMPLIANCE PIN

Bidders registered on the **National Treasury Central Supplier Database (CSD**) are required to submit their unique **Personal Identification Number (PIN)** issued by SARS in the space provided below as stipulated in Clause F2.28.

Bidders may also submit a **printed TCS** together with the bid.

In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party **must** submit a separate proof of **TCS / PIN / CSD** number.

Where no TCS is available but the bidder is registered on the Central Supplier Database (CSD), a **CSD number** must be provided

Alternatively, the tenderer must submit a valid tax clearance certificate together with the Bid, including Valid Tax Clearance Certificates for the Joint Venture partner/s and Subcontractors proposed.

The certificates may be stapled into the tender document without taking the tender document apart or may be attached in a separate file to the tender document.

If the documents are not included in the document, the tender will be regarded as being NON-RESPONSIVE.

Tenderer/Leading JV Partner

Name of Company:	
CSD Supplier Number: (Master Registration Number)	
Tax Compliance PIN number:	

JV Partner 1

Name of Company:	
CSD Supplier Number: (Master Registration Number)	
Tax Compliance PIN number:	

JV Partner 2

Name of Company:	
CSD Supplier Number: (Master Registration Number)	
Tax Compliance PIN number:	

***NB: All contractors, even tendering in JV, must be registered with National Treasury Central Suppler Database**

SECTION T2.2.14: FORM N: PRELIMINARY PROGRAMME

The Tenderer shall attach a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this Contract. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of the Tender.

Note: The programme must be based on the completion period as specified in the Contract Data.

SECTION T2.2.15: FORM O: ESTIMATED MONTHLY EXPENDITURE

The tenderer shall, in the table below, state the estimated cash flow on the contract based on his preliminary programme, his tendered unit rates and his submission of payment certificates to the Employer. Amounts for Contract Price Adjustment shall not be included.

Payment Certificate No.	Amount (VAT Included)					
	a	B	a-b			Cumulative cash flow
	Payments Received	Expenditure		Net cash flow		
1	None		d		**j=d**	
2			e		k=j+e	
3			f		l=k+f	
4			g		m=l+g	
5			h		n=m+h	
6			etc		etc	
7						
8						
9						
10						
Etc						
**Maximum negative cash flow: take the largest negative number in the last column and write it here >>>>

SECTION T2.2.16: FORM P: ALTERATIONS BY TENDERER

Should the Tenderer desire to have any departures from, or modifications to the General Conditions of Contract, Specifications, Bill of Quantities or Drawings considered, or to qualify his tender in any way, he shall set out his proposals clearly hereunder or alternatively state them in a covering letter attached to his tender and referred to hereunder.

PAGE	DESCRIPTION

Signature of person authorised to sign the tender: ....

Date: .....

SECTION T2.2.17: FORM Q: SUPPLIER MAINTENANCE FORM

SUPPLIER MAINTENANCE

BAS ☐ **LOGIS** ☐

OFFICE ☐

System User Only			
Captured By:			
Captured Date:			
Authorised By:			
Date Authorised:			
Safety Web Verification			
	YES		NO

The Director General: Department of Land Reform and Rural Development

I/We hereby request and authorise you to pay any amounts, which may accrue to me/us to the credit of my/our account with the mentioned bank.

I/we understand that the credit transfers hereby authorised will be processed by computer through a system known as "ACB - Electronic Fund Transfer Service", and I/we understand that not additional advice of payment will be provided by my/our bank, but that the details of each payment will be printed on my/our bank statement or any accompanying voucher. (This does not apply where it is not customary for banks to furnish bank statements).

I/we understand that the department will supply a payment advice in the normal way, and that it will indicate the date on which the funds will be made available on my/our account.

This authority may be cancelled by me/us by giving thirty days' notice by prepaid registered post.

Please ensure information is valid as per required bank screens.

I/We understand that bank details provided should be exactly as per the records held by the bank.

I/We understand that the department will not assume responsibly for any delayed payments, as a result of incorrect information supplied.

Company / Personal Details	
Registered name	
Trading name	
Tax number	
Vat number	
Title	
Initials	
First name	
Surname	

Address Details	
Postal Address Line 1	
Postal Address Line 2	
Physical Address Line 1	
Physical Address Line 2	
Postal Code	

New Detail			
☐ New Supplier Information		☐ Update Supplier Information	

Supplier type	☐ Individual	☐ Department		Department number	☐
	☐ Company	☐ Trust			
	☐ CC	☐ Other		Other Specify	☐
	☐ Partnership				

Supplier Account Details			
(This field is compulsory and should be completed by a bank official from the relevant bank.)			
Account name			
Account number			
Branch name			
Branch number			
Account type		Cheque Account	
		Savings Account	
		Transmission Account	
		Bond Account	
		Other (Please Specify)	
ID Number			
Passport Number			
Company Registration Number			
*CC Registration			
*Please include CC/ CK where applicable			
Practise Number			
When the bank stamps this entity maintenance form, they confirm that all the information completed by the entity is correct.	Bank stamp It is hereby confirmed that these details have been verified against the following screens: **ABSA** – CIF screen **FNB** – Hogans system on the CIS4 **STD** Bank – Look-up-screen **Nedbank** – Banking Platform under the Client Details tab		

Contact Details			
Business			
	Area Code	*Telephone Number*	*Extension*
Home			
	Area Code	*Telephone Number*	*Extension*
Fax			
	Area Code	*Telephone Number*	
Cell			
	Cell Code	*Cell Number*	
E-mail Address			
Contact Person			

	Supplier details	**Departmental sender details**
Signature		
Print Name		
Rank		
Date (dd/mm/yyyy)		

Address of Land Reform and Rural Development where form is submitted from:

SECTION T2.2.18: FORM R: DECLARATION CERTIFICATE FOR LOCAL LABOUR PARTICIPATION

1. Definitions

1.1 Targeted Labour

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

1.2 Target Group

For this project, the contract does not specify the target group based on gender, age or disability. However, specifically excluded from the Target Group is the contractor's own staff unless such staff are also from the Target Area.

1.3 Target Area

FOR THIS PROJECT, THE TARGET AREA IS DEFINED AS EMAKHAZENI LOCAL MUNICIPALITY WITHIN NKANGALA DISTRICT MUNICIPALITY IN MPUMALANGA PROVINCE.

1.4 Labour Maximisation

Labour maximisation shall contribute a minimum of 80%.

2. Conditions associated with the granting of preferences

The tenderer undertakes to:

1) engage one or more targeted labour in accordance with the provisions of the SANS 1914-4 as varied in section 3 hereunder;
2) accept the sanctions set out in Section 2 below, should such conditions be breached;
3) complete the Targeted Labour (CPG) calculation form contained in Section 5 below; and
4) complete the Supporting Contract Participation Goal Calculation contained in Section 6 below.

3. Variation to the targeted construction procurement specification SANS 1914-4

The variations to SANS 1914-4 are set out below. Should any requirements of the variations conflict with requirements of SANS 1914-4 the requirements of the variations shall prevail

Calculations shall be based as a % of targeted labour costs of the Tender Sum (excluding VAT) and not calculated in accordance with methods 1 or 2 in Annexure A of SANS 1914-4.

4. Sanctions

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

$$P = 0{,}50 \times \frac{(D - D_o)}{(100)} \times N_A$$

Where D = tendered Contract Participation Goal percentage.

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

N_A = Net Amount (Actual contract expenditure, excluding VAT)

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

P = Rand value of penalty payable

Tender Contract Participation Goal in respect of targeted labour

I/We hereby tender a Contract Participation Goal of ……% in compliance with the Employer's Socio-Economic Requirements.

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

Signature: .....

Name: .....

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

Telephone: .....

Fax: .....

5. Supporting Targeted Labour (CPG) calculation

TYPE OF TARGETED LABOUR	TOTAL ESTIMATED WORKING HOURS	RATE	TOTAL ESTIMATED WAGE COST
Permanent labour*			
Temporary labour			
SMME labour			
		Total	

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

SIGNED ON BEHALF OF THE TENDERER: .....

SECTION T2.2.19: FORM S: TENDERERS PERFORMANCE EVALUATION FORM

PROJECT PERFORMANCE EVALUATION FORM

Project Name of Tenderer: _____

Project name: _____

Project location: _____

Construction period: _____

Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Tenderer on the above-mentioned project, on which you were the principal agent, by inserting a score rate of 0 to 5 with 0 being unacceptable rate and 5 being excellent rate in the relevant box below:

	REMARKS BY CONSULTANT/COMPANY LISTED BY THE CONTRACTOR AS REFERANCE
1. Project performance/ time management/ programming	
2. Quality of Workmanship	
3. Resources Personnel	
4. Resources Plant	
5.Financial management/ payment of subcontractors/ cash flows etc	

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments: _____

D. My contact details are:

Telephone: _____ Cell phone: _____

Fax: _____E-mail: _____

Thus, signed at _____ on this _____ day of _____ 2024

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to contact the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points

SECTION T2.2.20: FORM T: COMPULSORY ENTERPRISE QUESTIONARE

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: CSD number:

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

Name*	**Identity number***	**Personal income tax number***

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

Section 6: Particulars of companies and close corporations

Company registration number:

Close corporation number:

Tax reference number:

Section 7: SBD4 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 8: SBD 6.1 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

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

Signed		Date	
Name		Position	
Enterprise name			

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PART C1: AGREEMENT AND CONTRACT DATA

C1.1 - FORM OF OFFER AND ACCEPTANCE

FORM OF OFFER AND ACCEPTANCE
(AGREEMENT)

OFFER

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

APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF 64M2 FARM HOUSE AT PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT IN EMAKHAZENI LOCAL MUNICIPALITY UNDER NKANGALA DISCTRICT MUNICIPALITY IN MPUMALANGA PROVINCE.

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

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

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

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

*(**Should there be a discrepancy between the amount in words and the amount in figures then the amount in figures shall govern**.)*

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s) of duly authorised				
Name(s)				
Capacity				
THE TENDERER (Name of tenderer/Bidder)				
Address of tenderer/Bidder				
WITNESS: Name and signature of witness			Date	

ACCEPTANCE

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

The terms of the contract, are contained in:

Part C1 Agreements and contract data, (which includes this agreement)

Part C2 Pricing data

Part C3 Scope of work

Part C4 Site information and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five (5) working days of the date of such receipt notifies the employer in writing of any reason why he/she cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signature(s)				
Name(s)				
Capacity				
for the Employer				
	(Name and address of employer)			
Name and signature of witness			Date	

SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the bid documents issued by the Employer prior to the bid closing date is limited to those permitted in terms of the Conditions of Bid.

2. A Bidder'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 bid 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 bid 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 _____

Subject _____

Details _____

4 **Subject** _____

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Bidder agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Bid Data and addenda thereto as listed in the Bid Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Bidder 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 bid documents and the receipt by the Bidder 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(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____
(Name and address of organisation)

Name and Signature
of Witness _____

Date _____

FOR THE EMPLOYER:

Signature(s) _____

Name(s) _____

Capacity _____

_____
(Name and address of organisation)

Name and Signature
of Witness _____

Date _____

C1.2 - CONTRACT DATA

CONTENTS

Item	Description	Page
1.	Conditions of Contract	51
2.	Amplifications of the General Conditions of Contract	51
3.	Data Provided by the Contractor	58
4.	Priority of Documents	58
5.	Appendix to the Contract Data	59

1. CONDITIONS OF CONTRACT

The conditions of contract are the General Conditions of Contract for Construction Works (3rd Edition 2015) published by the South African Institute of Civil Engineering, Private Bag X200, Halfway House, 1685, tel 011 805 5947.

The General Conditions of Contract make several references to the Contract Data. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

Where applicable, items of data given here below are cross-referenced to the sub clause in the General Conditions of Contract to which they apply.

2. AMPLIFICATIONS OF THE GENERAL CONDITIONS OF CONTRACT

2.1 General

The following clauses amplify the General Conditions of Contract and highlight areas in this document that require specific attention.

2.2 Data Provided by the Employer

2.2.1 Defects Liability Period (CL 1.1.1.13)

The Defects Liability Period is **52 calendar weeks** calculated from the date of the Certificate of Completion.

2.2.2 Time for Practical Completion (CL1.1.1.14)

This clause shall apply *mutatis mutandis* to any portion or phase of the Works that may be described in the scope of Works or in the Contract Data or agreed subsequently between the Contractor and the Employer, and committed to writing.

The time for achieving Practical Completion is **18 weeks** calculated from the Commencement Date, excluding special non-working days.

2.2.3 Employer (CL 1.1.1.15)

The Employer is: "**Department of Land Reform and Rural Development**
"

2.2.5 Delivery of Notices to the Employer (CL1.2.1.2)

The Employer's address for receipt of communications is:

Postal: 17 Van Rensburg Street, Bateleur Building, Nelspruit 1200
Telephone: 013 655 1000

2.2.6 Engineer (CL. 1.1.1.16)

'Engineer' means any person with specialized engineering skills who is appointed by the Employer

2.2.7 Delivery of Notice to Engineer (CL 1.2.1.2)

See clause 2.2.5

2.2.4 Pricing Strategy (CL 1.1.1.26)

The pricing strategy is the **Re-measurement Contract**.

2.2.8 Subcontracting (CL 4.4)

Delete the contents of Clause 4.4.1 and insert:

"The Contractor shall not subcontract more than 30 percent of the value of the Contract."

2.2.9 Information in respect of Construction Equipment (CL 4.9.1)

The Contractor shall deliver to the Engineer, on a monthly basis, a detailed inventory of Construction Equipment kept on Site, full particulars given for each day of the month. Distinction shall be made between Owned Equipment and Hired Equipment as well as Equipment in working order and Equipment out of order. Such inventory shall be submitted by the seventh day of the month following the month to be reported.

2.2.10 Information in respect of Employees (CL 4.10.2)

The Contractor shall deliver to the Engineer, on a monthly basis, a return in detail of supervisory staff and the number of categorized classes of labour employed each day for the said period by the Contractor for execution of the Contract. Such return shall be submitted by the seventh day of the month following the month to be reported.

2.1.11 Contractor's Superintendence (CL 4.12)

Add the following sub-clause 4.12.4 to Clause 4.12:

"Where a form is included in the Appendix to the Contract Data for this purpose, the Bidder shall fill in the name of the person he proposes to entrust with the post of Contractor's Site Agent on this Contract in the space provided therefor. Previous experience of this person on work of a similar nature during the past five (5) years is to be entered in the list.

The Contractor's Site Agent shall be on Site at all times when work is being performed.

The person as approved of by the Engineer in writing shall not be replaced or removed from Site without the written approval of the Engineer."

2.2.12 Documentation required before Commencement with Works Execution (CL 5.3.1)

The documentation required before commencement with Works execution is:
a) Health and Safety Plan (refer to CL 4.3)
b) Initial Programme (Refer to CL 5.6)
c) Security (Refer to CL 6.2.1 and CL 6.2.3)
d) Insurance (Refer to CL 8.6)

2.2.13 Time to Submit the Documentation (CL 5.3.2)

The time to submit the documentation required before commencement with Works execution is **14 days**.

2.2.14 Access Not Exclusive (CL 5.4.2)

Where access and possession of the Site is not exclusive to the Contractor as other construction activities might be executed concurrently by independent Contractors or bodies under separate Contracts entered into with the Employer, this Clause shall apply.

The Contractor shall ensure that neither his operations nor his employees shall interfere with or hinder the operations of the Employer or of other Contractors and he shall indemnify the Employer against all claims arising through default of this requirement.

The Contractor shall hand over portions of the Site of Works (whether completed or not), or completed portions of Works, to these Contractors when required by the Employer. The Contractor shall cause no interference with or delays in the execution of these Contracts.

No discount or commission for the Contractor is allowed on these contracts and it will be assumed that he has fully allowed in the Contract Price for the presence of these contractors on Site. Any service rendered or assistance given by the Contractor to these contractors save as are contained in the Works Specifications, shall be for their accounts only and the Employer shall in no way be responsible to the Contractor for any payments in this respect.

The Contractor shall protect all existing services and all work being carried out and structures being erected on the Site by other contractors. Any damage caused to these services or structures or any obstructions or hindrance caused to other contractors by the Contractor and claims arising there from will be the sole responsibility of the Contractor.

Any repair work shall be carried out at the Contractor's expense, in conformity with the Works Specifications.

The same obligations shall be imposed on the Employer and on other Contractors in respect of the Works being executed under this Contract.

2.2.15 Programme (CL 5.6)

Add the following sub-clause 5.6.6 to Clause 5.6:

"Failure on the part of the Contractor to deliver to the Engineer, the

- programme of the Works in terms of Clause 5.6.1 and
- supporting documents in terms of Clause 5.6.2

within the period stated in the Contract Data, shall be sufficient cause for the Engineer to retain 25 percent of the value of the Fixed Charge and Value-related items in assessment of amounts due to the Contractor, until the Contractor has submitted aforementioned first Programme of the Works and Supporting Documents".

2.2.16 Non-working Days (CL 5.8.1)

a) The non-working days are Sundays.

b) The special non-working days are statutory public holidays and the year-end break commencing on 14 December 2026 and ending on 11January 2027.

2.1.17 Contractor's Designs and Drawings (CL 5.9.7)

Add to Clause 5.9.7 the following:
"All designs, calculations, drawings and operation and maintenance manuals shall be fully endorsed by a third party registered engineer, accomplished in such specific field of practice and the cost thereof shall be borne solely by the Contractor.

Once the alternative design has been approved, the Contractor shall indemnify and hold harmless the Engineer, the Employer, their agents and assigns, against all claims howsoever arising out of the said design, whether in contract or delict".

2.2.18 Extension of Time Arising from Abnormal Rainfall (CL 5.12)

Add the following to sub-clause 5.12.2.2:

"The extension of time to be allowed due to abnormal rainfall shall be calculated separately for each calendar month or part thereof in accordance with the following formula:

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

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

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

Nn = Average number of days for the calendar month on which a rainfall of 10 mm or more has been recorded, as derived from existing rainfall records

Rw = Actual recorded rainfall for the calendar month

Rn = Average rainfall for the calendar month, as derived from existing rainfall records

x = 20

Average number of days per year with rainfall exceeding:

Y = 10mm

X = 15mm

The factor (Nw - Nn) shall be considered to represent a fair allowance for days during which rainfall exceeds 10 mm and the factor (Rw - Rn)/x shall be considered to represent a fair allowance for those days when rainfall does not exceed 10 mm but wet conditions prevent or disrupt work.

The total extension of time shall be the algebraic sum of all monthly totals for the contract period, but if the algebraic sum is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for a part of a month shall be calculated using pro rata values of Nn and Rn."

2.2.19 Penalty for Delay (CL 5.13.1)

The penalty for failing to complete the Works is: R 1100.00 of the offered total of prices excluding VAT per calendar day.

2.2.20 Latent Defect Period (Cl 5.16.3)

The latent defect period is **5 years**.

2.2.21 Delivery of Security (CL 6.2.1)

The type of security required for the due performance of the Contract shall be restricted to one of the following:

Performance Guarantee of **10 (ten) percent of the Contract Sum**, issued by a Commercial Bank registered in the Republic of South Africa,

or

Performance Guarantee of 10 (Ten) percent of the Contract Sum, issued by an Insurance Company registered in terms of the Short-term Insurance Act (Act 53 of 1998).

Whenever a Joint Venture constitutes the contracting party (Contractor) to this Contract, the Performance Guarantee shall be issued on behalf of the Joint Venture.

2.2.22 Contractor Failing to Select or Provide Security (CL 6.2.2)

Delete the entire contents of Clause 6.2.2 and replace with:

"Failure to deliver an acceptable security as selected in the Contract Data within the stipulated period is a fundamental breach of Contract".

2.2.23 Variations (CL 6.3)

Omit the words "Provided that" under Clause 6.3.2 and omit Clause 6.3.2.1.

Add the following to the existing clause

Any Contract Variations must be approved by the Department in line with the Departmental Approved Supply Chain Management Delegation of Authority.

Contingencies: Contingencies are under the sole control of the Department and upon approval in line with the Departmental Approved Supply Chain Management Delegation of Authority.

2.2.24 Dayworks (CL 6.5.1.2.3)

The percentage allowance to cover overhead charges is **15 (fifteen) percent**.

2.2.25 Contract Price Adjustment (CL 6.8.2)

CPA not allowed.

2.2.26 Variation in Cost of Special Materials (CL 6.8.3)

Price adjustments for variations in the costs of special materials **are not permitted**.

2.2.27 Interim Payments (CL 6.10)

Add to the end of Clause 6.10.1 the following paragraph:

"The Contractor shall complete the 'Contractor's Monthly Report Schedule', which pro forma documentation is obtainable from the Engineer. Pursuant to Sub-Clause 6.10.1.8, these, duly signed by all concerned, together with the Contractor's statement and a VAT invoice in original format are to be submitted to the Engineer. Issue by the Engineer to the Employer and Contractor of any signed payment certificate is conditional to this information being fully endorsed, accurately and timeously submitted to the Engineer".

Add to the end of Clause 6.10.2 the following paragraph:

"All documentary evidence of such materials shall be unambiguous with respect to ownership having fully passed to the Contractor on or before the date of submittal of the Contractor's monthly statement.
Should the Contractor fail to supply unambiguous documentary evidence, he shall, prior to submittal of his monthly statement, deliver to the Employer a Guarantor Guarantee in the form contained in the Appendices to the Contract Data."

2.2.28 Percentage Limit on Plant and Materials (CL 6.10.1.5)

The percentage limit on Plant and Materials not yet built into the Permanent Works is **80 (eighty) percent**.

2.2.29 Retention Money (CL 6.10.3)

The percentage retention on amounts due to the Contractor is **10 (ten) percent**.

The limit of retention money is **5 (FIVE) percent** of the Contract Sum.

Add the following sub-clause 6.10.3.1:

A Retention Money Guarantee is **not permitted**.

2.2.30 Insurances (CL 8.6)

Delete sub-clause 8.6.7) and substitute with:

"Failure on the part of the Contractor to effect and keep in force any of the insurances referred to in Clause 8.6.1 and its sub-clauses, is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in terms of Clause 9.2."

2.2.31 Special Risks Insurance (CL 8.6.1.2)

A Coupon Policy for Special Risks **is required**.

2.2.32 Liability Insurance (CL 8.6.1.3)

The limit of indemnity for liability insurance required is **R5 000 000.00**.

2.2.33 Insurance of Materials Supplied by the Employer (CL 8.6.1.1.2)

The insurance amount to cover the value of Plant and Materials, supplied by the Employer for incorporation in the Works and not included in the Contract Sum, is **NIL**.

2.2.34 Insurance to Cover Professional Fees (CL 8.6.1.1.3)

The insurance amount to cover professional fees, not included in the Contract Sum, payable in respect of the repair or reinstatement of damage to the Works, is **NIL**.

2.2.35 Cancellation of the Contract (CL9)

Alter the numbering of:

Clause 9.1.5 to 9.1.6 to Clause 9.1.6 and 9.1.7 respectively.

Insert the following new clause 9.1.5.

"The Employer shall be entitled to cancel the Contract, at any time for the Employer's convenience, by giving written notice of such cancellation to the Contractor. The termination shall take effect 28 days after the later of the dates which the Contractor receives this written notice or the Employer returns the Demand Guarantee.

The Employer shall not cancel the Contract under this sub-clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor.

This restriction on the Employer shall lapse 18 months after the date of receipt by the Contractor of cancellation in terms of this sub-clause".

2.2.36 Dispute Resolution (CL 10.5.2)

Dispute resolution shall be referred to **ad-hoc adjudication**.

2.2.37 Disagreement with ad-hoc Adjudicator's Decision (CL 10.6.1)

Should either of the contracting parties disagree with any decision of the ad-hoc adjudicator, such matter shall be referred to litigation for **court judgement**.

2.2.38 Claims Procedure (Clause 10.1)

In sub-clause 10.1.1.1 omit the words, "within 28 days" and replace with the words "as soon as possible but no later than 7 days".

In sub-clause 10.1.1.2, 10.1.1.2.1, 10.1.1.3, 10.1.2 and 10.1.4 omit the words "28 days" and replace with the words "7 days".

3. DATA PROVIDED BY THE CONTRACTOR

3.1 Contractor (CL 1.1.1.9)

The legal name of the Contractor is _____

3.2 Delivery of Notices to the Contractor (CL 1.2.1.2)

The Contractor's address for receipt of communication is:

Postal: _____

_____

Telephone: _____

Facsimile: _____

E-mail: _____

Important Note

Paragraphs 3.3.1 and 3.3.2 hereabove to be duly completed by the **Tenderer before submitting the tender**.

4. PRIORITY OF DOCUMENTS

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purpose of interpretation, the priority of the documents shall be in accordance with the following sequence:

a) The Form of Offer and Acceptance.
b) Amplifications of the General Conditions of Contract within the Contract Data.
c) Additional special conditions or amendments to the General Conditions of Contract within the Contract Data.
d) The General Conditions of Contract.

e) The Specifications, Drawings, Schedules and other documents forming part of the Contract (in that order) contained in the Scope of Work and the Site Information.

If any ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

APPENDIX TO CONTRACT DATA

PERFORMANCE GUARANTEE

(not to be completed at bid stage)

To: ..... (whom the Contract defines as the Employer)

Address: .....

.....

.....

DEFINITIONS AND DETAILS

"Guarantor" means: …….

Physical address: …….

"Employer: means: …….

"Contractor" means: …….

"Engineer" 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.

The description of the Contract is: …….

…….

…….

"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: …….

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 the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3. The Guarantor hereby acknowledges that:

   3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

   3.2 its obligations 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 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:

   4.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 4; or

   4.2 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 4; and

   4.3 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.

5. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 shall not exceed the Guarantor's maximum liability in terms of 1.

6. Payment by the Guarantor in terms of 4 shall be made within seven (7) calendar days upon receipt of the first written demand by the Employer.

7. Payment by the Guarantor in terms of 4 will only be made against the return of the original Performance Guarantee by the Employer.

8. 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.

9. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

10. 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.

11. This Performance Guarantee, with the required demand notices in terms of 4 shall be regarded as a liquid document for the purposes of obtaining a court order.

12. 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 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) ……..

……. ……
Print Name Capacity

Guarantor's signatory (2) ……..

……. ……
Print Name Capacity

……. ……
Witness signatory (1) Print Name

……. ……
Witness signatory (2) Print Name

PERFORMANCE GUARANTEE FOR MATERIALS AND EQUIPMENT NOT YET BUILT INTO THE WORKS
(not to be completed at bid stage)

To: .....

.....

.....
(hereinafter referred to as the Employer)

re: Demand Guarantee in respect of the project : …….

Contract No. : …….

For construction of : …….

Contractor : …….

I/We, the undersigned,

…….

and

…….

of

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

address:

…….

…….

and acting on behalf of the Bank have been informed that ……
(hereinafter called "the Contractor") is your contractor under such Contract and wishes to receive payment in respect of manufacture or partial manufacture of equipment and/or materials brought in a ready state for despatch to the construction site, whether temporarily stored in the warehouse of the Contractor or on the Construction Site, for which the Contract requires him to obtain a guarantee.

We hereby irrevocably undertake to pay you, the Employer, any sum or sums not exceeding in total the amount of R..... (in words …… only) the "Guaranteed Amount"
upon receipt by us of your demand in writing and your written statement stating:

- that the Contractor has failed to deliver such equipment and/or materials when required or instructed to do so.

The Bank's liability under this guarantee is principal in nature and is not subject to the Contract. The Bank's liability shall not be reduced, or in any way be affected by any alteration of the terms of the Contract, or any other arrangements made between the Employer and Contractor.

The Bank will pay on demand and will not determine the validity of the demand or the correctness of the amount demanded, or become party to any claim or dispute of any nature which any party may allege.
The Bank will pay the amount demanded into the bank account to be notified by the Employer.

This guarantee is neither negotiable nor transferable, is restricted to the payment of a sum of money only and is limited to the Guaranteed Amount.

This guarantee will lapse sixty (60) days after all the said equipment and/or materials have been built into the Works unless the Bank is, before the expiration date, advised in writing by the Employer of his intention to demand payment for such equipment and/or materials.

This original guarantee must be returned to the Bank by the Employer or the Employer's duly authorised agent either:

- on expiry of the guarantee; or
- against payment of the Guaranteed Amount.

This guarantee shall be governed by the law of the Republic of South Africa.

The Bank chooses as its domicilium citandi et executandi for the purpose of the service of all notices and legal processes the following address:

THUS DONE AND SIGNED AT ..... ON ..... 20.....

In the presence of the following:

AS WITNESSES:

1. .....

.....
Print Name

2. .....

.....
Print Name

on behalf of the Bank and duly authorised thereto

1. .....

.....
Print Name

and

on behalf of the Bank and duly authorised thereto

2. .....

.....
Print Name

PART C2: PRICING DATA

C2.1 – PRICING INSTRUCTIONS

CONTENTS

Item	Heading	Colour	Page
C2.1	Pricing Instructions	Yellow	99
C2.2	Bills of Quantities	Yellow	104

1. GENERAL

The pricing instructions describe the criteria and assumptions for which in the Contract it will be assumed the Tenderer has taken into account when developing his prices. The schedules of quantities record the Contractor's rates for providing supplies, services, engineering and construction works in accordance with the Scope of Work.

The terms of payment and the provisions for price adjustment, if applicable, are established in the Contract Data. These items are not described in the Pricing Data.

The Tenderer's obligations in pricing the tender offer and the Employer's undertakings in the checking and correction of arithmetical errors are dealt with in the Standard Conditions of Tender contained in Annexure F of SANS 294, as amended in and read in conjunction with the Tender Data.

2. DOCUMENTS MUTUALLY EXPLANATORY

The documents forming the Contract are to be taken as mutually explanatory of one another. The schedule of quantities forms an integral part of the Contract Documents and shall be read in conjunction with the Tender Data, Contract Data, Scope of Work, Site Information, General and Special Conditions of Contract, the Specifications and the Drawings.

3. DEFINITIONS

For the purpose of this schedule of quantities, the following words shall have the meanings hereby assigned to them:

Unit	:	The unit of measurement for each item of work as defined in the Scope of Work and Site Information.
Quantity	:	The number of units of work for each item.
Rate	:	The payment per unit of measurement at which the Contractor contracts to do the work.
Amount	:	The product of the quantity and the rate tendered for an item.
Sum	:	An amount contracted for an item, the extent of which is described in the schedule of quantities, the specifications or elsewhere but the quantity of work of which is not measured in any units.

4. DESCRIPTIONS

Descriptions in the schedule of quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of 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 Standardised Specification, or the Scope of Work, conflict with the terms of the schedule, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.

5. REFERENCES

The clauses in a specification in which further information regarding the schedule item can be obtained appear under “Reference clause” in the Schedule. The reference clauses indicated are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SABS in the SABS 1200 series of specifications, e.g. G for SABS 1200G.

6. UNITS OF MEASUREMENT

The units of measurement indicated in the schedule of quantities are metric units.

The following abbreviations are used in the schedule of quantities:

%	=	percent
H	=	hour
Ha	=	hectare
Kg	=	kilogram
Kl	=	kilolitre
Km	=	kilometre
kW	=	kilowatt
L	=	litre
M	=	metre
Mm	=	millimetre
l/min	=	Litre per minute
m/s	=	Meter per second
kPa	=	kilopascal
MPa	=	megapascal
m²	=	square metre
m³	=	cubic metre
m³-km	=	cubic metre-kilometre
No	=	number
PC sum	=	Prime Cost sum
Prov Sum	=	Provisional Sum
Sum	=	lump sum
T	=	ton (1 000 kg)

7. NET MEASUREMENTS

Unless otherwise stated, items are measured nett in accordance with the drawings, and no allowance is made for off-cuts and waste.

8. QUANTITIES

The quantities set out in the schedule of quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work accepted and certified for payment.

9. CURRENCY

All rates and sums of money quoted in the schedule of quantities shall be in Rand and whole cents. Fractions of a cent shall be discounted.

10. VALUE ADDED TAX

Value Added Tax shall be excluded from the rates and sums contracted for the various items of work included in the schedule of quantities. VAT will be added as a single entry to the summary.

11. RATES AND PRICES

11.1 General

1) The Contractor must price each item in the schedule of quantities in BLACK INK. Reproduced computer printouts of the schedules of quantities will not be acceptable.

2) The rates and prices to be inserted in the schedule of quantities shall cover all the services and incidentals 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.

3) Where the Contractor is required to furnish detailed drawings and designs or other information in terms of the Contract Data, all costs thereof shall be deemed to have been provided for and included in the unit rates and sum amounts contracted for the items scheduled in the schedule of quantities. Separate additional payments will not be made.

4) A price or rate is to be entered against each item in the schedule of quantities, whether the quantities are stated or not. An item against which a NIL price is entered will be considered to be covered by the other prices or rates in the schedule. The Contractor will not be paid for items against which no rate or lump sum has been entered in the schedule of quantities.

5) Should the Contractor group a number of items and contract one lump sum for such group of items, this single lump sum shall apply to that group of items and not to each individual item.

6) Should the Contractor indicate against any item that compensation for such item is included in another item, the rate for the item included in another item shall be deemed nil.

7) A submission may be regarded as non-responsive if any rates or lump sums in the schedule of quantities are, in the opinion of the Employer, unreasonable or out of proportion.

11.2 "Rate only" items

The Contractor shall fill in a rate (in the rate column) against all items where the words "rate only" appear in the Amount column, which rate will constitute payment for work which may be done in terms of this item. Such "rate-only" items are used where it is estimated that little or no work will be required under the item or where the item is to be considered as an alternative to another item for which a quantity is given.

11.3 Arithmetic

Excepting where Sum Amounts are required or where Provisional Sums have been indicated, the Contractor shall enter an applicable rate in the Rate Column of the schedule of quantities for each scheduled item. He shall also enter an appropriate sum in the Amount column for each scheduled item, by determining in the applicable line item the product of the Quantity and the Unit Rate.

12. VARIATION IN TEXT

No alteration, erasure or addition is to be made in the text of the schedule of quantities. Should any alteration, erasure or addition be made, it will not be recognised; the original wording of the schedule of quantities will be adhered to.

SECTION A : GENERAL

ITEM No.	PAY REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	SABS 1200A	**SECTION A1: GENERAL REQUIREMENTS AND PROVISIONS**				
1.1	8.3	FIXED CHARGE AND VALUE-RELATED ITEMS				
1.1.1	PSA 8.3.1.1	Fixed Preliminary and General charges	Sum	1		
1.1.2	PSA 8.3.1.2	Value related Preliminary & General charges	Sum	1		
	8.3.2	Establishment of facilities on site				
1.2	8.3.2.2	Facilities for Contractor				
1.2.1		a) Offices and storage sheds	Sum	1		
1.2.2		e) Ablution and latrine facilities	Sum	1		
1.2.3		f) Tools and equipment	Sum	1		
1.2.4		g) Water supply, electricity and communication	Sum	1		
1.2.5		h) Security	Sum	1		
1.2.6		i) Temporary Access roads	Sum	1		
1.2.7		j) Plant	Sum	1		
1.2.8		k) Occupational Health and Safety				
		(i) Preperation of Health and Safety Plan	Sum	1		
		(ii) Compilation of a Risk Assessment prior to construction	Sum	1		
		(iii) Health and Safety Induction Training of employees	Sum	1		
		(iv) Compilation and the keeping up to date of a Health and Safety file , which shall include all	month	3		
		(v) Implementation of the Health and Safety Plan over the entire construction period	month	3		
		(vi) Provision of Safety Gear as per OHS ACT	Sum	1		
		(vii) Medical assessment of employees	Sum	1		
1.2.9	8.3.3	Other fixed charge obligations	Sum	1		
1.2.10	8.3.4	Removal of site establishment	Sum	1		
		TOTAL CARRIED FORWARD				

SECTION A : GENERAL

ITEM No.	PAY REF.	DESCRIPTION	UNIT	BILL		
				QUANT.	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
1.3	8.4	TIME RELATED ITEMS				
1.3.1	PSA 8.4.1	Time related Preliminary & General charges	Sum	1		
1.4	8.4.2	Operation and Maintenance of Facilities on Site, for Duration of Construction, except where otherwise stated				
	8.4.2.2	Facilities for Contractor				
1.4.1		a) Offices and storage sheds	Sum	1		
1.4.2		e) Ablution and latrine facilities	Sum	1		
1.4.3		f) Tools and equipment	Sum	1		
1.4.4		g) Water supply, electricity and communication	Sum	1		
1.4.5		h) Security	Sum	1		
1.4.6		i) Temporary Access Road	Sum	1		
1.4.7		j) Plant	Sum	1		
1.4.8	8.4.3	Supervision for duration of construction	Month	3.0		
1.4.9	8.4.4	Head Office overhead costs	Sum	1		
1.4.10	8.4.5	Other time-related obligations				
		a) General	month	3		
		b) Compensation to CLO appointed from local community	month	3	R 24 000.00	R 24 000.00
1.5	8.5	SUMS STATED PROVISIONALLY BY ENGINEER				
1.5.1	PSA 8.5.2	a) Tests as requested by Engineer	Prov Sum	1	R 2 000.00	R 2 000.00
1.5.2	PSA 8.5.2	b) Profit and attendance charges on 1.5.1	%	2000		
1.5.3		c)NHBRC registration fees	Prov Sum	1	R 2 000.00	R 2 000.00
1.5.4		d) Profit and attendance charges on 1.5.3	%	2 000		
1.5.5		e)Undertake soil testing, Review and redesign house drawings for construction and submission for municipality approval	Prov Sum	1.00	R 100 000.00	R 100 000.00
1.5.6		f) Profit and attendance charges on 1.5.5	%	70000		
1.5.7		g) Maintenance of gravel access road	Prov Sum	1.00	R 150 000.00	R 150 000.00
1.5.8		h)Profit and attendance charges on 1.5.7	%	50000		
		TOTAL CARRIED TO SUMMARY				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate	Amount
	SECTION NO.2				
	SUPPLEMENTARY PREAMBLES				
	catalogue numbers are only an indication of the quality required. Items, materials or other approved may be used with prior approval from the architect				
2.1	**EARTHWORKS (PROVISIONAL)**				
	SITE CLEARANCE ETC				
	Site Clearance				
2.1.1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	**124**		
	REMOVAL OF TREES ETC				
	Cutting down and removing, grubbing up roots and filling in holes				
2.1.2	Tree exceeding 200mm and not exceeding 500mm girth	No	**Rate only**		
2.1.3	Tree exceeding 500mm and not exceeding 1000mm girth	No	**1**		
2.1.4	Tree exceeding 1500mm and not exceeding 2000mm girth	No	**Rate only**		
	EXCAVATION, FILLING, ETC				
	Excavation in earth not exceeding 2m deep				
2.1.5	Reduced levels under floors	m3	**10**		
2.1.6	Trenches	m3	**18**		
	Extra over trench and hole excavations in earth for excavation				
2.1.7	Soft rock	m3	**5**		
2.1.8	Hard rock	m3	**3**		
	Extra over all excavations for carting away				
2.1.9	Surplus material from excavations and / or stockpiles on site to a dumping site to be located by the contractor	m3	**2**		
	Risk of collapse				
2.1.10	Allow for the risk of collapse to sides of excavation from ground level not exceeding 1,5 m deep.	m2	**71**		
2.1.11	Keeping excavations free of water:				
2.1.12	Keeping excavations free of water by pumping and bailing.	Item	**1**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
	FILLING, ETC:				
	Earthfiling with material excavated and stockpiled on site, compacted to 93% Mod ASSHTO in 150mm layers				
2.1.13	Under floors, steps, pavings, etc	m3	**17**		
	Backfill in trenches	m3	**8**		
	Prescribed density tests on filling				
2.1.14	Modified AASHTO Density test	No	**3**		
	SOIL POISONING				
	Soil insecticide in accordance with SANS 5859				
2.1.15	Under floors, pavings, etc. including forming and poisoning ramming.	m2	**57**		
2.1.16	To bottoms and sides of foundations	m2	**98**		
	e)Undertake soil testing, Review and redesign house drawings for construction and submission for municipality approval				R70 000.00
				R70 000.00	
					R100 000.00
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.2	**CONCRETE, FORMWORK AND REINFORCEMENT (PROVISSIONAL) REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**				
	25 MPa/19 mm concrete				
2.2.1	Strip foundations	m3	**7**		
2.2.3	Surface beds cast on waterproofing	m3	**6**		
2.2.4	In aprons cast in panels	m3	**3**		
	TEST BLOCKS				
2.2.5	Making and testing 150 x 150 x 150mm concrete strength test cube	No	**6**		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete to an evenly ribbed non-slip surface				
2.2.6	Surface beds, slabs, etc	m2	**57**		
	REINFORCEMENT				
	Mild steel reinforcement to structural concrete work				
2.2.7	8mm Diameter bars.	t	**0**		
	High tensile steel reinforcement to structural concrete work				
2.2.8	12mm Diameter bars.	t	**0**		
	Fabric reinforcement				
2.2.9	Type 193 fabric reinforcement in concrete surface beds	m2	**57**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.3	**MASONRY**				
	SUPPLEMENTARY PREAMBLES				
	BRICKWORK				
	Sizes in descriptions				
	Where sizes in descriptions are given in brick brick" shall represent the length and "half brick" the width of a brick				
	BLOCKWORK				
	Concrete masonry units				
	Blocks are to be solid dense concrete masonry units having a compressive strength of 10Mpa Blockwork shall comply with SANS 10145 "Concrete				
	Masonry Construction" Surfaces to be plastered shall have joints raked out to a depth of at least 10mm to provide a key. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole				
	Standard complementary blocks				
	Descriptions of blockwork shall be deemed to include standard complementary blocks such as corner, three-quarter, half and quarter blocks required in the construction of corners, reveals, jambs, ends, etc to solidand hollow walls and for bonding as necessary				
	FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFP bricks				
2.3.1	220mm brick walls	m2	**27**		
2.3.2	115mm brick walls.	m2	**16**		
	SUPERSTRUCTURE				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar				
2.3.3	160mm brick walls	m2	**69**		
2.3.4	160mm brick walls above wall plate level	m2	**8**		
2.3.5	160mm brick walls in beamfilling	m2	**5**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
	Brickwork of NFP bricks in class II mortar				
2.3.6	115mm brick walls.	m2	**49**		
	BRICKWORK SUNDRIES				
	2,8mm Brick reinforcement				
2.3.7	57mm 'Brickforce' into walls	m	**276**		
2.3.8	100mm 'Brickforce' into walls	m	**672**		
	Prestressed fabricated lintels				
2.3.9	110 x 75 mm Lintels in lengths not exceeding 4m	m	**24**		
	Turning pieces				
2.3.10	Turning piece not exceeding 300mm wide	m	**4**		
	30 x 1.6mm Galvanised hoop iron ties, etc				
2.3.11	30 x 1.6mm Galvanised hoop iron ties, etc, 3m long)	No	**18**		
	FIBRE-CEMENT WINDOW SILLS				
	Natural grey sills in single lengths bedded in class 2 mortar including metal fixing lugs etc				
2.3.12	15 x 150mm Wide sills set flat and slightly projecting	m	**10**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
	WATERPROOFING				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 375 micron "Plastic Brikgrip DPC" embossed damp proof course				
2.4.1	In/ Under walls	m2	**8**		
	One layer of 250 micron "Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"				
2.4.2	Under surface beds	m2	**57**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.5	**ROOF COVERINGS ETC**				
	For preambles see "Model Preambles for Trades"				
	SUPPLEMENTARY PREAMBLES				
	Straight cutting				
	Descriptions of all roof coverings are deemed to include for all straight cutting				
	PROFILED METAL SHEETING AND ACCESSORIES				
	0,47mm IBR profile sheeting with Chromadek finish on one side in colour "rain forest", fixed to timber purlins				
2.5.1	Roof coverings with 28 degrees pitch	m2	**80**		
2.5.2	Ridge cappings 375mm girth	m	**10**		
	ROOF AND WALL INSULATION				
	Multi-layered reinforced double-sided aluminium foil sheeting in accordance with SANS 1381-4 with a mass of not less than 293g/m² and a Class I fire rating in accordance with SANS 0177-3				
2,5,3	Insulation laid taut over purlins (at approximately 800mm centres) and fixed concurrent with roof covering, including taped laps and nylon straining wires	m2	**74**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.6	**CARPENTRY AND JOINERY**				
	SUPPLEMENTARY PREAMBLES				
	Particle board				
	Particle board shall comply with the following specifications:				
	a) SABS 1300 Particle board: exterior and flooring type				
	b) SABS 1301 Particle board: interior type				
	Joinery				
	Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc				
	Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes				
	Fixing				
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete				
	Decorative laminate finish				
	Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish				
	ROOFS, ETC				
	PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION ETC				
	Sawn softwood				
2.6.1	50 x 76mm Purlins	m	**82**		
2.6.2	38 x 114mm Wall plates	m	**19**		
2.6.3	36 x 73mm Longitudinal Bracing	m	**17**		
2.6.4	Doupble pitched howe truss or simillar (3850mm rafters x 6715mm span x 1215mm high) with 300mm eaves projected both sides	No	**9**		
	Sundries				
2.6.5	Two coats creosote on sawn timbers	m²	**8**		
2.6.6	90 x 12mm Bolt and Nut. With 40mm Washer	no	**135**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
	EAVES, VERGES, ETC				
	Everite medium density plain nutec-cement				
2.6.7	12 x 225mm Fascia with plastic H-profile joint strips, screwed timber with brass screws	m	**21**		
2.6.8	275 x 80mm L-shaped bargeboard with plastic H-profile joint strips, screwed to timber with brass screws	m	**16**		
	SKIRTINGS				
2.6.9	19 x 76 mm Rounded skirting plugged to walls including 19 mm quadrant bead planted on including mitres, etc.	m	**79**		
	DOORS ETC.				
	Wrought white oak doors hung to timber frames				
2,6,10	40mm Solid hardwood door 813 x 2032mm high, formed of 40 x 110mm top rail and stiles, 20 x 150mm bottom ledge and 20 x 75mm tongued, grooved and v-jointed both sides vertical boarding fixed in and including grooves in styles and top rail.(D1)	No	**2**		
2.6.11	40mm timber hollow core doors with 3.2 tempered hard board facings and tow h/wood edge strips hung to steel frames door size 813 x 2032mm high. (D2)	No	**4**		
	FITTINGS				
	CUPBOARDS TO KITCHENS, BEDROOMS, ETC				
2.6.12	Sink cupboard type 900 x 560 X 720mm high with sides, bottom, divisions, shelf, back and double hinged doors (sink elsewhere)	No	**1**		
2.6.13	Laminated kitchen counter top 2700 x 600 x38mm	No	**1**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.7	**CEILINGS ETC**				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as "nailed" shall be deemed to be fixed with				
	hardened steel nails or pins or shot pinned to brickwork or concrete				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere				
	NAILED UP CEILINGS				
	4,6mm Fibre-cement plain ceiling boards with 4 x 50mm cover strips over joints				
2,7,1	Ceilings including 38 x 38mm sawn softwood brandering at 500mm centres and cross brandering at 500mm centres	m2	**57**		
	Gypsum plasterboard cornices				
2,7,2	50mm Coved cornice	m	**82**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.8	**IRONMONGERY**				
	PRICES				
	Prices are to include for fixing to hardwood, softwood or pressed steel door frames				
	The following items are for taking delivery, unpacking and fixing only. The cost to supply the items is covered elsewhere in a Prime Cost Amount				
	HINGES, BOLTS, ETC				
	SABS Approved				
2,8,1	100mm steel hinge with double steel washers				
	LOCKS, ETC				
	SABS Approved				
2,8,2	Three lever mortice upright lockset with satin chrome furniture	No	**2**		
2,8,3	Two lever mortice upright lockset with satin chrome furniture	No	**4**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.9	**METALWORK**				
	PRESSED STEEL DOOR FRAMES				
	walls				
2.9.1	Frame for door 813 x 2 032mm high	No	**6**		
	STEEL WINDOWS, DOORS, ETC				
	Galvanised steel residential windows with heavy duty solid brass ironmongery, including silicon sealant to all sides of window				
2.9.3	Window Type ND511F	No	**1**		
2.9.4	Window Type ND54F	No	**4**		
2.9.5	Window Type NE1	No	**1**		
2.9.6	Window Type TD75	No	**1**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.10	**PLASTERING** **SCREEDS, ETC:** Cement sand screeds on concrete				
2,10,1	25 mm Thick on floors	m2	**57**		
	INTERNAL PLASTER Cement plaster steel trowelled, on brickwork to a smooth surface with a steeel trowel				
2,10,2	On walls	m2	**167**		
2,10,3	On walls in narrow widths (Reveals)	m2	0		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.11	**TILING** **WALL TILING**				
	200x 200 x 5 mm thick first class white glazed ceramic tiles fixed with approved adhesive to plaster (plaster elsewhere)				
2,11,1	To walls.	m2	**14**		
2,11,3	On splash back	m2	**2**		
	FLOOR TILING				
	300 X 300 X 8mm Thick Ceramic tiles laid to approved pattens and bedded to manufacturer's specifications including tinted epoxy grouting				
2,11,4	On floors	m2	**57**		
	TOILET ROLL HOLDERS, ETC.				
2,11,5	Single soap dish size 150 x 150 mm (white)	No	**1**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
BROUG					
2.12	**PLUMBING AND DRAINAGE (PROVISIONAL)**				
	RAINWATER DISPOSAL				
	0.6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside				
2,12,1	127 x 85mm Eaves gutters	m	**9**		
2,12,3	Extra over gutter for outlet for 200mm pipe	No	**1**		
2,12,4	110 x 110mm Rainwater pipes	m	**4**		
2,12,5	Extra for bend	No	**5**		
2,12,6	Extra for socket	No	**1**		
	SANITARY FITTINGS				
	SABS Approved				
2,12,7	560 x 405mm wash hand basin on brackets	No	**1**		
2,12,8	1160 x 460mm Double end Bowl stainless steel sinc fixed to wall complete with one tap.	No	**1**		
2,12,9	Low level WC suite comprising white vitreous china pan, p-trap with matching 9 litre low level white valveless symphonic fitting, ball valve and matching flush pipe and heavy duty white plastic seat and lid	No	**1**		
2,12,10	1700 x 750mm built in bath with waste outlet, overflow grating with coupling and pair of handles, bedded in position	No	**1**		
	WASTE UNIONS				
2,12,11	32mm Basin waste union, plug and chain.	No	**1**		
2,12,12	40mm Bath waste union, plug and chain.	No	**1**		
	TRAPS, ETC.				
	SABS Approved				
2,12,13	38mm uPVC Reseal combination "P" or "S" trap.	No	**2**		
2,12,14	32mm pvc bottle trap with 342 tailpipe, cap nut and wall flange	No	**1**		
	TAPS, VALVES, ETC SABS Approved				
2,12,15	22 mm 1003/125 RB fullway gate valve	No	**1**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2,12,16	15 mm CP underwall angle valve including flexi connector	No	**5**		
2,12,17	22mm CP ball-o-stop valve	No	**1**		
2,12,18	15 mm CP ball-o-stop valve	No	**1**		
2,12,20	15mm basin mixer	No	**1**		
2.12.19	15mm Kitchen mixer	No	**1**		
2,12,21	15mm sink mixer	No	**1**		
2,12,22	15mm bath mixer with hand shower	No	**1**		
	SANITARY PLUMBING				
	uPVC pipes:				
2.12.23	50mm Pipes.	m	**4**		
2.12.24	50mm Pipes laid in and including trenches not exceeding 1m deep under surface beds	m	**2**		
2.12.25	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds	m	**18**		
	Extra over uPVC pipes for fittings:				
2.12.26	50mm Bend	No	**5**		
2.12.27	50mm Access bend.	No	**3**		
2.12.28	110mm Access bend.	No	**1**		
	WATER SUPPLIES				
	Class O copper pipes				
2.12.29	15 mm Pipes	m	**18**		
2.12.30	22 mm Pipes	m	**12**		
	Extra over class 0 copper pipes for capillary fittings				
2.12.31	15 mm Fittings	No	**12**		
2.12.32	22 mm Fittings	No	**12**		
	Extra over class 0 copper pipes for conex compression fittings				
2.12.33	15 mm Fittings	No	**Rate Only**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.12.34	22mm fittings	No	**Rate Only**		
	Copper overflow and service pipes				
2.12.35	15 mm Service pipe 350 mm girth	No	**1**		
	TESTING				
2.12.36	Provide all necessary apparatus water, etc. for testing all plumbing work installations on 1 houses as required by Project Manager	Item	**1**		
	WATER CONNECTION				
2.12.37	Allow for a 40mm dia. Water connection comprising a stopcock onto the site boundary of 1 stands to the approval of the principal agent	Item	**1**		
	SOLAR WATER HEATER				
	SABS Approved				
2.12.38	150L Low pressure roof mounted solar water geyser including all necessary fittings	No	**1**		
	DRIP TRAYS, TANKS, ETC				
	Polyethylene rain water harvesting tanks with black lining internaly				
2.12.39	2000Litre circular tank 1420m diameter x 1420m high, approximately 350mm above ground level	No	**1**		
2.12.40	Outlet union for 300mm steel pipe including hole through tank	No	**1**		
2.12.41	25mp unreinforce concrete plinth slab 1500mm x 1500mm x 200mm with power floated finish	m3	**0**		
2.12.42	160mm NFX brickwall in foundation for plinth	No	**5**		
2.12.41	25mp unreinforce concrete plinth slab 1500mm	m3	**0**		
	x 1500mm x 200mm with power floated finish				
2.12.42	160mm NFX brickwall in foundation for plinth	No	**5**		
2.12.43	Earthfilling and compaction to 93%MODAshto with excavated or stockpile material	No	**0**		
2.12.44	Excavation in earth for trenches of plinth Foundation	No	**1**		
2.12.45	4mm wire ties 3000mm long and 10mm steel round bar with overall length of 300mm anchored to concrete plinth	No	**4**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
2.13	**GLAZING**				
	Glazing to steel sashes fixed with approved putty:				
2.13.1	4 mm float clear glass in panes exceeding 0,5 and not exceeding 2 m2.	m2	**3**		
2.13.2	4 mm float clear glass in panes exceeding 2 and not exceeding 2 m2.	m2	**11**		
2.13.3	4 mm float obscure glass in panes exceeding 0,1 and not exceeding 0,5 m2.	m2	**0**		
	MIRRORS 6mm Silvered float glass mirrors with polished edges holed for and fixed with 4No chronium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete:				
2.13.4	Mirror 450 x 600mmigh with four screws	No	**1**		
TOTAL SECTION 2 CARRIED FORWARD					

ITEM NO.	DESCRIPTION	Unit	QTY		
TOTAL BROUGHT FORWARD					
	BILL NO. 14				
2.14	**PAINTING**				
	PAINTWORK, ETC TO NEW WORK				
	ON FLOATED PLASTER				
	One coat alkaline resistant primer, one coat Merit universal undercoat and two velvaglo broken white paint				
2.14.1	On internal walls	m2	**167**		
	Prepare, stop, priming nail heads with zinc chromate primer,				
	apply one coat universal under coat and two coats of acrylic emulsion paint				
2.14.2	On ceilings	m2	**57**		
	ON FIBRE-CEMENT				
	One coat plaster primer and two coats super acrylic emulsion paint				
2.14.3	On facias & bargeboards	m2	**9**		
	ON METAL				
	Degrease, one coat galvogrip primer, one undercoat and two coats high gloss enamel paint on steel:				
2.14.4	On gutters and down pipes	m2	**4**		
	ON WOOD				
	Sand down and apply three coats polyurathane varnish on				
2.14.5	On doors (Outside)	m2	**23**		
TOTAL SECTION 2 CARRIED FORWARD TO FINAL SUMMARY					

Item			Unit	Qty	Rate	Amount
	SECTION 3- Electrical					
	Bill No. 1					
	Refer to Drawing: Electrical layouts					
3.1	**LOW VOLTAGE DISTRIBUTION**					
	DISTRIBUTION BOARDS					
	Specified equipment installed and connected, prewired main busbars of HCHD copper to match main switch rating, all metal work, frame (where required), chassis, panel, doors painted in the specified colour, neutral and earth bars, busbars for earth leakega relays and for sub-section as detailed, legend cards, gland plates, etc, as per specifications, including connections, terminating, testing and commissioning					
	Surface Mounted DB-4.7 :					
3,1,1	Pre-populated 12-way distrubution board	Supply	No	1		
3,1,2	Pre-populated 12-way distrubution board	Install	No	1		
	CABLES					
	Supply and installation of 600/1000V PVC/PVC/SWA/PVC/Cu cable in shaft, sleeve, trench, on cable rack or on surface, including strapping or clamping, supports, etc. 400/1000V Aluminium Self supporting Aerial Bundle Cable + N/E insulated support conductors **including mounting brackets for strain fittings, mounting brackets for suspension fittings etc.**					
3,1,3	4 core 1.5 mm²	Supply	m	13		
3,1,4	4 core 1.5 mm²	Install	m	13		
	EARTH CONDUCTORS					
	Supply and installation of copper earth conductor in trench or sleeve, on racking, steelwork or					
3,1,5	2.5 mm² Bare copper conductor	Supply	No	13		
3,1,6	2.5 mm² Bare copper conductor	Install	No	13		
TOTAL CARRIED FORWARD						

ITEM NO.	DESCRIPTION		Unit	QTY	Rate	Amount
BROU						
	EARTH TERMINATIONS					
	Terminate and connect earth conductor including lug, bolt, nut, etc.					
3,1,7	2.5 mm² Bare copper conductor	Supply	No	4		
3,1,8	2.5 mm² Bare copper conductor	Install	No	4		
		e)Undertake soil testing, Review and rede house drawings for construction and submission for municipality approval			R 70 000.00	
				70000		
					R 100 000.00	R 100 000.00
TOTAL CARRIED FORWARD						

ITEM NO.	DESCRIPTION		Unit	QTY	Rate	Amount
BROU						
	Bill No. 2					
	Refer to Drawing: Power Layout:					
3.2	**SMALL POWER INSTALLATION**					
	CONDUIT					
	Supply and installation of SABS approved PVC conduit complete with bends, joints, adaptors, couplings, saddles, cutting, etc.					
3,2,1	20mm Conduit	Supply	m	80		
3,2,2	20mm Conduit	Install	m	80		
3,2,3	25mm Conduit	Supply	m	20		
3,2,4	25mm Conduit	Install	m	20		
	Supply and installation of galvanised steel conduit complete with bends, joints, adaptors, couplings, saddles, cutting, etc.					
3,2,5	20mm Galvanised conduit	Supply	m	16		
3,2,6	20mm Galvanised conduit	Install	m	16		
	Supply and installation of surface or flush mounted conduit boxes including fixing to conduit with necessary locknuts, adaptors, bushes, etc.					
	CONDUIT BOXES					
3,2,7	100 x 100 x 50mm Outlet box	Supply	No	6		
3,2,8	100 x 100 x 50mm Outlet box	Install	No	6		
3,2,9	60mm Round outlet box	Supply	No	4		
3,2,10	60mm Round outlet box	Install	No	4		
3,2,11	60mm Diameter cover plate	Supply	No	4		
3,2,12	60mm Diameter cover plate	Install	No	4		
3,2,13	100 x 50 Blank cover plates	Supply	No	6		
3,2,14	100 x 50 Blank cover plates	Install	No	6		
3,2,15	Draw wires drawn into conduit	Supply	m	60		
3,2,16	Draw wires drawn into conduit	Install	m	60		
TOTAL CARRIED FORWARD						

ITEM NO.	DESCRIPTION		Unit	QTY	Rate	Amount
BROU						
	FITTINGS AND ACCESSORIES					
	Supply and installation of power outlets and accessories complete with all necessary screws, cover plates, labelling, cradles, including all holes, drilling, etc.					
3,2,17	16A, 3-Pin flush mounted switched socket outlet, [double] mounted on brickwork / floor duct	Supply	No	6		
3,2,18	16A, 3-Pin flush mounted switched socket outlet, [double] mounted on brickwork / floor duct	Install	No	6		
3,2,19	20A double pole isolator c/w box	Supply	No	1		
3,2,20	20A double pole isolator c/w box	Install	No	1		
3,2,21	60A double pole isolator c/w box	Supply	No	1		
3,2,22	60A double pole isolator c/w box	Install	No	1		
	CONDUCTORS					
	Supply and installation of 600/1000V PVC insulated copper conductors into conduit, trunking or powerskirting, including conductor identification labels, terminating, etc.					
3,2,23	2.5 mm² conductor	Supply	m	60		
3,2,24	2.5 mm² conductor	Install	m	60		
3,2,25	4 mm² conductor	Supply	m	15		
3,2,26	4 mm² conductor	Install	m	15		
	Supply and installation of bare copper earth conductor into conduit, trunking, etc.					
3,2,27	2.5 mm² conductor	Supply	m	60		
3,2,28	2.5 mm² conductor	Install	m	60		
3,2,29	1.5 mm² conductor	Supply	m	15		
3,2,30	1.5 mm² conductor	Install	m	15		
TOTAL CARRIED FORWARD						

ITEM NO.	DESCRIPTION		Unit	QTY	Rate	Amount
TOTAL BROUGHT FORWARD						
	APPLIANCE CONNECTIONS					
	Supply and installation of flexible steel connections complete with adaptors, locknuts, bushes, labeling, etc. not exceeding 2 meters or approved termination kit					
3,2,32	600 x 600 x 150 Deep flush draw-boxes with timber backing and lockable doors	Supply	No	1		
3.2.33	600 x 600 x 150 Deep flush draw-boxes with timber backing and lockable doors	Install	No	1		
	EARTHING AND BONDING					
3,2,34	Allow for earthing, bonding and **Lightning protection** of the entire installation as required by the Code of Practice		No	1		
TOTAL CARRIED FORWARD						

ITEM NO.	DESCRIPTION		Unit	QTY	Rate	Amount
TOTAL BROUGHT FORWARD						
	Bill No. 3					
	Refer to Drawing: Lighting Layout					
3.3	**LIGHTING INSTALLATION**					
	CONDUIT BOXES					
	Supply and installation of surface or flush mounted conduit boxes including fixing to conduit with necessary locknuts, adaptors, bushes, etc.					
3,3,1	60mm Round outlet box	Supply	No	4		
3,3,2	60mm Round outlet box	Install	No	4		
3,3,3	100 x 100 x 50mm Outlet box	Supply	No	2		
3,3,4	100 x 100 x 50mm Outlet box	Install	No	2		
	LUMINAIRES					
	The supply & installation of light fittings, recessed or surface mounted to celing, onto walls or floor mounted.					
3,3,5	Type A LED Lighting Inside of house	Supply	No	7		
3,3,6	Type A LED Lighting Inside of house	Install	No	7		
3,3,7	Type B1 Wall mounted round bulkhead fitting LED outside including waterproof cover		No	3		
3,3,8	Type B1 Wall mounted round bulkhead fitting LED outside including waterproof cover		No	3		
	LIGHT SWITCHES					
	[Clipsal Series 2000]					
	Supply and installation of light switches, complete with all necessary connections, labelling, screws, cover plates, etc.					
3,3,9	16A one lever one-way flush mounted	Supply	No	4		
3,3,10	light switch	Install	No	4		
3,3,11	16A Two lever one-way flush mounted	Supply	No	2		
3,3,12	light switch	Install	No	2		
TOTAL CARRIED FORWARD						

ITEM NO.	DESCRIPTION	Unit	QTY		
BROU					
	APPLIANCES				
	Supply and installation of gas stove				
3.3.13	4 plate s/s hobs 60cm gas stove including regulator and 9kg gas bottle, external cage and pipe Supply	No	1		
3.3.14	4 plate s/s hobs 60cm gas stove including regulator and 9kg gas bottle, external cage and pipe Install	No	1		
	TESTING AND COMMISSIONING				
3.3.15	Testing and commissioning of entire works	Sum	1		
3.3.16	Issuance of Certificate of Complaince	No	1		
CARRIED FORWARD TO FINAL SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SECTION 4				
	SUPPLY AND INSTALL OFFGRID PHOTOVOLTAIC POWER SYSTEM INCLUDING ACCESSORIES AND POWER BANK				
4.1	PHOTOVOLTAIC MOUNTED ON ROOF STRUCTURE				
4.1.1	330W Sola PV Panel	No	**8**		
4.1.2	Mounting Rail 41x41x6m	No	**4**		
4.1.3	Roof Hook	No	**20**		
4.1.4	Mounting clip	No	**40**		
4.2	CONTROLS, INVENTERS ETC				
4.2.1	5000W 48V HYBRID INVERTER	No	**1**		
4.2.2	MPPT Solar Charge Controller	No	**1**		
4.2.3	1000 x 500mm, perforated on the front and side for ventilation, including a lockable door	No	**1**		
4.2.4	DC String Combiner box LV 2 String	No	**1**		
4.2.5	Aluminium angle wall mounting structures	No	**1**		
4.3	POWER STORAGE AND BACKUP				
4.3.1	Lithium Battery 100AH, 5,1kW with 4,8kW useable	No	**2**		
4.3.2	Fuse disconnector & 100A fuses	No	**1**		
4.3.3	Battery cables	m	**1**		
4.3.4	BMS communication cables	m	**1**		
4.3.5	AC DB	No	**1**		
4.5	CABLES				
4.5.1	MC4 Connectors	No	**2**		
4.5.2	Solar wire 6mm	m	**25**		
4.5.3	Twin flex wire 6mm	m	**10**		
4.6	CONDUITS				
4.6.1	Trunking 40mm x 40mm/ 25mm conduit	m	**4**		
4.7	SUNDRIES				
4.7.1	Consumnables	Item	**1**		
	INSTALLATION, COMMISSIONING AND WARANTY				
4.7.1	Installation & Commissioning	Item	**1**		
4.7.2	Certificate of Compliance AC DB	Item	**1**		
4.7.3	5 year waranty and maitenance plan	Item	**1**		
TOTAL AMOUNT CARRIED OVER TO FINAL SUMMARY FORM					

ITEM NO	DISCRIPTION	UNIT	QTY	RATE	AMOUNT
	SECTION 5				
	WATER SUPPLY RETICULATION				
	PIPELINES, PIPE WORKS AND MISCELLANEOUS				
5.1	SITE CLEARANCE				
5.1.1	Clear vegetation and trees of girth up to 0,25m (2m wide)	m	100		
5.1.2	Clear trees of girth over 0,25m and designated objects	No	Rate only		
5.2	**EARTHWORKS (PIPE TRENCHES)**				
	Excavation in all materials for trenches, backfill and compact to 93% mod AASHTO density by labour intensive methods and dispose of Surplus Material, all within the free haul distance (excavations for yard connections included with this item)				
5.2.1	Exceeding 0m but not exceeding 2m	m	100		
	Extra-over item 2.2.1 for Intermediate excavation (Provisional)				
5.2.2	Exceeding 0m but not exceeding 2m	m³	10		
	Hard rock excavation (Provisional)				
5.2.3	Exceeding 0m but not exceeding 2m	m³	0		
5.3	**BEDDING PIPES**				
5.3.1	Provision of selected granular Bedding material from Trench Excavations (flexible pipes):	m³	28		
	Provision of selected granular Bedding material and pipe blanket by Importation				
5.3.2	From borrow pits (Provisional)	m³	20		
5.3.4	From commercial sources (Provisional)	m³	Rate only		
CARRIED FORWARD					

ITEM NO	DISCRIPTION	UNIT	QTY	RATE	AMOUNT
5.4	**MEDIUM PRESSURE PIPELINES**				
	HDPE pipes, Lay, Bed, Test, Disinfect Pipes Complete with Couplings				
5.4.1	**Class 6**				
5.4.1.1	50mm Ø HDPE	m	100		
5.4.2	**Extra over item 2.4.1 for Fittings for HDPE Pipes:**				
	90° Bends for HDPE (Class 6)				
5.4.2.1	50mm Ø	No	2		
	T pieces for HDPE (Class 6)				
5.4.2.2	50mm Ø x 50mm Ø	No	1		
5.4.3	**Extra over 2.4.1 for the Supplying, Fixing and bedding of Valves-**				
5.4.3.1	50mm Ø class 10 gate valve	No	1		
5.4.3.2	Vosa type ball valve for 50mm dia inlet pipe - class 10	No	1		
5.4.3.3	50mm Ø Non return valves - class 10	No	1		
5.4.3.4	25 mm Ø air valves - class 10	No	2		
5.4.4	**Thrust / Anchor Blocks:**				
5.4.4.1	Concrete volume < 0,8m³ as per Drawing	No	1		
5.5	**Miscellaneous**				
5.5.1	Supply and install pipe works into and out of plastic tanks as per drawing (inlet, outlet, overflow, scour)	No	1		
5.5.2	Yard connection long complete with isolating valve as per drawing	No	1		
5.5.3	Supply and install standpipe as per dwg	No	1		
TOTAL CARRIED FORWARD TO SUMMARY					

ITEM NO	DISCRIPTION	UNIT	QTY	RATE	AMOUNT
	SECTION 6				
	SANITATION AND SEWER RETICULATION				
6.1	**EARTHWORKS PIPE TRENCHES**				
6.1.1	Clear vegetation and trees of girth up to 1 m (2m wide)	m	80		
6.1.2	Clear trees of girth over 1 m	No.	Rate only		
6.2	**EXCAVATION**				
	Excavate in all materials for trenches backfill, compact, and dispose of surplus/unsuitable material, for pipes: 110 mm Ø for total trench depth:				
6.2.1	Exceeding 0,0 m but not exceeding 2,0 m	m	128		
6.2.2	Exceeding 2,0 m but not exceeding 2,5 m	m	0		
	Extra-over items 3.2.1 to 3.2.6 incl. for (prov):				
6.2.3	Intermediate excavation	m³	13		
6.2.4	Hard rock excavation	m³	13		
6.2.5	Excavate and dispose of unsuitable material from trench bottom (Provisional)	m³	5		
6.3	**EXCAVATION ANCILLARIES - Make up deficiency in backfill material (Provisional)**				
6.3.1	from other necessary excavations on site	m³	13		
6.3.2	by importation from designated borrow pit on site	m³	5		
6.4	**PIPEWORK**				
	Supply, lay, joint, bed and test solid wall PVC-U spigot and socketed compression joints in accordance with SABS 791				
6.4.1	110 mm Ø on class C bedding	m	80		
CARRIED FORWARD					

ITEM NO	DISCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
6.5	**MANHOLES Construction of manholes to Dwg No. 3235/11/010 complete with Type 14B cover and frame, for depths over and up to**				
6.5.1	0.0 m 1,0 m	No.	1		
6.6	**SUNDRIES**				
6.6.1	Encasing to pipes, concrete mix 20/19 MPa	m³	1		
6.6.2	Anchor blocks, concrete mix 20/19 MPa	m³	1		
6.7	**BEDDING** **PROVISION OF BEDDING** Available from trench within 0,5 km (Subclause 3.4.1.1)				
6.7.1	a) Selected granular material and fill blanket	m³	16		
	Imported from a) Other necessary excavations within 0.5 km (Provisional)				
6.7.2	1) Selected granular material and fill blanket	m³	16		
6.7.3	Concrete bedding (Provisional)	m³			
6.9	**Miscellaneous**				
6.9.1	Bio Recycling Package Plant complete with bedding	PROV SUM	1	R 50 000.00	50 000.00
6.9.2	French drains	PROV SUM	1	R 20 000.00	20 000.00
TOTAL SCHEDULE 8 CARRIED FORWARD TO SUMMARY					

FINAL SUMMARY		
SECTION	**SUMMARY**	**Total amount**
1	SECTION 1 - PRELIMINARY AND GENERAL	
2	SECTION 2 - HOUSE BUILDING	
3	SECTION 3 - ELECTRICITY	
4	SECTION 4 - SOLAR POWER SYSTEM	
5	SECTION 5 - WATER SUPPLY RETICULATION	
6	SECTION 6 - SANITATION AND SEWER RETICULATION	
	SUB-TOTAL 1	
	ADD AMOUNT OF 10% FOR CONTINGENCIES TO BE USED AS DIRECTED BY THE PROJECT MANAGER PRIOR TO OBTAINING APPROVAL FROM DELEGATED AUTHORITY FROM THE DEPARTMENT AND DEDUCTED IN WHOLE OR IN PART IF NOT REQUIRED	
	NET AMOUNT	
	ADD 15% VAT	
	TOTAL CARRIED FORWARD TO FORM OF OFFER	

PART C3: SCOPE OF WORKS

CONTENTS

Item	Description		Page
1.	**DESCRIPTION OF THE WORKS**		**91**
	1.1	Employer's Objectives	91
	1.2	Overview of the Works	91
	1.3	Extent of the Works	91
	1.4	Location of the Works	95
	1.5	Employment of Labour	95
2.	**ENGINEERING**		**96**
	2.1	Design Services and Activity Matrix	96
	2.2	Employer's Design	96
3.	**DRAWINGS**		**96**
4.	**DESIGN PROCEDURE**		**98**
5.	**PROCUREMENT**		**98**
	3.1	Preferential Procurement	98
6	**CONSTRUCTION (PART 1 : GENERAL)**		**98**
	A1	Nature Of The Ground	99
	A2	Construction Programme	99
	A3	Site Facilities Available	101
	A4	Site Facilities Required	101
	A5	Features Requiring Special Attention	103
	A6	Applicable Standardised And Particular Specifications	111
PART 2.1 VARIATIONS TO THE STANDARDISED SPECIFICATIONS			**112**
CIVIL WORKS APECIFICATION			
	PSA General (Sabs 1200 A)		112
	PSA 1 Reference Pegs		112
	PSA 2 Commencing Of Work		112
	PSA 3 Accuracy Of Work		112
	PSA 4 Control Of Work		112
	PSA 5 Sundry Works And Costs		112
	PSA 6 Payment Certificate		113
	PSA 7 Daywork Schedule		113
	PSA 8 Finishing Off And Clearing Up Of Site		113
	PSA 9 Payment For Items Under General		113
	PSA 10 Receipt And Storage Of Material		114
	PSC Clearing (Sabs 1200 C)		115
	PSC 1 Conservation Of Fauna And Flora		115
	PSC 2 Cutting Of Trees		115
	PSC 3 Spoil		115
	PSDA Earthworks (Sabs 1200 Da)		116
	PSDA 1 Materials (Sub-Clause 3)		116

PSDA 2 Construction 116
PSDA 3 Tolerances 116
PSDE Small Earth Dams – Sabs 1200 De – 1984 117
PSDE 1 Materials (Clause 3) 117
PSDE 2 Specifications 117
PSDK Gabion And Pitching Sabs 1200 Dk 1996 118
PSDK 1 Stone 118
PSGA Concrete (Small Works) (Sabs 1200 Ga) 118
PSGA1 Cement (Sub-Clause 3.2) 119
PSGA 2 Aggregates (Sub-Clause 3.4) 119
PSGA 3 Concrete (Sub-Clause 5.4) 119
PSHA Structural Steelwork (Small Works) (Sabs 1200 Ha) 120
PSHA1 Construction – Protective Treatment (Sub-Clause 5.2.10) 120
PSL Medium Pressure Pipeline – Sabs 1200 L – 1983 121
PSL 1 Piping 121

A7. ANNEXURES TO SCOPE OF WORK 122

Annexure A Particular Specifications 123

Annexure B References to the scope of works in terms of the occupational health and safety act and regulations: health and safety specification 186

1. DESCRIPTION OF THE WORKS

1.1 Employer's Objectives

PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT was acquired by the Department through the PLAS programme, and were approved for disposal to the labour tenants to provide long-term security of tenure to them and their associates in settlement of labour tenant applications that were lodged with the Department in terms of section 16 of the Land Reform (Labour Tenants) Act, 1996.

The Department aims to further provide the beneficiaries with access to basic services, improve sustainability of land use to become self-sufficient, create meaningful employment and contribute to the National Development Plan targets in the agricultural sector of the economy
Therefore, the main objective of this contract is to develop the requisite quality and sustainable basic infrastructure and housing in order to create habitable settlement spaces for farm dwellers and beneficiaries

The tenderer is expected to undertake construction of the entire works and deliver functional 7 housing units including off-grid basic services infrastructure such as water supply, sanitation, energy solutions and solar electrification.

The objective of this contract is, inter alia to create employment and training opportunities for the local community, NARYSEC participants and developing SMME's in the area.

The employer's objectives are to deliver public infrastructure using labour intensive methods. The NARYSEC participants should form greater part of the construction team under the supervision of the successful bidder and an implementation plan will be discussed prior to the commencement of the project.

1.2 Overview of the Works

The total works to be carried out under this contract entails the development and construction of the entire works and deliver functional 1 housing unit including off-grid basic services infrastructure such as water supply, sanitation, energy solutions and solar electrification.

1.2.1 Review plans for permanent works and register for NHBRC

1.2.2 Construction of the works inclusive of all 1 units of 64m2 House and basic service infrastructure such as

- Off grid sanitation system including Bio Recycling Sanitation System
- Construction of closed dry sanitation system toilets
- 5KVa off grid PV solar energy system , including of battery storage, inventers, controllers and producing energy output equivalent to 10KWh/Day/
- Connection of the electricity to houses and issuing COC
- Plumbing installations and issuing COC etc
- Connection and reticulation of water supply

1.2.3 The service provider should provide a detailed project plan, clearly indicating how they will allocate resources and manage construction activities, undertake the following activities

- Manage the entire project from inception right through to hand-over including construction management and administration of all labour procedures (i.e. sourcing of labour, payment of wages, conflict resolution etc).

- Ensuring that effective communication and consultations continue with all stakeholders
- The service provider will set up supervising and monitoring mechanisms to facilitate the management of projects Manage all labour related requirements and relationship
- Ensure compliance to all applicable legislations
- Mitigate and manage all risks associated with the project (project risk management plan)
- Service provider will be required to gather and record information about progress and results of projects, then prepare detail monthly progress report to compare actual result with plan, highlight difficult problems in implementing project and suggest resolutions;

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

1.3 Extent of the Works

The contract comprises the supply of labour, materials, plant, equipment, transport and management for the completion of the following Works.

b) Location Data

PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT
Situated in Emakhazeni Local Municipality
GPS COORDINATES : ***Latitude: S 25.761994°***
Longitude: E 30.146961°

1.5 Employment of Labour

It is the intention that this Contract should make the maximum possible use of the local labour force available from within the target community and which is at present underemployed.

The targets for employment are as follows:

- Women: 55%
- Youth: 40%

To this end it will be expected of the Contractor to employ and train labour on this Contract.

2. ENGINEERING

2.1 Design Services and Activity matrix

Design responsibilities through to contract completion are as follows:

DESCRIPTION	RESPONSIBLE
Concept, feasibility and overall process	Employer
Basic Engineering and detail layout to tender stage, including drawing up of necessary specifications.	Employer's Representative
Tendering and providing the necessary information required in terms of the Tender Documents including compliance with the Specifications.	Tenderers
Adjudication of tenders and submission of results of adjudication to the Employer	Employer's Representative
Final design to approval for construction stage	Contractor
Construction of the Works including necessary Temporary Works	Contractor
Commissioning of the Whole of the Works	Contractor
Preparation of as built drawings	Contractor & Employer's
Preparation of Operation and Maintenance Manuals	Contractor

3. DRAWINGS

3.1 General

The drawings as listed in Table 2.2 form part of the tender documents and shall be used for tender purposes only.

The Contractor will be supplied with three unreduced paper prints of each of the drawings. These prints will be issued free of charge and the Contractor shall make any additional prints he may require at his own cost.

Any information in the possession of the Contractor necessary for the Resident Engineer to complete his as-built drawings shall be supplied to the Resident Engineer before a Certificate of Completion will be issued.

Only figured dimensions shall be used and drawings may not be scaled unless so instructed by the Engineer. The Engineer will supply any figured dimensions, which may have been omitted from the drawings.

3.2 List of Contract Drawings prepared by Employer

The following drawings as listed in Table 2.2 below as well as all drawings prepared by the contractor in complying with any performance specifications, form part of the contract.

Table 2.2 : List of Drawings

Drawing Number	Title Description
001	Floor and roof layout
002	Elevation
003	Foundations
004	Roof details
005	Water details
006	Septic Tank Detail
007	Geyser Detail

4 DESIGN PROCEDURES

The Contractor shall be responsible for the design and specifications for the following aspects of the Works.

- Any temporary works requirements,
- Design integration before and during construction
- The requirements of the relevant Performance Specifications
- Procedures for all necessary approvals
- Environmental Management
- Design change procedures, and
- Record keeping and tracking of documents

5 PROCUREMENT

5.1 PREFERENTIAL PROCUREMENT PROCEDURES AND REQUIREMENTS

The system of measurement of preferential procurement points shall be as defined in the Section T1.3: Tender Data.

5.2 USE OF LOCAL LABOUR

It is a requirement of the Employer that the maximum possible use is made of local labour.

The Contractor is therefore required to limit the use of non-local labour to key personnel only and to employ only local labour on this Contract.

The Contractor shall fill in the relevant forms regarding “Key Personnel” and state how many non-local key personnel he intends to employ in the various categories.

The numbers stated in the “Key Personnel” forms shall be strictly controlled during the Contract Period and any increase in numbers shall be subject to the approval of the Engineer.”

6 CONSTRUCTION

PART 1 : GENERAL

A1 NATURE OF THE GROUND

Geotechnical investigations will be carried out by the appointed service provider.

A2 CONSTRUCTION PROGRAMME

The successful Tenderer shall submit a detailed, comprehensive and realistic Works programme within 14 days after the award of the contract showing the order of construction and method by which he proposes to carry out the Works. The format of the programme shall be to the Engineer’s approval, but shall be in the form of a bar chart showing the critical path. In addition, the Contractor shall provide a schedule of the forecast value of completed work, month by month.

The programme shall include the critical construction path and an estimate of the anticipated cash flow.

The successful Tenderer shall complete the Works within the stipulated times in order to avoid the payment of penalties as provided for in Clause 42 of the General Conditions of Contract.

The Contractor shall not depart from the order in which the various items of work have been agreed without the prior written consent of the Engineer. If the programme is to be revised by reason of the Contractor falling behind he shall produce a revised version showing the modifications to the original programme necessary to ensure completion of the Works or any part thereof within the time for

completion as defined, or any extended time granted, as well as a revised schedule of the forecast value of completed work, month by month.

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 to take steps as provided for in the Conditions of Contract.

The approval by the Engineer of any programme shall have no Contractual significance other than that the Engineer would be satisfied if the Work is carried out according to such programme and that the Contractor undertakes to carry out the Work in accordance with the programme. It shall not limit the right of the Engineer to instruct the Contractor to vary the programme should circumstances make this necessary.

Cognisance shall be taken of the frequency of rain days, inclement weather and material delivery delays when formulating a programme of works.

A3 SITE FACILITIES AVAILABLE

A3.1 Water Supply

The Contractor will have to make his own arrangements for the provision of potable water for human consumption as well as water required for construction.

A3.2 Power Supply

The Contractor will have to make his own arrangement for power supply to his construction camp and construction site and his tender will be deemed to include for all costs in this regard.

A3.3 Camp Sites

The Contractor will be allocated an area for his use in the establishment of a yard, storage, offices, etc. The Contractor shall be responsible for fencing and securing his own area. On completion of the Works and removal of the depot, the site shall be cleaned and restored to its natural condition immediately it is vacated.

A3.4 Housing

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

A4 SITE FACILITIES REQUIRED

A4.1 Engineer's Office

Not required.

A4.2 Engineer's Accommodation

Not required.

A4.3 Engineer's Laboratory

Not required.

A4.4 Sanitary Facilities

The Contractor shall provide adequate ablution and toilet facilities for all workmen on site.

All latrines shall comply with the requirements of the Local Authorities and shall be placed where directed by the Engineer. All sanitary fees and costs payable shall be paid by the Contractor. All latrines must, for the duration of the contract, be kept continuously in a clean and hygienic condition by the contractor to the satisfaction of the Engineer.

If at any time the Contractor neglects to comply with the abovementioned requirements and after he has been requested to do so by the Engineer, fails to rectify the matter about which the Engineer has complained, the Engineer shall have the right to immediately order such material, employ such workmen and take such measures as he regards necessary to ensure clean and hygienic conditions all at the expense of the contractor.

A 4.5 Disposal of Waste

The Contractor shall be responsible for disposal of refuse and waste generated by his staff on a daily basis. The site is to be kept clean, neat and tidy to the Engineer's satisfaction. Refuse and waste shall not under any circumstance be buried on the site, but shall rather be collected in suitable skips and disposed of at the nearest suitable landfill site.

The disposal of waste shall be carried out in accordance with the requirements of the relevant Local Authority.

A4.6 Engineer’s Survey Equipment

The Contractor shall provide on request from the Engineer or his Representative, survey equipment for temporary use such as an automatic level, tachometer, level staff, 100 m tape, ranging rods, pegs, etc and any labour required for this purpose. Instruments provided shall be in a good state of repair and accuracy.

The Contractor shall maintain the equipment in good working order and keep it clean until the completion of the Works.

The Contractor shall keep the equipment continuously insured against any loss, damage or breakage, and he shall indemnify the Engineer and the Employer against any claims in this regard. Upon completion of the Works the survey equipment as listed above shall revert to the Contractor.

A5 FEATURES REQUIRING SPECIAL ATTENTION

A5.1 Use of Explosives

Prior to the use of explosives at any specific location, the Contractor shall obtain permission for blasting from the Engineer. The safety of existing Works and services, and of persons, etc., shall remain the responsibility of the Contractor, who shall abide by all the relevant laws and regulations.

A5.2 Existing Services and Buildings

Although the plans may show the approximate position of existing services and buildings, neither the Employer nor the Engineer will accept the responsibility for the accuracy thereof.

Where the Contractor anticipates that it will be impossible for him to carry out the work without causing damage to existing services, Works or buildings he shall forward a proposal on the method of construction for approval by the Engineer.

Where any existing services are crossed or temporarily removed, the Contractor shall be responsible for the repair and / or reinstatement of the crossings to the satisfaction of the Engineer.

Any damage done to existing Works or buildings shall be immediately notified to the owners concerned and to the Engineer.

Unless it is established by the Engineer that the Contractor exercised reasonable care and damage was unavoidable, the Contractor shall be held responsible for the damage to any existing Works or buildings and for the costs of repair, including any claims which may arise as a result thereof.

A5.3 Compliance with Statutory Requirements

The Contractor shall allow for all costs necessary to ensure that all work is undertaken in a safe manner and in compliance with the Occupational Health and Safety Act, Act No. 85 of 1993 and all statutory and local regulations and requirements.

The cost of complying with the requirements of this clause shall be deemed to be included in the rates.

A5.4 Permits

The Contractor shall be responsible for obtaining all necessary permits to transport materials to the area.

A5.5 Facilities to Other Contractors

In addition to the requirements of the General Conditions of Contract, the Contractor must make allowance for the presence of other Contractors on Site, which may involve, *inter alia*, the adaptation of his programme to fit in with work to be done by the other Contractor, as well as assuring other Contractors access to the site. The Contractor will be advised at tender stage of any other Contractors who will be engaged on other Works during the course of the Contract.

A5.6 Security of Contractor's Site

The provision and sustainment of security for the Contractor's Site Establishment shall be his own responsibility, and no claims for additional security measures taken during the currency of the Contract will be considered other than as provided for in the General Conditions of Contract.

A5.7 Contractor's Site Agent

a. Within 14 days of the award of Contract, the Contractor shall advise the Employer in writing of the name of the responsible person in charge of this Contract.

b. In amplification of Clause 25 of the General Conditions of Contract :-

It shall be noted that the Contractor shall be required to strictly observe his obligations regarding adequate full time superintendence of the Works, with particular reference to accuracy of setting out, excavations, correct steel fixing, properly constructed formwork, positioning of foundation bolts, and / or bolt pockets, placing of concrete, etc. in order to achieve the high standard of workmanship required of him.

Adequate facilities for superintendence of his work shall be provided by the Contractor and the Engineers engineering staff must under no circumstances be expected to act in this capacity on his behalf.

A5.8 Attendance at Site Meetings

The Contractor will be required to attend site meetings as and when these are required by the Engineer. The objectives of such meetings will be to review progress and ensure compliance with the programme, discuss and where possible solve any problems that may arise, and generally to liaise with all parties concerned with the Works.

The cost of attending such meetings shall be deemed to be included in the rates. Instructions given by the Engineer or agreement reached at such meetings and confirmed in the minutes shall be considered as a “written instruction by the Engineer” as referred to in the General Conditions of Contract.

Site meetings will generally be held every two weeks; however this will be confirmed as the contract progresses.

A5.9 Liaison Officer

If required in terms of the contract, the Contractor shall employ a Liaison Officer for the full duration of the contract. In the event that a Liaison Officer is required, a provisional sum will be provided in the Schedule of Quantities to cover the cost of the CLO.

A5.10 Courtesy

In all dealing with the public the Contractor shall bear in mind their right to enjoy the use of the roads and services and access to their properties and that the Employer desires to interfere as little as possible with these rights.

At all points of contact with the public, the Contractor and his staff are requested to handle discussions and disputes with deliberate courtesy and understanding. To assist the Contractor in his dealings with the public, use should be made by him of the Liaison Officer and the Engineer’s Representative on site. On occasions where the Contractor liaises directly with the public, the Liaison Officer and the Engineer’s Representative should be informed of the outcome to be able to maintain a coherent picture of developments in the area.

A5.11 Dealing with Landowners

It is of paramount importance that good relations be maintained at all times between the Contractor and the landowners in the area. In order to preserve these good relations, the following routine shall be observed throughout the works:

(a) At least one week's notice shall be given by the Contractor to the Engineer before entering upon any property along the route for the purpose of commencing construction.

(b) On receipt of such notice, the Engineer will, as far as possible, arrange for a meeting between the Engineer, Contractor and the landowner concerned during which the programme of construction will be discussed. The landowners will be advised of the times of commencement and completion of work on their land and will be acquainted with the Contractor's intentions with regard to the cutting down of trees, temporary lowering of fences, temporary access roads, and all other matters affecting the owners' land and farming operations.

Any requests from owners which are reasonable and which will not affect the economical construction of the works in accordance with the Specification shall be met if at all possible.

(c) The Contractor shall negotiate directly with the landowners with regard to alternative access over private property to the site of the works, borrow pits and any dumping site for surplus excavation. All such sites shall be subject to the approval of the Engineer and the Engineer shall also be kept fully informed of all negotiations that are in progress between the Contractor and the landowners. The Contractor shall make prompt payment to the landowners for any royalties for borrow pits and for any agreed amounts to be paid to the farmer for the use of borrow pits, dumping sites, access roads, etc. No separate payment shall be made to cover royalties and all costs in this regard shall be deemed to be included in the tendered rates.

The Contractor shall, within a period of 3 months of completing the construction work on any private property produce to the Engineer a certificate, signed by the landowner in question, that all the Contractor's obligations to the landowner have been completely discharged in terms of the servitude agreements and any private agreements that may have been arranged between the Contractor and the landowners.

If such evidence is not produced within the stipulated period, the Employer reserves the right to investigate any agreement entered into between the landowner in question and the Contractor and any claims made by the landowner. If the Employer is then satisfied that the Contractor is in default in terms of the contract and any private agreements made, all justifiable claims shall be paid to the landowner by the Employer from retention money held and shall be deducted from the amount payable to the Contractor.

A5.12 Working within the Road Reserve and Landowners' Property

The Contractor shall observe the following when operating within private property, roads and road reserve:

(a) The Employer will acquire servitudes from the owners of all properties crossed by new services, or has permission to occupy where the servitudes will not be obtained.

(b) At all times the Contractor shall confine his operations to the area of the servitude unless he has made prior arrangements with adjoining land owners to the Engineer's approval.

(c) No damage shall be done to buildings, dwellings, crops, cultivated lands, dams, watercourses, roads, fences and the like outside the servitude.

(d) When working within existing road reserves the Contractor shall ensure that as little inconvenience as possible is caused to residents and traffic. Extra care shall be taken with regard to the siting of the excavated material and materials to be built in to the Works so that disturbances will be minimised.

(e) The area within the road reserves and servitudes shall be restored to the same standard and state as it was before construction at the Contractor's expense.

(f) Every precaution must be taken by the Contractor to prevent any flooding and erosion damage to adjoining property resulting from uncontrolled run-off during construction.

A5.13 Drawings and Specifications to be Provided

The Contractor shall be entitled to receive free of charge, the following :-

- Three (3) paper copies of each drawing, and
- Two (2) copies of the signed Contract Document

Any information in the possession of the Contractor which is necessary for the Engineer's Representative to complete his "As Built" or "Record" drawings must be submitted to the Engineer's Representative in accordance with the General Conditions of Contract.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Engineer. The Engineer will supply any figured dimensions which may have been omitted from the drawings.

A5.14 Certificates of Payment

The statement to be submitted by the Contractor in terms of the General Conditions of Contract shall be prepared in accordance with the standard payment certificates prescribed by the Employer and shall consist of at least **two** sets of A4-sized paper copies.

All costs resulting from the preparation and submission of the statements shall be borne by the Contractor.

A5.15 Extension of Time Arising from Abnormal Rainfall and Weather

No extensions of the time for completion shall be granted on the grounds of normal rainfall conditions, but extension of time in terms of clause 5.12.2.2 of the General Conditions of contract on the grounds of abnormal rainfall or wet conditions shall be calculated separately for each calendar month or part thereof, according to the following formula. It shall be calculated as follows for the time for completion, including any extension thereof:

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

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

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

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

Rw = Actual rainfall for the calendar month concerned in mm

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

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

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

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

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

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

Average number of days per year with rainfall exceeding:

Y	=	10mm
X	=	15mm

A6 APPLICABLE STANDARDISED AND PARTICULAR SPECIFICATIONS

The latest edition as at date of tender of the following Standardised Specifications for Civil Engineering Construction as published by the South African Bureau of Standards shall apply.

SABS 1200

1200	A	-	General
1200	C	-	Site Clearance
1200	DA	-	Earthworks (Small)
1200	DE	-	Small Earth Dams
1200	DK	-	Gabions and Pitching
1200	GA	-	Concrete (Small Works)
1200	HA	-	Steelworks (Small Works)
1200	L	-	Medium Pressure Pipelines

Variations and additions to the SABS 1200 Standardised Specifications are given in Section C3.4 - Part B of this document.

Copies of the above listed SABS specifications are not bound into this document but may be purchased by Tenderers at their own cost from :-

SA Bureau of Standards
Private Bag X191
PRETORIA
0001

For all Building Works, the latest edition (1999) of the "Model Preambles for Trades" as recommended and published by the Association of South African Quantity Surveyors shall apply. This Standardised Specification is not bound into this Document but may be purchased by Tenderers from the Master Builders Association, Natal Building Centre, 40 Essex Terrace, Westville (031 - 266 70706).

In the event of any discrepancy between the "Model Preambles for Trades" and the SABS 1200 Standardised Specifications or Project Specifications, the SABS 1200 Standardised and Project Specifications shall take precedence.

PART 2 : VARIATIONS TO THE STANDARDISED SPECIFICATIONS

PSA GENERAL (SABS 1200 A)

The PSA Clauses below refer to SABS 1200 A.

PSA1 REFERENCE PEGS

Any reference pegs placed by the Engineer may, of necessity, have to be moved during construction. Pegs that have to be moved must be properly referenced and reinstated.

PSA2 COMMENCING OF WORK

Before commencing with the works, the Contractor will check all dimensions, levels, sections and other data used for the calculation of quantities for payment purposes, with the Engineer. The Contractor will inform the Engineer before any new part of the work is started. If the Contractor fails to follow the above steps, the decision of the Engineer regarding dimensions, levels and sections will be final and no further negotiation will be entered into.

PSA3 ACCURACY OF WORK

The Contractor must execute the works according to the drawings and specifications as set out in this document, as well as any drawings that will be issued during the construction period. Vertical tolerance is to be within +25mm or -25mm of the stated level provided on the drawings. Horizontal tolerances are to be as specified in the relevant SABS specification. Any deviations in this regard must be approved by the Engineer beforehand.

PSA4 CONTROL OF WORK

The Contractor must verify the quality and completion of all work and notify the Engineer before he requests that an inspection be done. All equipment for the execution of tests (compaction, concrete) must be supplied or arranged by the Contractor. Application for inspection and/or approval of tests must be done on a proper format. The cost for such tests must be included in the rates tendered for installation.

PSA5 SUNDRY WORKS AND COSTS

If the Contractor is of the opinion that costs are to be incurred which are not covered by the Schedule of Quantities, he may insert such costs under “General”. No further costs will be allowed if this procedure is not followed.

In the case of sundry extra work, as requested by the Engineer, the following procedure will be followed:

i) The Engineer will check and approve the purchase of fittings/materials regarding quantities and cost price.
ii) The Contractor will pay for the items as soon as he receives an account.
iii) The Contractor will set out his claim on an account and add administration fees/profit as provided in the Appendix to Tender and submit this claim with a copy of the original account.

PSA6 PAYMENT CERTIFICATE

The monthly claim for payment to the Contractor will be set out on a typed form similar to the Schedule of Quantities. A preliminary copy will be submitted to the Engineer for approval where after it will be returned, with or without changes, to the Contractor for submission of the final payment claim. Procedures as specified under the Special Conditions of Contract must be followed.

PSA7 DAYWORK SCHEDULE

When the Engineer requests Daywork, the Contractor will, within 48 hours of the completion of the Daywork, submit a list of details of the Daywork with prices to the Engineer.

PSA8 FINISHING OFF AND CLEARING UP OF SITE

PSA8.1 Description:

After completion of the Works, the Contractor is responsible for the finishing off and clearing up of the site. This work entails the clearing of all obvious signs of construction activities like building equipment, excess material, rubbish and temporary works, to the satisfaction of the Engineer.

PSA9 PAYMENT FOR ITEMS UNDER GENERAL

PSA9.1 Site Establishment:

Payment for site establishment will be done in a single amount, which will cover maintenance and running costs (e.g. water, electricity and supervision).

PSA10 RECEIPT AND STORAGE OF MATERIAL

The Contractor is responsible for the receipt of material on site or at the port where materials are to be collected, as well as for the safe storage thereof. He is responsible for the control of deliveries and signing of delivery notes. The Contractor will ensure that all material delivered be in good condition and will return defective material immediately. The Contractor must ensure that no damage is done during handling of material on site and is fully responsible for any damages before or during installation.

Where the Contractor receives material from the employer (Free Issue) the Contractor is to inspect such material before acceptance. Thereafter the materials shall be off-loaded by the Contractor and stored, protected and cared for in accordance with the Contract. The Contractor shall at all times remain responsible for all such materials after inspection and acceptance.

PSC CLEARING (SABS 1200 C)

The PSC Clauses below refer to SABS 1200 C.

PSC1 CONSERVATION OF FAUNA AND FLORA

SABS specification 1200 C is applicable on this contract. It is expected that the Contractor will only clear the minimum area for construction purposes.

PSC2 CUTTING OF TREES

Grubbing will include removal of all roots up to a depth of at least 1m below natural ground level.

PSC 3 SPOIL

The main spoil site will be within a free haul distance of 1.0 km of the site.

PSDA EARTHWORKS (SABS 1200 DA)

Clauses referred to in this Clause PSDA refer to SABS 1200 DA.

PSDA1 MATERIALS (Sub-Clause 3)

PSDA1.1 Material excavation will be classified as described in the Schedule of Quantities. Excavation shall include for trenching, small foundations, shaping and cut to fill as required.

PSDA1.2 Material for the platforms shall be sourced from essential excavations and the local quarry. All material is deemed to include for freehaul – overhaul will not be paid.

PSDA1.3 Compaction will be done to 95% MOD AASHTO for all works unless otherwise stated on drawings or the Schedule of Quantities.

PSDA2 CONSTRUCTION

PSDA2.1 No excess material from excavations or material used to provide access or protection may be left in the riverbed, ditches, canals or roads. The Contractor must make allowance for the carting away and spoiling of such material.

PSDA3 TOLERANCES

PSDA3.1 All earthworks to be within +25mm or -25mm (vertical height) of the indicated levels on the drawings.

PSDE SMALL EARTH DAMS – SABS 1200 DE – 1984

Clauses referred to in this clause PSDE refer to SABS 1200 DE - 1984.

PSDE 1 MATERIALS (CLAUSE 3)

PSDE 1.1 Earthfill

The walls of the dam are to be constructed with selected material as pointed out on site.

PSDE 1.2 Topsoil

Topsoil is to be placed on all exposed areas on the upstream and downstream face as well as on borrow areas. The minimum layer thickness is to be 100 mm.

PSDE 2 SPECIFICATIONS

PSDE 2.1 Compaction

Minimum compaction shall be 95% of Proctor density. It is required that a padfoot roller be available to ensure this density is achieved.

PSDE 2.2 Moisture Content

The moisture content of fill material shall be between 1% dry and 2% wet of the optimum moisture content (Proctor).

PSDE 2.3 Settlement

A 5% allowance must be made for settlement

PSDK GABION AND PITCHING SABS 1200 DK 1996

Clauses referred to in this clause PSDK refer to SABS 1200 DK - 1996.

PSDK 1 STONE

See Clause 3.2.1

No less than medium stone sizes will be accepted for pitching. The minimum thickness of the pitching shall be 500mm thick.

PSGA CONCRETE (SMALL WORKS) (SABS 1200 GA)

Clauses referred to in this clause PSGA refer to SABS 1200 GA.

PSGA1 CEMENT (Sub-Clause 3.2)

PSGA1.1 Unless otherwise specified on the drawings, cement type shall be Ordinary Portland Cement. Rapid hardening cement may be used if the Contractor wishes to expedite the works.

PSGA2 AGGREGATES (Sub-Clause 3.4)

PSGA2.1 Unless otherwise specified on the drawings the standard stone size shall be 19 mm.

PSGA2.2 The use of plums in concrete is prohibited.

PSGA3 CONCRETE (Sub-Clause 5.4)

PSGA3.1 Unless otherwise specified or shown on the drawings all concrete shall have 28-day cube strength of 25 MPa.

PSGA3.1 Compaction of all concrete shall be made by either hand or mechanical vibration.

PSHA STRUCTURAL STEELWORK (SMALL WORKS) (SABS 1200 HA)

Clauses referred to in this clause PSHA refer to SABS 1200 HA.

PSHA1 CONSTRUCTION – PROTECTIVE TREATMENT (Sub-Clause 5.2.10)

PSHA1.1 All galvanising shall be done in accordance with SABS ISO 1461. The minimum amount of zinc deposited shall be 760g/m².

PSHA1.2 All galvanised surfaces, which suffer damage during transport or erection, shall be made good with an approved “cold-galvanising” process. Specialised coatings, such as “galvalloy”, “zincfix” etc, shall be obtained only from the manufacturer or an agent appointed by them. These coatings are to be applied strictly in accordance with the manufacturer’s instructions and specially qualified painters are to be employed for this work.

PSHA1.3 Where exposed galvanised steel is to be primed, this is to be achieved using a self-etching primer, followed by one coat of universal undercoating and two coats of high gloss enamel paint. Other galvanised surfaces are to be left unpainted. Coatings at joints and coatings that have been repaired shall be tested in the same manner as the first applied coatings over 100% of the area and shall in every way be to the satisfaction of the Engineer.

PSL MEDIUM PRESSURE PIPELINE – SABS 1200 L – 1983

Clauses referred to in this clause PSL refer to SABS 1200 L - 1983.

PSL 1 PIPING

PSL 1.1 Outlet & Trickle Flow Pipes

The outlet pipes through the wall shall be as detailed on the drawings and in the Schedules of Quantities.

PSL 1.2 Steel Pipes

Steel pipes 200 mm diameter and below are to be hot dipped galvanized to SABS ISO 1461. Steel pipes over 200 mm diameter are to be copon coated and lined unless the pipe is to encased in concrete, in which case only internal protection is required. All copon coating is to be 250 microns thick and steel pipes are to be of 4.5 mm wall thickness.

PSL 1.3 Flanges

Flanges for pipe fittings and valves are to conform to SABS 1123 Table 1 000.

A7 ANNEXURES TO SCOPE OF WORK

Annexure A	Particular Specifications	226
Annexure B	Drawings	227

PART 3 : PARTICULAR SPECIFICATIONS

C.5 HOUSE BUILDING & ELECTRICAL INSTALLATIONS, WATER SUPPLY AND SANITATION

C.5.1 SCOPE OF WORKS HOUSE CONSTRUCTION

C.5.1.1 PROJECT SPECIFICATIONS

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

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

a) Site Clearance

- This entails clearing of area envisaged to be used for the tunnels as well as preparation of the land for installation of the tunnels, water reservoirs and pump station.

b) Earthworks and Site Preparation

Normal regulations regarding safety, municipal by-laws, contamination of water sources, erosion, siltation etc. will still apply. Site preparations & establishment: SABS 1200 AA (4) and setting out of works: SABS 1200 AA (5.1.1)

- Orientation: The longitudinal axis of the building shall be placed in an east-west direction with the higher side of the mono pitch roof facing north, unless the prevailing wind would be from that direction, in which case the building may be turned up to 45 degrees.
- The site, including an area extending to at least 2 meters longitudinally and 2m in front of front and back gable must be cleared and stripped of all plant materials, roots and topsoil prior to site levelling.
- The cleared and stripped material is to be stockpiled away from the construction site and is to be levelled/replaced once all construction is complete.
- The site is to be levelled prior to any construction.
- Compaction of the site shall take place at optimum moisture content (OMC) to a maximum dry density of at least 95% of Mod. AASHTO. The Contractor shall arrange independent compaction testing before the floor slabs are cast. Four (4) distributed places per site shall be tested, once off, after completion of the compaction of the floor base. (Test results are to be provided). The floor is to be inspected prior to the pouring of any concrete.
- A storm water cut off drain is to be dug above the shed diverting runoff away.
- Clearing and grubbing of the road reserve and drainage area to specification for road. All topsoil removed during this process must be stockpiled in heaps not higher than 1m for later use during rehabilitation and landscaping. Clearing and grubbing must cover the entire extent of the construction width and include all space to be taken by drains
- Road base to be compacted to 95% Mod AASHTO (quantities are located under excavation for new shed). Compact G6 selected layer to 93% mod AASHTO density

- Make provision for Slope & erosion protection including grassing with Kikuyu grass as directed by Engineer
- Apply soil poisoning around structure (70x10m) by specialist and provide guarantee

c) Provision of Electricity

Refer to drawing Number

- Supply and install the internal electric, lighting and switches
- Supply & connect main electricity control panel in control room. (Main DB)
- Allow for light duty cable trays for cabling inside house
- Establish low voltage reticulation in layers house for lighting and plug points.
- Supply & install seemorelux fittings complete with 7W lamp.
- Supply & install PVC conduit and conduit box.
- Allow for supply and installation of 2.5mm 3 core & earth surfix
- Allow for supply and installation of 2.5mm 4 core surfix and related fittings and terminations
- Supply & Install 60-watt fluorescent lights
- Supply and install capacitor rated 25 Micro Farad.
- Supply & install rotary switch (preset 5/10/20 lux).
- Supply & Install flood lights 125-watt mercury vapour complete with lamps and daylight switch
- Supply & Install single phase outlet socket
- Supply and install 3 phase wall mounted un switched outlet sockets
- Allow for additional earth wiring for installation
- Allow for additional electrical fittings not covered elsewhere

d) CONSTRUCTION OF A HOUSES:

- Refer to drawing for placement house
- All materials used must be new.
- All rubble / building materials must be removed from the building site after completion of the building.
- All works to be executed to engineer specifications.
- All material used to be SABS approved.
- Use 25MPa for all concrete works with taper outside edge for depth pads.
- Refer to drawings for placement and details of construction of the tractor unit.
- Use 30 MPa mix for footings concrete works.
- All concrete must be properly cured for at least 3 days by keeping it wet or properly covered with plastic.
- Clear all vegetation matter, tree stumps and all debris for excavation to 5 m around the unit.
- Foundations of internal and external walls to be excavated to 800 below ground.
- Compact foundation until no further collapse is encountered.
- Cure concrete by wetting and keeping damp for 3 days.
- All areas (floors, ramps) to be compacted before concrete is cast
- Provide concrete reinforced with R-193 & R-500 mesh
- 0,58mm Corrugated Steel roof sheeting
- as specified in drawings
- Refer to drawing for the details of the required bolts and nuts.

Foundations & Floors

Refer to drwaing

- 500x250mm thick strip foundations min 600mm blow ground.
- 150mm thick hard-core fill compacted in layers not exceeding 75mm.
- 150mm thick floor slab with option of 25mm thick granolithic screed or 100mm thick with power float finish painted with light grey epoxy paint unless specified.

e) Employer's Design, Considerations, Requirements and Scope Summary

The Engineer's design of the Works is to be used as guide to the complete the construction works. The Employer retains the right to issue whatever additional drawings during the progress of the works as may be required.

e.1 Clearing and excavation of foundations

The work to be done shall consist inter alia of the following:
- Site Clearance
- Removal of trees, mounds, and obstructions
- Cut and fill operations
- Compaction
- Soil poisoning
- Excavate for foundations

e.2 Concrete and reinforcement of foundations and floor

The work to be done shall consist inter alia of the following:
- 25 MPa/19mm and 20 MPa/19mm Concrete
- Formwork and finishing
- Movement joints
- Mild steel, high tensile steel and Fabric reinforcement

e.3 Masonry

The work to be done shall consist inter alia of the following:
- Brickwork of NFX bricks in class II mortar
- Brickwork reinforcement
- Pre-stressed fabricated lintels

e.4 Waterproofing

The work to be done shall consist inter alia of the following:
- Supply and installation of DPC
- Joint Sealants

e.5 Roof Coverings

The work to be done shall consist inter alia of the following:
- Industrial Roofing
- Sisalation

e.6 Plastering

The work to be done shall consist inter alia of the following:
- Screeds
- Internal Bag Wash Plaster
- External Bag Wash Plaster

e.7 Plumbing and Drainage

The work to be done shall consist inter alia of the following:
- uPVC Pipes and fittings
- Class 0 Copper pipes
- Rain water disposal
- Testing

e.9 External Work

The work to be done shall consist inter alia of the following:
- Sewer reticulation and package plant installation
- Storm water Drainage
- Water Supplies and reticulation
- Photovoltaic power module installation
-

f) Design Services and Activity Matrix

The service provider is responsible for the construction of the permanent works. The contractor shall also be responsible for the safety of all temporary formwork, support work required in the construction whenever required.

C.5.1.2 General (PART A)

C.5.1.2.1 APPLICATION OF CLAUSES

These Model Preambles for Trades, SABS 1200 : standardized specifications for civil Enginnering construction and any Supplementary Preambles, shall be read in conjunction with and shall form part of the descriptions of items in the bills of quantities.

Where descriptions or Supplementary Preambles in the bills of quantities differ from these Model Preambles for Trades, the descriptions or Supplementary Preambles in the bills of quantities shall take precedence. Where supplementary preambles differ from descriptions in the bills of quantities, the descriptions in the bills of quantities shall take precedence.

Except where otherwise stated, all preambles contained in any individual Trade Preamble shall apply equally to any work of a similar nature in all other trades.

C.5.1.2.2 ABBREVIATIONS

The following abbreviations shall apply:

AASHTO - American Association of State Highway and Transportation Officials
AISI - American Institute of Steel Industries
BS - British Standard
CKS - Co-ordinating Specifications issued by the Central Co-ordinating Committee under the aus-pices of the South African Bureau of Standards
CSIR - Council for Scientific and Industrial Research
SANS - South African Bureau of Standards and the number following shall refer to the relevant specification or code of practice as the case may be.

C.5.1.2.3 MATERIALS AND WORKMANSHIP

Materials and workmanship shall be the best of their respective kinds. Only new and undamaged materials shall be used in the Works. Materials to be permanently installed into the works shall not be used for any temporary purposes on site. Work shall be to the approval of the Principal Agent and shall be executed in accordance with the relevant manufacturer's written recommendations and instructions where applicable.

C.5.1.2.4 PROPRIETARY PRODUCTS

For the purposes of submission of tenders, rates for items described in the bills of quantities by trade names, catalogue references, etc. shall be for the particular type and manufacture specified.

The approval of the Principal Agent shall be obtained prior to any substitution and where products or materials, etc. other than those specified are used, adjustments in the rates will be made if necessary.

C.5.1.2.5 ASSEMBLING

Rates for manufactured items shall include assembling complete and handing over in proper working order.

C.5.1.2.6 REFERENCES IN DESCRIPTIONS

Any references given in brackets at the end of certain descriptions shall refer to the relevant references on the drawings or schedules.

C.5.1.2.7 WATER

Water shall be clean and free from injurious amounts of acids, alkalis, organic matter and other substances and shall be suitable for its intended use.

C.5.1.2.8 APPLICATION OF THE NATIONAL BUILDING REGULATIONS

All work shall be executed in accordance with the requirements of SANS 10400; SANS 10400X & XA

C.5.1.2.10 ACCURACY IN BUILDINGS

The dimensional and positional accuracy of the buildings and their component parts shall comply with Grade II requirements of SANS 0155 unless otherwise stated.

C.5.1.2.11 REFERENCES TO OTHER DOCUMENTS

References in these “Model Preambles for Trades” to other documents, including SANS Specifications

C.5.1.3 B Alterations

C5.1.3.1 ALTERATIONS

In taking down and removing existing work the utmost care shall be observed to prevent any structural or other damage to remaining portions of the building. The Contractor shall ensure the stability of all structures during alteration work.

Special care shall be exercised during the progress of the work to ensure that any electrical installations, water supply pipes, telephone and other services which may be encountered are not interfered with and notice shall be given to the Principal Agent if any disconnection or alterations become necessary.

The Contractor shall take all precautions necessary to prevent any nuisance from dust whilst carrying out the work.

C.5.1.3.2 MATERIALS FROM THE ALTERATIONS, CREDIT, ETC

Materials recovered from the alterations (except where described as to be re-used or to be handed over to the Employer) will become the property of the Contractor, who may allow credit in respect thereof where provided for in the bills of quantities. Such materials shall not be re-used in new work without written permission from the Principal Agent.

Materials described as “removed” shall be removed from the site immediately.

Materials described as “handed over to the Employer” shall be carefully dismantled where necessary, neatly stored under cover on the site where directed and protected from damage, until required.

Materials described as “set aside for re-use” shall be carefully dismantled where necessary, cleaned, neatly stored under cover and protected from damage until required for re-use. Any damage caused to such materials during removal, tractor or refixing shall be made good at the Contractor's expense.

C.5.1.3.3 DISPOSAL OF DEBRIS, ETC

The Contractor shall be responsible for the removal from the site of all materials, debris and rubbish resulting from the alterations.

C.5.1.3.4 MAKING GOOD DAMAGED WORK

The Contractor shall make good in all trades to existing work where damaged or disturbed through the alterations with all necessary new materials to match the existing.

C.5.1.3.5 FORMING NEW OPENINGS OR ALTERING OPENINGS IN EXISTING WALLS

Where new openings are formed or openings altered in existing walls, the wall above the opening shall be broken out and a new brick, in situ concrete or prestressed concrete lintel inserted, complete with all necessary reinforcement, formwork, turning piece, etc., the jambs and portions of openings as described shall be built up with new brickwork or blockwork properly toothed and bonded to existing, cavities of hollow walls shall be closed where necessary and finishes shall be made good all round and into reveals.

C5.1.3.6 BUILDING UP OPENINGS

Where existing openings are given in number as built up, the existing surfaces all round shall be prepared as necessary, brickwork or blockwork properly toothed and bonded to existing, wedged up to underside of existing lintel and finishes shall be made good on both sides.

C5.1.4 Earthworks

C5.1.4.1 DEMOLITION

Nature and extent
Descriptions of demolitions give a rough guide only as to the scope of the work. Tenderers are therefore advised to visit the site before submitting a tender and to acquaint themselves with the

nature and extent of the work to be done and the value of recoverable materials which are not to be re-used or handed over to the Employer. Unless otherwise stated, loose furniture, kitchen and other equipment, apparatus, machinery, etc shall remain the property of the Employer and the removal thereof does not fall within the scope of this Contract.

The Contractor shall completely demolish the buildings, etc in a careful, skilful, practical and safe manner down to 150mm below ground level.

Demolitions shall include breaking up and removing:
all floors and surface beds;
all external screen walls, steps, ramps, aprons, surface water channels, rainwater sumps, gulleys, etc attached to the building to be demolished;
all services, manholes, etc in ground to a point not less than 1 m beyond the perimeter of the building including plugging off ends of all remaining pipes, drains, etc, filling in holes where necessary and ramming and levelling to ground level.

Where only a portion of a building is to be demolished, it shall be done without damage to the remaining portion of the building. Any such damage shall be made good by the Contractor at his own expense.

Notices, etc

The Contractor shall, before commencing work, obtain all necessary authorisation for carrying out the work, by whatever means including the use of pneumatic equipment or blasting, give all necessary notices and pay all charges and fees in connection therewith. He shall also comply with all regulations pertaining to rodent extermination and he shall obtain the requisite Rodent Extermination Clearance Certificate and pay all necessary fees. All receipts and certificates shall be left in the safekeeping of the Principal Agent. All the above mentioned charges and fees shall be paid by the Contractor and included in his prices.

The Contractor shall give ample notice to the Principal Agent and Local Authorities regarding any disconnections necessary prior to the removal or interruption of electrical or telephone cables, water and sanitary services, etc.

Loss
After the handing over of the site to the Contractor, the full risk of any loss or damage to buildings to be demolished shall be the responsibility of the Contractor and he shall take such precautions as he deems necessary against such loss or damage.

Materials from the demolitions, credit, etc.
Materials recovered from the demolitions will become the property of the Contractor, who may allow credit in respect thereof where provided for in the bills of quantities. Such materials shall not be re-used in any new work without written permission from the principal Agent.

Disposal of debris, etc.
The Contractor shall be responsible for the removal from the site of all materials, rubble, debris and rubbish resulting from the demolitions.

C.5.1.4.2. MATERIALS

Soil insecticides shall comply with SANS Specification 1165.

C5.1.4.3 CODES OF PRACTICE

Work shall be carried out in accordance with “The application of soil insecticides for the protection of buildings” – SANS Code of Practice 0124.

C5.1.4.4 FILLING, ETC.

Filling generally

Filling over site shall be spread, levelled, watered and consolidated in layers not exceeding 300mm.

C.5.1.5 Specifications for Concrete Work Generally(PART F)

All in situ concrete work (plain and reinforced) shall comply with SANS 1200G supplemented by the following Project Specification. Where SANS 1200G and the Project Specification are in conflict, the Project Specification shall take precedence.

Wherever the term “Engineer” appears in SANS 1200G or in the following Project Specification this shall be deemed to mean the Principal Agent's representative responsible for this section of the Works.

C5.1.6 FORMWORK

C5.1.6.1 Classification of Finishes

(a) Rough.
No treatment of the surface of the concrete will be required after the striking of the formwork. The finish of the concrete need not be more accurate than Degree of Accuracy III.

(b) Smooth.
Imperfections such as small fins, bulges, irregularities, surface honeycombing and surface discolorations shall be made good and repaired by Approved methods. The finish of the concrete shall be accurate to Degree of Accuracy II.

(c) Special

(i) Smooth and Fair

This class of finish requires the highest standard of concrete work, formwork, accuracy and technique.

Concrete placed in any one structure to give this finish shall be made from cement and aggregates from the same source. The grading of the aggregate shall be kept constant.

Formwork shall be metal, timber or other approved material in new condition designed and constructed to suit the particular job in hand and with shutter bolts and joints between panels in a regular pattern approved by the Principal Agent. Joints between panels shall be watertight, but the use of sealing tape which will mark the concrete shall not be permitted.

Designated joints shall be in the position and of the details shown upon the working drawings. Should the Contractor wish to incorporate further construction joints or amend the position of those shown to suit his own requirements or technique, this may be allowed provided that all design considerations are met, that the prior approval of the Engineer is obtained and that any extra costs are borne by the Contractor.

In the case of horizontal construction joints, the top edge of the concrete on the smooth and fair finished side shall be struck true and level with a trowel.

Special care shall be taken to ensure that forms are clean and free of all pieces of tying wire, nails and other debris at the time of concreting.

The standard of finish shall be such that upon removal of the formwork, no further treatment, other than treatment of bolt holes if required, shall be found necessary to provide a straight, smooth and uniform finish of good quality and consistent colour and texture, free of all honeycombing, etc. Any defect shall be made good by either removing or replacing the defective concrete or, in certain instances only, by patching.

C.5.1.7 CONCRETE

C.5.1.7.1 Prescribed mix concrete

Where prescribed mix concrete is specified the proportions of constituents, the maximum size of coarse aggregate and the estimated minimum compressive strength shall be as specified in the following table:

Class of Concrete	Estimated minimum compressive strength in M Pa at 28 days	Maximum nominal size of coarse aggregate in mm	Proportions of Constituents		
			Cement (Parts)	Fine aggregate (Parts)	Coarse aggregate (Parts)
A	7	37,5	1	4	8
B	15	19	1	3	5
C	20	19	1	2,5	3,5

Cement shall be ordinary CEM 1 32,5 cement.

Should cement and aggregates be mixed by volume, the contents of a 50 kg sack of cement shall be taken to be 0,033 m3 .

Notwithstanding the requirements contained in SANS 1200G, the Principal Agent may permit certain items of non-structural concrete to be mixed by hand.

If the concrete is mixed by hand, it shall first be mixed in a dry state on a clean non-absorbent surface until it is of uniform colour and consistency. Just enough water shall then be added to permit mixing and working, at which stage the concrete shall continue to be mixed until it is of uniform colour and consistency.

C5.1.7.2 **Strength concrete**
Where strength concrete is specified it shall be designated by its specified strength followed by the size of stone used in its manufacture, e.g. 30 MPa/19mm.

The water/cement ratio shall be as Table 5 of moderate exposure conditions.

C5.1.7.3 “No-Fines” concrete
“No-fines” concrete shall consist of one part cement to eight parts aggregate graded from minimum 6mm to maximum 13mm size.

The quantity of water used shall be just sufficient to form a smooth grout which shall completely coat every particle of aggregate and also to ensure that the grout is just wet enough to form a small fillet at each point of contact between the stones. “No-fines” concrete mixed with excessive water, which results in a thin grout which drops off the aggregate, will be rejected.

“No-fines” concrete shall be placed in its final position within 20 minutes of mixing and shall be placed in continuous horizontal layers. Concrete shall be spade worked sufficiently to ensure that it fills the forms but vibrating, tamping or ramming will not be permitted

C5.1.7.4 Ready-mixed concrete
The use of ready-mixed concrete and the acceptability of test results from a central concrete production facility shall be subject to the written approval of the Engineer.

C5.1.7.5 AGGREGATES OF LOW DENSITY

Aggregates of low density shall comply with SANS 794.

C5.1.7.6 SUPERVISION

A competent and experienced foreman shall superintend personally the whole of the concrete construction and pay special attention to:
(a) The quality, testing and mixing of materials,
(b) The placing and compaction of concrete,
(c) The construction and removal of formwork and
(d) The sizes and position of reinforcement

The Contractor shall obtain the permission of the Principal Agent before commencing concreting of foundations or reinforced structure.

No inspection, approval, authorisation to proceed, comment or instructions following from such an inspection, or failure of the Principal Agent to comment on any particular aspect of the work, shall be deemed to relieve the Contractor in any way from his obligation to ensure through his own supervision that the work is constructed in every way in accordance with the Drawings, Specification and Conditions of Contract, nor relieve him from his obligations to make good any fault or defect, nor shall it be deemed that there is any obligation on the Principal Agent to inspect all or any part of the Works or that such inspection is necessarily complete in every respect.

C5.1.7.7 GENERAL

a. Concrete
Rates for concrete work shall include all “construction joints” other than “designated joints” as defined in SANS 1200G clause 2.4.3 which are measured separately, for the design of strength concrete mixes and all testing of concrete and materials other than compressive strength testing of concrete samples taken from concrete being placed in the Works. The Contractor shall only be entitled to payment for those samples and compressive strength tests called for by the Engineer and which pass the test requirements.

b. Formwork
Formwork to slabs and beams shall be cambered where required.

Rates for formwork to soffits shall include propping not exceeding 3,5 m high unless otherwise described. Formwork to walls and columns is not exceeding 3,5 m high above bearing level unless otherwise described.

c. Reinforcement
Standard fabric reinforcement shall be as included in Table 1 of SANS 1024 and shall have 300mm wide laps.

The mass of binding wire is not included in the mass of the reinforcement and the cost thereof shall be included in the rates for the reinforcement.

C5.1.8 J Precast Concrete

C5.1.8.1 MATERIALS

Materials shall comply with the following specifications and requirements:

C5.1.8.2 Material SANS Specification
Precast concrete paving slabs

Cement, water, aggregates and reinforcement shall be as described under D. CONCRETE, FORMWORK AND REIN-FORCEMENT.

C5.1.8.3 CONCRETE

Concrete shall be as described under D. CONCRETE, FORMWORK AND REINFORCEMENT and unless otherwise stated shall be prescribed mix concrete Class C but with coarse aggregate of an appropriate size.

C5.1.8.4 MOULDS

Before each casting, moulds shall be coated with a suitable release agent which will not in any way discolour the surface of the finished product or impair its strength. Where items are described as “finished smooth from the mould” or as “precast terrazzo”, moulds shall be made to a high degree of accuracy and shall be such as to leave even and smooth surfaces.

C5.1.8.5 CASTING, ETC

Items shall be suitably cured, shall not be handled whilst still green and shall not be built in within 21 days of casting.

C5.1.8.6 REINFORCEMENT

Unspecified reinforcement required for manufacturing, handling and erection purposes and for reinforcing projecting and other unwieldy portions of blocks shall be provided by the Contractor at his discretion.

C5.1.8.7 BEDDING, JOINTING AND POINTING

Blocks shall be bedded and jointed solidly in Class I mortar as described under F. MASONRY and shall be pointed with slightly keyed joints.

C.5.1.8.8 GENERAL

Precast concrete work shall include reinforcement required for manufacturing, handling and erection purposes, steel rod or wire hooks and/or mortices for lewis bolts required for handling and transporting, any necessary temporary propping and strutting and bedding, jointing and pointing.

C.5.1.9 Masonry

F.1 MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Type
Burnt clay masonry units	227	-
Calcium silicate masonry units	285	-
Lime for use in building	523	Hydrate bedding mortar lime
Sand for plaster and mortar	1090	-
Concrete masonry units	1215	-
Prestressed concrete lintels	1504	-
Burnt clay paving units	1575	-
Metal ties for cavity walls	28	-
Masonry cement	ENV 413-1	MC 12,5
	CKS Specification	
Concrete flooring tiles	208	
	SABS Code of Practice	
Concrete masonry construction	0145	
The structural use of masonry	0164	
Masonry walling	0249	

C5.1.9.1 SAND
Sand shall be washed where necessary and screened through a 2,4mm mesh sieve.

C5.1.9.2 IBURNT CLAY BRICKS

Burnt clay bricks shall be of nominal size 222 x 106 x 73mm for internal walls division and 222 x 150 x 73mm for external enclosure unless otherwise stated.

Common bricks shall be General Purpose bricks.

Extra hard burnt bricks shall be General Purpose (Special) bricks.

Facing bricks shall exhibit a liability to efflorescence not in excess of “Slight” and water absorption when tested in conformity with the requirements of SANS 227 shall not exceed 14%.

Particular care shall be taken to preserve arises and faces of facing and paving bricks during transit and handling.

C5.1.9.3 CONCRETE BRICKS

Concrete bricks shall have a minimum compressive strength of 7 MPa.

C5.1.9.4 QUARRY TILES, ETC

Quarry, cement and similar tiles shall be of approved manufacture, even in shape and size, free from cracks, twists or blemishes and uniform in colour.

C5.1.9.5 WIRE TIES

Wire ties shall be of galvanized steel of the single wire type for solid walls and either the “Butterfly” or Modified PWD type for hollow walls. Ties shall be of sufficient length to allow not less than 75mm of each end to be built into brickwork or embedded in concrete.

C5.1.9.6 BRICKWORK REINFORCEMENT

Brickwork reinforcement shall be manufactured from hard drawn steel wire conforming to BS 785 and shall consist of two 2,8mm diameter main wires with 2,5mm diameter cross wires at 300mm centres welded at intersections.

Brickwork reinforcement shall be lapped not less than 300mm at end joints and for a length equal to the width of the widest reinforcement at intersections.

F.8 MORTAR

Mortar shall comply with the following table:

1	2	3	4
Mortar Class	Masonry Cement kg	Lime	Sand (measured loose and damp) max
I	50	0 – 10	130
II	50	0 – 40	200
III	50	0 – 80	300

Mortar shall be Class II unless otherwise specified.

Mortar plasticizers may only be used with the approval of the Principal Agent.

The materials shall be mixed dry until of uniform colour, water added and the mixture turned over until the ingredients are thoroughly incorporated.

Mortar shall be produced in such quantities as can be used before commencement of set and no mortar that has set shall be used.

C3.2.16j COMPO MORTAR

Compo mortar shall be Class III mortar in accordance with clause F.8 but with a lime content of 80 l.

The lime and sand shall be mixed dry until of uniform colour, water added and the mixture turned over until the ingredients are thoroughly incorporated.

Immediately before use, the cement shall be mixed in and the requisite amount of water added.

Compo mortar shall be produced in such quantities as can be used before commencement of set and no compo mortar that has set shall be used.

C3.2.17j BRICKWORK

Wherever practicable, brickwork shall be built in stretcher bond. Unless legitimately required to form bond, no false headers shall be used. English bond shall only be used where specifically so indicated or where stretcher bond is not practicable.

Brickwork, unless otherwise described, shall be built in Class II mortar.

Bricks shall be laid on a solid bed of mortar and all joints shall be grouted up solid.

The brickwork shall be carried up in a uniform manner, no part being raised more than 1,2 m above adjoining work.

Where necessary, bricks shall be wetted before being laid and the course of bricks last laid shall be well wetted before laying a fresh course upon it.

Walls in thicknesses of more than one skin shall have at least five wire ties per square metre. Linings to concrete, unless otherwise specified, shall be tied to the concrete with at least five wire ties per square

metre.

Hollow walls, unless otherwise specified, shall be built of two half brick skins with cavity between, tied together with at least five wire ties per square metre.
The cavities shall be kept free of all rubbish, mortar droppings and projecting mortar.

Mortar joints to brickwork shall be not less than 8mm or more than 12mm thick.

C.3.2.18j BLOCKWORK

Unless otherwise described, all blockwork shall be built in stretcher bond. Whole blocks shall be used except where bats or closers are required to form bond.

Blockwork, unless otherwise described, shall be built in Class II mortar.

Solid blocks shall be laid on a solid bed of mortar and all joints shall be grouted up solid.

Hollow blocks shall be laid in shell bedding, i.e. only the inner and outer shells of the blocks shall be covered with mortar. Vertical joints shall be similarly formed.
The blockwork shall be carried up in a uniform manner, no part being raised more than 1,2 m above adjoining work.

Clay blocks shall be wetted before being laid and the course of blocks last laid shall be well wetted before laying a fresh
course upon it.

C3.2.18j CENTRES AND TURNING PIECES

Centres and turning pieces to soffits of arches and lintels shall be left in position for not less than 14 days.

C3.2.19j FACE BRICKWORK

Face brickwork shall be built in stretcher bond, unless otherwise specified, to a true and fair face. Perpends shall be vertically aligned.

Facing bricks shall be mixed to ensure that the proper blending of bricks within the colour range of each facing brick being used is obtained.

C3.2.20j PAVINGS, SILLS, COPINGS, ETC

Clay bricks and tiles shall be wetted before fixing and shall be solidly bedded and jointed in Class I mortar and pointed with slightly keyed joints.

C3.2.21j Waterproofing

G.1 MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Type and/or Additional Requirements
Bituminous damp-proof courses	248	Type FV
Polyolefin sheet in damp-proof courses to walls, sills, etc	952	Type B
Ditto, to floors and basements	952	Type C
Mastic asphalt for roofing	297	-
Mastic asphalt for damp-proof courses and tanking	298	-
Bituminous roofing felt	92	Type 60
Polyolefin sheet for the waterproofing of flat roofs	952	Type A
Chloroprene rubber sheet (for waterproofing)	580	At least 2,5 mm thick and 1200 mm wide
Sealing compounds with two-component polysulphide base	110	Type 2 Gun Grade
Sealing compounds with two-component polyurethane base	1077	-
	SABS Code of Practice	
The waterproofing of buildings	021	
The installation of profiled roof and side cladding	0237	

C3.2.22j WATERPROOFING TO ROOFS, BASEMENTS, ETC

Waterproofing to roofs, basements, etc shall be carried out by workmen who are experienced in this type of work.

C3.2.23j DAMP-PROOF COURSE TO WALLS

All joints in damp-proof course to walls shall be lapped a minimum of 150mm except at junctions and corners where the lap shall equal the full thickness of the wall.

C3.2.K Roof Coverings, etc.

C3.2.1K MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification
Concrete roofing tiles	542
Clay roofing tiles	632
Softwood brandering and battens	653
Fibre-cement sheets: profiled and flat	685
Aluminium alloy and toughened sheets	903
Zinc coatings	934
Polyethylene sheeting for roof underlay	952
Metal roofing tiles	1022
Glass reinforced polyester laminated sheets (profiled or flat)	1150
Fasteners for roof and wall coverings in the Form of sheeting	1273
Materials for thermal insulation of buildings	1381
	BS Specification
Sheet zinc	849
Sheet lead	1178
Sheet aluminium	1470
Sheet copper	2870
	SABS Code of Practice
Fixing of concrete interlocking roofing tiles	062

C3.2.2k GALVANIZED STEEL PROFILED SHEETS, ETC

Galvanized steel profiled sheets, ridge and hip coverings, etc shall be coated with a minimum of 275 g zinc per m2 and shall be free of white rust.

C3.2.3K GALVANIZED SHEET IRON

Galvanized sheet iron shall be rolled steel sheet coated on both sides with a minimum of 275 g of zinc per m2 and shall be free from white rust.

C3.1H.4 NAILING AND SCREWING

Where nailing and screwing is required:
– galvanized iron nails and screws shall be used for galvanized sheet iron and sheet zinc
– copper or copper alloy nails and screws for sheet copper and sheet lead
– aluminium alloy or stainless steel nails and screws for sheet aluminium.

C3.2.4k LAPS

Sheet metal flashings shall have 100mm laps and linings to valleys, secret gutters, etc 225mm laps.

C3.2.5k GENERAL

Rates for profiled sheet roofing and rolled edges, ridge and hip coverings, flashing pieces, etc of metal, fibre-cement, plastic, etc shall include fixing accessories.

C3.2L Carpentry Joinery

C3.2.1L MATERIALS

Materials shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Softwood general structural timber	563	Stress grade 4
Softwood engineering timber	1245	As specified
Softwood studs for timber frames in buildings	1146	-
Softwood brandering and battens	653	-
Softwood flooring boards	629	Flooring grade Heavy flooring boards
Softwood joinery timber	1359	-
Hardwood joinery timber	1099	Knotty grade
Hardwood strip flooring	281	As specified
Wooden ceiling and panelling boards	1039	As specified
Laminated timber (glulam)	1460	As specified
Gypsum plasterboard	266	-
Wood fibreboard	540	As specified
Wood-wool panels (cement bonded)	637	-
Fibre-cement sheets: profiled and flat	685	As specified
Fibre-cement boards	803	As specified
Plywood and composite board	929	As specified
Particle board: highly moisture-resistant exterior and flooring type	1300	-
Particle board: interior type	1301	-
Decorative laminates	1405	High pressure
Wooden doors (flush)	545	Class 4 Dry interior quality
Materials of thermal insulation of buildings	1381	-
Mild steel nails	820	-
Metal screws for wood	1171	-
Creosote	538	As specified

Softwood shall bear the relevant SANS mark and shall be ordered in the sizes in which it will be used as no scantlings of marked timber will be allowed. Should SANS marked timber be unavailable, the Principal Agent's prior permission shall be obtained before using unmarked timber.

C3.2.2L HARDWOODS

All hardwoods shall be specially selected, well-seasoned, free from sapwood and well kiln dried. Meranti shall be Red or Medium Brown Meranti, even in grain and colour, selected from “Standard and Better” quality from Malaysia.

All timber used on the site, whether for permanent or temporary work, shall be free of borer or other beetle and termite infection. If the work under this contract falls within an area designated under Government Notice R2577 of 1978-12-29, permanent softwood fixed in the building shall be treated against borer, etc in accordance with Government Notice R451 of 1969-03-28 using Class B or C preservative. The type of preservative used shall be appropriate to the use of the timber. Any prescribed treatment shall comply with SANS 05.

When treated timbers are cut, the cut surfaces shall be effectively brushed with at least two coats of preservative solution.

C3.2.3L CONSTRUCTION IN GENERAL

Where applicable, construction methods shall comply with SANS 082. Boarded floors shall be laid in accordance with SANS 043. Roof trusses shall be manufactured, erected and braced in accordance with SANS 0243.

C3.2.4L STRUCTURAL TIMBER

Timbers generally shall be in single lengths and jointing of timbers will only be permitted when the required length is unobtainable. Only the absolute minimum of joints to obtain a particular length will be permitted and such joints are to be evenly spaced along the length of the timber.

Finger-jointing of structural timber will be permitted, in which case it shall be manufactured in accordance with SANS 096.

C3.2.5L PLATE NAILED TIMBER ROOF TRUSSES

Plate nailed timber roof trusses shall be of approved design and manufacture and constructed with softwood structural timber by a truss Fabricator holding a current Certificate of Competence awarded by the Institute of Timber Construction.

Each roof truss shall have all its members accurately cut and closely butted together and rigidly fixed by CSIR approved patented galvanized metal spiked connectors, precision pressed on both sides of each intersection by an approved method, all in accordance with the manufacturer's instructions.

The design, manufacture and transportation of the roof trusses, bracing, etc shall be under the control of a registered Structural Engineer in accordance with SANS 0160 and SANS 0163, who shall, after erection, provide a certificate confirming that the design, manufacture, transportation, erection and bracing has been carried out in accordance with this specification.

The design shall include for all live loads, wind loads and for dead loads imposed by roof covering, purlins, ceilings, etc.

Fully detailed shop drawings of all trusses, etc, indicating sizes, bracing, loading, etc, shall be submitted to the Principal Agent for approval prior to fabrication.

Unless specific erection instructions are given, erection shall be carried out in accordance with the procedures and recommendations of the manual “The Erection and Bracing of Timber Roof Trusses” published by the Institute for Timber Construction and the Council for Scientific and Industrial Research or as detailed by the designer.

Roof trusses and bracing shall include design and preparation of shop drawings.

C3.2.6L TONGUED AND GROOVED BOARDING

Tongued and grooved boards for floors, panelling, etc shall be in long varying lengths with joints tightly cramped up and secret nailed. Flooring boarding shall be flush jointed with staggered heading joints and machine sanded after fixing.

C3.2.7L JOINERY

Skirtings, cornices, rails, etc shall be in single lengths wherever practicable and shall have splayed heading joints where necessary. Skirtings shall be trenched at back.

All horns of door frames shall be checked and splayed back where frames are fixed projecting or flush with surface and built in.

Heads of screws in exposed faces of hardwood joinery shall be sunk and match pelleted.

Joinery shall have arras rounded angles and shall be blocked and planted on.

C3.2.8L VENEERS

All face veneers shall be of kiln dried timber, free from knots, cracks, patchwork, sapwood and other defects, selected and glued, dried and machine-sanded to a smooth finish. All veneers shall be applied under hydraulic pressure.

C3.2.9L DOORS
Flush doors shall have solid timber edge strips with concealed edges. Where doors are to be finished with a transparent finish, the veneer and the edge strips shall be timber of the same species and as far as possible of matching colour. Unless otherwise described all flush doors shall be of interior quality, but where exterior quality doors are specified the glue used shall be of the WBP type.

Framed and ledged batten doors described as filled in with V-jointed boarding shall be filled in flush on one side with tongued and grooved vertical boarding, V-jointed on one or both sides and of the thickness stated. The boarding shall be in narrow widths, closely cramped up, rebated or tongued on outer edges and housed to grooves in stiles and rails and twice countersunk brass screwed at each intersection with ledges and braces and the inner edges of the abutting
stiles and rails shall be chamfered to form a V-joint at junction with the board.

Unless otherwise described double doors shall have rebated meeting stiles.

C3.2.10L FIXING
All nails and screws shall be of the size, length and type appropriate to their respective uses. All screws for hardwood joinery work shall be brass.

Items described as “plugged” shall be screwed to fibre, plastic or metal plugs at not exceeding 600mm centres. Where items are described as “bolted”, the bolts have been given separately.

C3.2.11L ADHESIVES
Adhesives shall comply with BS 1204 and 4071 where applicable. Adhesives used in the manufacture

of external joinery exposed to excessive moisture (e.g. kitchen and laboratory worktops) shall be of the WBP type.

C3.2.M Ceilings, Partitions & Access Flooring

C3.2.1M .MATERIALS

Materials shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Gypsum plasterboard	266	-
Fibreboard	540	As specified
Gypsum cove cornice	622	-
Wood-wool panels (cement-bonded)	637	-
Softwood brandering and battens	653	-
Fibre-cement boards	803	As specified
Plywood and composite board	929	As specified
Wooden ceiling and panelling boards	1039	As specified
Softwood studs for timber frames in buildings	1146	-
Materials for thermal insulation of buildings	1381	-
Expanded polystyrene thermal insulation boards	1508	-
Raised access flooring	1549	-

C3.2.2M TONGUED AND GROOVED BOARDING

Tongued and grooved boarding for ceilings shall be in long varying lengths, V-jointed one side and with joints tightly cramped up and secret nailed.

C3.2.2.1M CEILINGS, ETC

C3.2.2.2M Brandering

Brandering for ceilings and eaves soffit coverings shall be symmetrically arranged with necessary smaller panels. Main branders shall be at right angles to roof timbers, with cross branders cut in between and branders shall be fixed with galvanized wire nails driven in on skew alternately in opposite directions.

C3.2.2.3M Ceiling boards

Ceiling boards shall be in long lengths symmetrically arranged with necessary smaller panels, closely butted and secured at 150mm centres to brandering with galvanized or cadmium-plated clout-headed nails.

C3.2.2.4M GYPSUM SKIM PLASTER
Gypsum skim plaster shall be pure gypsum plaster finished with a steel trowel.

C3.2.2.5M EXPOSED TEE-SYSTEM SUSPENDED CEILINGS
The ceiling panels shall be as described in the items and the panels shall be stiffened at back as recommended by the manufacturer to prevent bowing or sagging.

The exposed surfaces of all ceiling panels and supporting members shall be uniform in colour and free from surface blemishes.

The suspension grid system shall be an approved patent suspension system comprising 38mm galvanized steel main and cross tee bearers spaced in both directions at centres to suit sizes of ceiling panels used, with the cross bearers fitted between and notched to form flush fit with main bear

The suspension grid system shall be an approved patent suspension system comprising 38mm galvanized steel main and cross tee bearers spaced in both directions at centres to suit sizes of ceiling panels used, with the cross bearers fitted between and notched to form flush fit with main bearers. The exposed flange of the tees shall be 25mm wide, covered with a rolled aluminium cap painted a low sheen satin white. Cornices, etc shall be as described in the
items and shall be finished to match the exposed tees.

The main tee bearers shall have holes for cross tees at 300mm centres and holes for hangers at 50mm centres. In addition, main and cross tee bearers shall be holed as necessary for and provided with timber wedges or steel clips where recommended by the manufacturer to prevent ceiling panels from lifting.

The web of the exposed cross tee bearers shall extend to form a positive interlock with the main tee bearers and the lower flange shall be cut back to provide a joint free appearance.

All hangers shall be galvanized and shall be at centres to meet the requirements of the specification with one end fixed to the suspension grid main bearers and the other end fitted with suitable galvanized fixing cleat securely fixed to the structure. Fixing points shall be agreed to by the Principal Agent before any power shot fixings are made. Hangers shall not be suspended from air-conditioning ducts. Where recommended by the manufacturer, hangers shall be of the rigid type.

Component parts and fixings shall be non-corrosive and able to withstand atmospheric pollution. Surfaces of aluminium which are in contact with other materials when fixed, particularly metals, shall be suitably insulated to prevent electrolytic corrosion.

Ceilings shall comprise hangers, suspension grid system and ceiling panels, shall be constructed in a manner suitable for carrying air conditioning diffusers and light fittings in the positions required, shall be set out to layouts approved by the Principal Agent and shall have the standard suspension systems modified as necessary to work around any pipes or light fittings.

C3.2.2.6M FLUSH PLASTERED SUSPENDED CEILINGS
Gypsum plasterboard panels of the specified thickness generally in 1200mm widths and in long lengths shall be fixed grey side down with self-tapping screws to the suspension system with the joints between boards loosely butt jointed and covered with 50mm wide strips of self-adhesive fibre tape.

The plasterboard panels shall be finished with gypsum skim plaster trowelled to a smooth polished surface to the thickness, etc recommended by the manufacturer.

The suspension system shall be an approved patent concealed suspension system consisting of galvanized mild steel bearers suspended on approved non-rusting metal hangers spaced generally at 1200mm centres or to suit layout of air-conditioning ducts and other services, etc above ceiling with one end bolted to the bearer and the other end fitted with a galvanized fixing cleat securely fixed to the structure as required.

Fixing points shall be agreed to by the Principal Agent before any power shot fixings are made. Hangers shall not be suspended from air-conditioning ducting.

Ceilings shall comprise hangers, suspension system, ceiling panels and plaster finish, shall be constructed in a manner suitable for carrying air-conditioning diffusers and light fittings in the positions required, shall be set out to layouts approved by the Principal Agent and shall have the standard suspension system modified as necessary to work around any pipes or light fittings.

C3.2N Floor Coverings Wall Linings etc.

C3.2.1N MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Semi-flexible vinyl floor tiles	581	-
Resin modified vinyl floor tiles (thermoplastic)	586	-
Flexible vinyl flooring	786	-
Hardwood block flooring	281	Clear grade
Wood mosaic flooring	978	-
Textile floor coverings (pile construction)	1375	-
Textile floor coverings (needle-punched construction)	1415	-
Carpet underlays	1419	-
	BS Specification	
Sheet linoleum (calendered types), cork, carpet and linoleum tiles	810	-
Solid rubber flooring	1711	-
Felt backed linoleum	1863	-
	SABS Code of Practice	-
The laying of wood floors	043	
The installation of resilient thermoplastic and similar flexible floor coverings materials	070	
The installation of textile floor coverings	0186	

C3.2.2N LAYING OF MATERIAL
Floor tiles shall be laid with continuous joints in both directions.

Patterned floor coverings shall be matched at joints.

C3.2.3N GENERAL
Floor coverings, wall linings, skirtings, nosing, etc shall include all preparatory work to screened or plastered sur-faces, etc, priming coats and adhesives.

Floor coverings and wall linings shall be dressed around and into corners.

Wood block and wood mosaic flooring shall be sanded with a sanding machine and sealed with a coat of approved penetrating sealer.

Plastic handrails shall have welded and polished butt joints.

C3.2O Ironmongery

C3.2.1o MATERIALS
Material shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Locks, latches and associated furniture for doors	4	-
Kitchen cupboards of steel, composite board and timber	1385	-
Single action overhead door closers	1510	-
Padlocks	1533	-
	CKS Specification	
Vitreous enamelled chalkboards	36	-

Locks shall have the minimum possible number of interchangeable keys. Cylinder locks and locks described as “en suite” shall be clearly marked with consecutive numbers and each key shall be punched with the corresponding number of the relative lock.

C3.2.2o FIXING
Unless otherwise described, ironmongery is to be fixed to wood.

Items described as “plugged” shall be screwed to fibre, plastic or metal plugs.

Screws, bolts, etc for fixing of ironmongery shall be of matching metal and finish, except for aluminium ironmongery or ironmongery fixed to aluminium in which cases stainless steel screws may be used.

All necessary preparation of pressed steel door frames for the fixing of ironmongery to the frames has been included with the pressed steel door frames.

C3.2.3o KITCHEN CUPBOARDS
Steel cupboards shall be finished with baked enamel. Tops of floor cupboards shall have laminated plastic covering.

Cupboards shall be fitted with all necessary hinges, handles, catches, etc. Cupboards shall be securely fixed with all necessary screws and fibre, plastic or metal plugs.

Where cupboards are described as a “series”, tops shall be continuous and cupboards shall be bolted or screwed together, including bolts, screws, holes, etc.

C3.2.P Structural Steelwork

C3.2.1P SPECIFICATION
All structural steelwork shall comply with SANS 1200H or 1200HA as applicable.

Whenever the term “Engineer” appears in SANS 1200H or 1200HA or in the following Project Specification this shall be deemed to mean the Principal Agent's representative responsible for this section of the Works.

C3.2.2P PROJECT SPECIFICATION INCORPORATING AMPLIFICATIONS, ADDITIONS AND AMENDMENTS TO SANS 1200H AND 1200HA

SANS 1200H

C3.2.2.1p **Grades of steel**
The grade of mild steel shall be Grade 300 W complying with SANS 1431.

C3.2.2.2p **Contractor provides shop details**
The Contractor shall be responsible for the preparation of all shop detail drawings.

C3.2.2.3p **Engineer provides shop details**
This clause shall not apply.

C3.2.2.4p **Protective treatment**
Structural steelwork shall be cleaned and prepared by wire brushing in accordance with SANS 064 and all surfaces shall be treated with one coat of zinc chromate primer complying with SANS 679 to a minimum dry film thickness of 30 micrometres before leaving the workshop. Upon delivery to the site and again after erection all bared surfaces shall be made good with similar primer.

C3.2.3p: Metalwork

C3.2.3.1P. MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification
ISO metric bolts, screws and nuts	135
ISO metric precision hexagon-headed bolts and screws, and hexagon nuts	136
Expanded metal	190
Steel windows and steel doors	727
Hot-dip (galvanised) zinc coatings	763
Strongroom doors	949
Anodised coatings on aluminium	999
Steel door frames	1129
Mushroom- and countersunk-head bolts and nuts	1143
Chromium plating of metalwork	728
	CKS Specification
Adjustable glass-louvred windows	413
	BS Specification
Aluminium sheet and strips	1470
Aluminium extruded tube and hollow sections	1474
Aluminium bars and sections	1476
	SABS Code of Practice
Welding of metalwork	044
The design and fabrication of articles for hot-dip galvanisi	0214

C3.2.3.2P STEEL

Steel shall be mild steel of approved commercial quality. Steelwork shall be cleaned and prepared by wire brushing in accordance with SANS 064 and given one coat of primer complying with SANS 679 before leaving the workshop.

C3.2.3.3P **Galvanizing of steel**

Steelwork described as “galvanized” shall be galvanized by means of the hot-dip process after fabrication.

Where welding on site is unavoidable, such welded joints shall be cleaned down and cold galvanized to approval.

C3.2.3.4P STAINLESS STEEL
Stainless steel shall be AISI Type 304 stainless steel and shall be buffed to an even satin finish. Stainless steel screws shall be used for fixing stainless steel.

C3.2.3.5P ALUMINIUM
Aluminium extrusions shall be of 6063-T6 alloy and temper. Aluminium sheet and strips shall be of 1200-H4 alloy and temper.

Joints in all aluminium members shall be formed in an approved manner so that the joints are practically invisible. Screw heads, pins, rivets, etc shall be concealed as far as possible. 300 Series stainless steel screws and bolts shall be used for jointing and fixing aluminium work.

The surfaces of all aluminium which are in contact with other materials when fixed shall be suitably insulated with a non-absorbent insulating material to prevent corrosion. All aluminium work shall be suitably protected against damage, deterioration or discolouration caused by mortar droppings, paint, etc by taping with removable tape, covering with temporary casings or by covering with motor oil.

C3.2.3.6P **Anodizing of aluminium**
Aluminium described as “anodized” shall be treated with Grade 25 coating thickness for exterior use or Grade 15 for interior use as specified, to the required finish. All alloys to be anodized shall be suited to anodizing.

C3.2.3.7P BOLTS AND NUTS
Nuts shall be of at least the strength grade appropriate to the grade of bolt or other threaded element with which they are used.

C3.2.3.8P SCREWING OF METALWORK TO STEEL, WOOD, CONCRETE, ETC
Metalwork described as “screwed” to steel, wood, etc or “plugged” to brickwork, concrete, etc shall be fixed at not exceeding 500mm centres, with necessary holes, countersinking, threading, screws, set screws, self-tapping screws and fibre, plastic or metal plugs.

C3.2.3.9P BOLTING OF METALWORK
Where metalwork is described as “bolted” to steel, wood, brickwork, concrete, etc, the bolts are measured elsewhere.

C3.2.3.10P WELDING OF METALWORK
All welds shall be cleaned and filed or ground off smooth to approval. All welded joints shall be continuous.

C3.2.3.11P METALWORK GENERALLY
Metalwork shall have all sharp edges ground smooth. Tubular and pipe work shall include running joints. Rails, etc described as “continuous” shall be in long lengths with welded joints.

C3.2.3.12P PRESSED STEEL DOORS, FRAMES, ETC

C3.2.3.12.1P **Door frames**
Frames shall project not less than 20mm into floor finish. Except where described as galvanized, frames shall be treated with one coat of primer complying with SANS 679 before leaving the factory. Frames are to jambs and heads of openings. Frames for single doors shall be provided with two 100mm steel butt hinges and an adjustable striking plate for a mortice lock and frames for double doors shall be provided with four 100mm steel butt hinges. Butt hinges shall be steel butts with loose pins, welded to

frames. Where necessary mortar caps shall be welded to frames and back plates shall be welded on behind tapping's for screws.

C3.2.3.12.2P **Cupboard door frames**
Cupboard door frames shall be as described in N.10.1, but with thresholds of unequal channel section, two 100mm steel butt hinges to hanging stiles, two 75mm steel butt hinges to hanging stiles above transoms, necessary striking plates for mortice locks and keeps for barrel bolts.

C3.2.3.12.3P **Combination doors and frames**
Combination doors and frames shall be manufactured of 1,6mm thick steel plate. Frames shall be as described in N.10.1. Doors shall be standard design and required profile, with a 44mm wide edge all round, vertical reinforcing ribs pressed in and with two reinforcing rails welded on. The door shall be provided with two lever mortice lock with lock box welded to inside. Doors shall be welded to steel butts.

C3.2.Q STEEL WINDOWS, DOORS, ETC

C3.2.1Q **Windows, doors, etc.**
All fittings to windows, doors, etc shall be chromium plated.

Fixed lights and opening sashes shall be in single squares. Windows, etc of single unit construction shall have weather bars at transoms above opening sashes.

Composite windows not of single piece construction shall be coupled with standard coupling mullions and transoms that correspond with the window section used.

Kicking plates and panels shall be 1,6mm metal plate fixed with standard metal glazing beads mitred at angles and countersunk screwed on at not exceeding 300mm centres with self-tapping screws.

Except where described as galvanized, windows, doors, burglar bars, etc shall be treated with one coat of primer complying with SANS 679 before leaving the factory.

C3.2.2Q **Burglar bars and flyscreens**
Where windows are described as fitted with burglar bars or flyscreens, these shall be standard type fitted over opening sashes.

C3.2.3Q ALUMINIUM WINDOWS AND DOORS

The foregoing preambles "N.3 – ALUMINIUM" shall apply to aluminium windows, doors, etc in all respects in so far as they are applicable. Aluminium windows and doors shall be manufactured from extruded aluminium members of 6063-T6, 6261-T6 or 6082-T6 alloy and temper.

Ancillary members such as sills, flashings, infill panels and the like formed from flat sheet material shall be of an appropriate alloy selected from 1200, 3004 or 5251 complying with BS 1470 of a temper suitable for the method of forming and a composition suitable for anodizing or painting as required.

Windows, doors, etc shall be of an approved standard system, manufactured by an approved firm experienced in this type of work, and shall meet with the minimum recommended performance requirements as set out by the Association of Architectural Aluminium Manufacturers of South Africa (AAAMSA) in the latest edition of the Selection Guide.

The fittings for all opening sashes shall be substantial and, unless otherwise described, shall be of high quality aluminium alloy finished to match the windows, doors, etc on which they occur. Samples of all fittings shall be supplied to the Principal Agent for approval.

Top, side and bottom hung opening sashes shall be hung on two aluminium hinges with 300 Series stainless steel pins, nylon bushes and stainless-steel washers. Side hung sashes shall have fasteners and sliding stays, top hung sashes shall have peg stays and bottom hung sashes shall have spring catches and concealed arms.

Projected out sashes shall have aluminium fasteners and concealed arms of a non-corrosive material compatible with aluminium.

The frames which are to be built into openings in brickwork shall be fitted with the manufacturer's standard type fixing lugs, not less than 20 x 3 x 150mm long, screwed to frame and placed one near each corner and intermediately not more than 450mm apart to sides, top and bottom and where fixed to concrete reveals, wood sub-frames or to pre-formed openings in brickwork shall have countersunk holes for screws, one near each corner and intermediately not more than 450mm apart to sides, top and bottom.

C3.2.4Q **Glazing beads**
Where so described, openings and sashes of windows and doors shall be fitted with approved channel section aluminium glazing beads sufficient in size and profile to suit the method of glazing employed, finished to match the windows, doors, etc and neatly mitred. Screws where necessary shall be of aluminium or
300 Series stainless steel and have pan or raised heads finished to match the beads.

C3.2.5Q **Finishes**
Windows, doors, etc described as “anodized” shall be treated with Grade 25 coating thickness.
Windows, doors, etc described as “factory painted” shall have an electrostatically applied oven baked polyester paint coating not less than 25 micrometres thick.

C3.2.6Q **General**
Aluminium windows, doors, etc shall include glass as described, fixing in position, sealing and protection against damage, deterioration or discolouration by taping with removable tape or covering with temporary casings or motor oil and removing same on completion.

C3.2.7Q STRONGROOM AND RECORD ROOM DOORS
Strongroom and record room doors shall not be built in as the work proceeds but shall be fixed later in the openings provided. The Contractor shall ensure that the lock or other important parts of the door are not tampered with. Should any such tampering occur, the Contractor will be held responsible and at the Principal Agent's discretion shall provide a new door or lock and keys at his own expense. The keys shall not be delivered together with the doors to the building site. The Contractor shall arrange for the manufacturer to send the keys direct to the Principal Agent per registered post. If these instructions are not complied with, a new lock and keys shall be provided by the Contractor at his own expense.

C3.2.8Q STEEL ROLLER SHUTTERS
Roller shutters shall be of approved manufacture comprising curtain, vertical channel guides and top mechanism. The curtain shall be constructed of 1mm thick machine-rolled galvanized interlocking slats with mild steel end locks spot welded to alternate strips. The bottom shall be provided with a galvanized rail riveted on and vertical edges shall slide in galvanized channel guides formed of steel not less than 2,5mm thick bolted to sides of openings.

The mechanism shall be covered in a galvanized sheet iron box. The ungalvanized sections shall be treated with one coat of primer complying with SANS 679 before leaving the factory.

C3.2R: Plastering

C3.2.1R MATERIALS
Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Masonry cement	ENV 413-1	MC12,5
Lime for use in buildings	523	A2P
Sand for plaster and mortar	1090	-

C3.2.2R PREPARATORY WORK
Surfaces shall be clean and free of oil and thoroughly wetted directly before any plastering or other in situ-finishes are commenced. Concrete surfaces shall be slushed with a mixture of one-part cement and one part coarse sand or otherwise treated to form a proper key. Preparatory coats shall be thoroughly scored and roughened to form a proper key.

C3.2.3R CONSTITUENTS OF MIXES
All constituents shall be mixed by volume.

C3.2.4R RFINISH
All coats of paving and plastering shall be executed in one operation without any blemishes.

C3.2.5R SCREEDS
Screeds shall be composed of one part cement and four parts sand.

C3.2.6R CEMENT RENDER
Cement render shall be composed of one part cement and three parts sand finished with a steel trowel to a smooth polished surface and cured for at least seven days after laying.

Cement render finish shall be divided into panels not exceeding 6 m 2 with V-joints and deep trowel cuts.

C3.2.7R GRANOLITHIC
Granolithic shall be composed of one part cement, one part fine sand, two parts coarse sand and one part granite or other approved stone aggregate that will pass through a 5mm sieve, finished with a steel trowel to a smooth polished surface and cured for at least seven days after laying.

Coloured granolithic shall be carried out in two coats in one operation and shall be tinted to the required colour with approved colouring pigment mixed into the finishing coat. Under no circumstances is the pigment to be sprinkled on and trowelled in after the granolithic is laid.

Granolithic shall be divided into panels not exceeding 6 m 2 with V-joints and deep trowel cuts.

C3.2.8R SKIRTINGS
Skirtings shall not exceed 25mm thick and shall have a fair edge with arras or rounded external angle at top edge or V-joint to finish flush with plaster and coved or square junction with floor finish.

C3.2.9R THICKNESS OF PLASTER
All plaster, other than skim plaster, shall be not less than 10mm and not more than 20mm thick.

C3.2.10R CEMENT PLASTER
Cement plaster shall be composed of one part cement and five parts sand.

C3.2.11R COMPO PLASTER
Compo plaster shall be composed of one part cement, two parts lime and nine parts sand.

C3.2.12R GYPSUM SKIM PLASTER
Gypsum skim plaster shall be pure gypsum plaster finished with a steel trowel.

C3.2.13R TWO COAT PLASTER WITH GYPSUM FINISH
Two coat plaster with gypsum finish shall comprise an undercoat composed of one part cement and five parts sand finished with a wooden float and a finishing coat of gypsum skim plaster.

C3.2.14R ROUGH-CAST PLASTER
Rough-cast plaster shall be applied in two coats. The undercoat shall be composed of one part cement and five parts sand finished with a wooden float. The finishing coat shall be composed of one part cement and three parts stone aggregate that will pass through a 4mm sieve. The finishing coat shall be flicked on with a machine before the undercoat has set to obtain an even texture.

C.3.2.15R FINE ROUGH-CAST PLASTER
Fine rough-cast plaster shall be as for rough-cast plaster, but the finishing coat shall be composed of one part cement and three parts coarse sand.

C3.2.16R GENERAL
Rates for plastering described as being on vertical surfaces of brickwork or blockwork shall include concrete columns, beams and lintels flush with the face of the wall.

C3.2S Tiling

C3.2.1S MATERIALS
Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Glazed ceramic wall tiles and fittings	22	
Glazed and unglazed ceramic wall and floor tiles, fittings and bedding	1449	
Masonry cement	ENV 413-1	MC 12,5
Sand for plaster and mortar	1090	
	SABS Code of Practice	
The installation of ceramic tiling	0107	

C3.2.2S TILES, MOSAICS, ETC.
Tiles, mosaics, etc shall be even in shape and size, free from cracks, twists or blemishes and uniform in colour.

C3.2.3S PREPARATORY WORK
Surfaces shall be clean and free of oil and thoroughly wetted directly before any tiling is commenced. Concrete surfaces shall be slushed with a mixture of one part cement and one part coarse sand or otherwise treated to form a proper key.

C3.2.4S CERAMIC WALL AND FLOOR TILING
Where tiles are fixed to plaster or screeds with an adhesive, the adhesive shall be as recommended by the manufacturer of the tiles. Joints shall be straight, continuous and flush pointed with an approved grouting compound.

C3.2.5S GENERAL
Tiling described as “on walls” is on brick walls or block walls unless otherwise stated and shall include concrete columns, beams and lintels flush with the face of the wall.

C3.2T Plumbing and Drainage

C3.2.1T MATERIALS, ETC

Materials and workmanship shall comply with the following specifications and requirements:

Sheet metal	**BS Specification**	
Sheet zinc	849	
Sheet aluminium	1470	
Sheet copper	2870	
Rainwater systems	**SABS Specification**	
Unplasticized polyvinyl chloride (UPVC) components for external rainwater systems	11	
Pipes and fittings	**SABS Specification**	**Class or type**
Steel pipes and fittings up to 150 mm nominal bore and suitable for screwing to ISO R7 pipe threads	62	Medium class, galvanized
Copper tubes for domestic plumbing services	460	Class 1 – above ground Class 2 – under ground
Hard drawn copper tubes	460	Class 0 – above ground
Malleable cast iron pipe fittings	509	Galvanized
Black polyethylene pressure pipes for cold water supply	533	–
Cast iron fittings for fibre-cement pressure pipes	546	–
Vitrified clay sewer pipes and fittings	559	–
Reinforced concrete pressure pipes	676	–
Concrete non-pressure pipes	677	SC Type; Class B
Cast iron pipes and pipe fittings for use above ground in drainage installations	746	Type B pipes
Unplasticized polyvinyl chloride (UPVC) sewer and drain pipes and pipe fittings	791	Normal duty, with socket and rubber ring type joint
Fibre-cement pipes and fittings for drains	819	Class 3
Pipes and fittings	**SABS Specification**	**Class or type**
Pitch-impregnated fibre pipes and fittings	921	Fittings shall be polypropylene
Unplasticized polyvinyl chloride (UPVC) pressure pipes and fittings for cold water supply	966	–
Unplasticized polyvinyl chloride (UPVC) soil, waste and vent pipes and pipe fittings for use above ground in drainage installations	967	–
Rubber joint (non-cellular) rings for pipes	974	–
Compression and capillary solder fittings for copper tubes	1067	–
Fibre-cement pressure pipes and couplings		

Pipes and fittings	SABS Specification	Class or type
Pitch-impregnated fibre pipes and fittings	921	Fittings shall be polypropylene
Unplasticized polyvinyl chloride (UPVC) pressure pipes and fittings for cold water supply	966	–
Unplasticized polyvinyl chloride (UPVC) soil, waste and vent pipes and pipe fittings for use above ground in drainage installations	967	–
Rubber joint (non-cellular) rings for pipes	974	–
Compression and capillary solder fittings for copper tubes	1067	–
Fibre-cement pressure pipes and couplings (constant internal diameter type)	1223	–
Polypropylene pressure pipes	1315	–
Plastic and rubber traps	1321	–
Vent valves for drainage installations	1532	–

Pipes and fittings	BS Specification
Heavy duty cast iron pipe fittings for drainage and gas and water supplies	78
Lead pipes	602
Cast iron pressure pipes for use in drainage and gas and water supplies	1211
Stainless steel pipes for use with compression fittings	4127

Sanitary fittings, etc.	SABS Specification	Remarks
Stainless steel sinks with draining boards (for domestic use)	242	–
Stainless steel wash hand basins	906	Each with two soap recesses
Stainless steel wash troughs	906	For installation against walls
Stainless steel sinks for institutional use	907	–
Stainless steel stall urinals	924	–

Sanitary fittings, etc	SABS Specification	Remarks
Acrylic resinous baths	1402	–
Glazed ceramic wash hand basins, sinks, washdown closet pans, urinals, cisterns and block channels	497	–
Hand operated W.C. flushing cisterns	821	–
Flushing devices for W.C. flushing cisterns	1509	–
Flush pipes for high level cisterns	821	Appendix X
Flush pipes for low level cisterns	821	–

Taps, valves, etc.	SABS Specification	Class
Taps (metallic)	226	Pillar taps, mixer taps and stoptaps shall be Class 2
Plastic water taps	1021	–
Single control mixer taps	1480	–
Float valves	752	–
Plastic ball floats for ball valves	1006	–
Functional control and safety valves	198	–
Cast iron gate valves	664	–
Automatic shut-off flush valves for water closets and urinals	1240	–
Check valves	1551	–

Portable rechargeable fire extinguishers	SABS Specification
Dry powder	810
Water	889
Halogenated hydrocarbon	1151

Other	SABS Specification
Fixed electric storage water heaters	151
Fire hose reels (with hose)	543

Drainage covers, gratings, etc	SABS Specification
Cast iron surface boxes and manhole and inspection covers and frames	558
Cast iron gratings for gullies and stormwater drains	1115
	BS Specification
Cast iron step irons	1247
	SABS Code of Practice
The installation of polyethylene and unplasticized polyvinyl chloride pipes	0112
Water supply and drainage for buildings	0252

C3.2.2T GENERAL

C3.2.2.1T **Excavations**
Excavations shall be deemed to be in “earth”. Backfilling to excavations shall be executed in 300mm thick layers, watered and compacted. Surplus excavated material shall be spread and levelled over site as directed.

C3.2.2.2T **Concrete**
Unreinforced concrete shall be Class B prescribed mix concrete and reinforced and precast concrete shall be Class C prescribed mix concrete.

C3.2.2.3T **Brickwork**
Brickwork shall be of extra hard burnt bricks built in Class I mortar.

C3.2.2.4T **Plaster**
Plaster shall be 1:3 cement plaster finished smooth with a steel trowel. All angles shall be rounded.

C3.2.2.5T **Diameters of pipes, etc**
Diameters stated for pipes, traps, valves, etc are internal diameters except PVC, polyethylene, stainless steel and copper pipes and traps for which external diameters are stated.

C3.2.3T SHEET METAL WORK

Q.3.1 **Galvanized sheet iron**
Galvanized sheet iron shall be rolled steel sheet coated on both sides with Class C zinc coating complying with SANS 934. Sheets shall be free from white rust.

C3.2.4T EAVES GUTTERS

C3.2.4.5T **Galvanized sheet iron gutters**
Galvanized sheet iron gutters shall have beaded edges and all joints shall be riveted and soldered. Angles shall be strengthened with 50 x 0,6mm galvanized sheet iron strips soldered on over the internal faces of mitres.

Gutters shall be fixed with falls to outlets on 30 x 3mm galvanized mild steel brackets, bent to the shape of gutters, with front ends taken up to the underside of beaded edge of gutter and each screwed to roof timbers or bolted to fibre-cement fascias with 6mm galvanized gutter bolts. Gutters shall be bolted to brackets at front with 6mm galvanized gutter bolts, one to each bracket.

Brackets shall be positioned at joints of gutters and intermediately at not exceeding 1,25 m centres.

C3.2.4.6T **Fibre-cement gutters**
Fibre-cement gutters shall have spigot and socket joints.
Gutters shall be fixed with falls to outlets on standard aluminium alloy brackets, screwed or bolted to roof timbers or fascias.

C3.2.4.7T **Unplasticized polyvinyl chloride (UPVC) gutters**
Gutters shall be fixed with falls to outlets on brackets as supplied by the manufacturer, screwed or bolted to roof timbers or fascias.

C3.2.4.8T **Aluminium gutters**
Aluminium gutters shall be roll formed on site to required lengths and profiles from 3003H14-3SH4 alloy strip not less than 0,7mm thick factory coated on both sides with baked enamel and two coats of silicone modified polyester to a total minimum thickness of 20 micrometres. Angles, stopped ends, etc shall be prefabricated units pop riveted to gutters with joints sealed with mastic. The guttering shall be in continuous lengths between angles, stopped ends, etc.

C3.2.5T RAINWATER PIPES

C3.2.5.1T **Galvanized sheet iron pipes**
Galvanized sheet iron pipes shall have seams at the back and shall be jointed with soldered slip joints.

Pipes shall be fixed to walls, etc with galvanized mild steel holderbats spaced at not exceeding 2 m

centres with tails driven in or cut and pinned in 1:3 cement mortar.

C3.2.5.2T **Fibre-cement pipes**
Fibre-cement pipes shall have spigot and socket joints.

Pipes shall be fixed to walls, etc with standard aluminium alloy holderbats with tails driven in or cut and pinned in 1:3 cement mortar.

C3.2.5.3T **Unplasticized polyvinyl chloride (UPVC) pipes**
Pipes shall be fixed to walls, etc with patented UPVC or aluminium clips and holderbats as supplied by the
manufacturer of the pipe.

C3.2.5.4T **Aluminium pipes**
Aluminium pipes and fixing straps shall be formed from 3003H14-3SH4 alloy strip not less than 0,7mm thick factory coated on both sides as described for aluminium gutters.

Pipes shall be in continuous lengths with formed angles, offsets, shoes, etc.

Pipes shall be fixed to walls, etc with 20 x 0,6mm straps at not exceeding 1,5 m centres screwed to 25 x 75 x 100mm hardwood chamfered and oiled blocks plugged to walls.

C3.2.6T STORMWATER CHANNELS
In-situ concrete stormwater channels shall be constructed of unreinforced concrete with segmental channel formed in top. Channels shall be laid to falls on a well rammed earth bottom and finished smooth on exposed surfaces.

Precast concrete channels shall be of 25 MPa concrete, generally in 1 m lengths, finished smooth from the mould on exposed surfaces, laid to falls on a well rammed earth bottom, jointed in 1:3 cement mortar and pointed with keyed joints.

Pipes	Joints
Fibre-cement, concrete, pitch-impregnated fibre and vitrified clay pipes for us under ground in non-pressure pipe lines	Flexible joints in accordance with the manufacturer's caulking compound
Cast iron for use above ground	Spigot and socket joints with tarred rope yarn and caulking compound or Plain ended joints with stainless steel couplings with neoprene rubber sleeves
Cast iron for use below ground	Spigot and socket joints with tarred rope yarn and caulking compound
Galvanised mild steel	Joints of screwed galvanised steel sockets or bolted galvanised iron flanges Screwed joints with plastic jointing tape or hemp Flanged joints which shall be bolted and provided with rubber gaskets and with flanges screwed to pipes

Joints between pipes of different materials shall be as follows:

Between cast iron and mild steel	Spigot and socket joints with tarred rope yarn and caulking compound
Between cast iron and clay	Spigot and socket joint with semi-dry cement caulking and 1:2 cement mortar fillet
Between mild steel or copper and clay	Spigot and socket joint with either bitumen or semi-dry cement caulking and 1:2 cement mortar fillet

Q.8 FIXING OF PIPES

Pipes shall be fixed as follows:

Q.8.1 Galvanised mild steel (except those stated in Q.8.3)	To walls with galvanised mild steel brackets for pipes not exceeding 80 mm diameter and with galvanised cast iron hinged holderbats with brass pins or bolts for pipes exceeding 80 mm diameter; both types with tails cut and pinned 1:3 cement mortar To woodwork with screw-on type galvanised mild steel holderbats
Q.8.2 Copper and stainless steel	To walls with brass holderbats or screw-on type two-piece spacing clips for pipes not exceeding 75 mm diameter and with purpose made holderbats for pipes exceeding 75 mm diameter; both types with tails cut and pinned in 1:3 cement mortar. To woodwork with screw-on type brass holderbats
Q.8.3 Cast iron and galvanised mild steel for soil, waste and vent pipes	To walls with hinged cast iron holderbats with brass bolts and with tails cut and pinned in 1:3 cement mortar To woodwork with screw-on type galvanised mild steel holderbats
Q.8.4 Polyethylene, polypropylene and patented UPVC or unplasticized polyvinyl chloride	To walls, woodwork, etc with aluminium clips and holderbats as supplied by the manufacturer of the pipes
Q.8.5 Fibre-cement	To walls with aluminium alloy holderbats with tails cut and pinned in 1:3 cement mortar
Q.8.6 Pipes fixed to ceilings	Fixed with holderbats and standard or purpose made hangers, with extended hangers for pipes to falls

C3.2.7T JOINTS
Joints of pipes not covered in SANS Specifications shall be as follows:

C3.2.8T PIPES LAID IN GROUND

C3.2.8.1T **Water pipes, etc**
Water pipes, gas pipes, etc laid in ground shall be at least 400mm deep from the crown of the pipe to the finished surface.

C3.2.8.2T **Drain pipes**
Excavations taken out too deep shall be filled in with selected soil and compacted.

Backfilling to sides and up to 300mm above plastic pipes shall be free from stone or hard substances which will not pass a 10mm mesh.

Q.10 CLEANING EYE LIDS

Cleaning eye lids for drain pipe fittings shall be fixed and sealed as follows:

Pipe fittings	**Method of sealing and fixing**
Fibre-cement	Sealed with synthetic rubber or bituminous mastic packing and fixed screws
Vitrified clay	Polypropylene lid sealed with synthetic rubber packing and pressed into position
Polypropylene and unplasticized polyvinyl chloride	Sealed with synthetic rubber packing and screwed on or pressed into position
Cast iron	Sealed with tallow or putty and fixed with non-ferrous metal screws
Galvanised malleable cast iron and cast brass	Sealed with synthetic rubber packing and screwed in

C3.2.9T CLEANING EYES
Cleaning eyes shall consist of cast iron frames and lids with letters “CE” (or “SO”) cast in lids. The lids shall be secured with non-ferrous metal screws. Frames shall be jointed to vertical drain pipes. Cleaning eyes shall be encased in unreinforced concrete taken up to ground level and plastered on exposed surfaces.

C3.2.10T INSPECTION EYE MARKER SLABS
Inspection eye marker slabs shall be 350 x 350 x 50mm thick precast concrete finished smooth from the mould, with letters “IE” (or “IO”) formed in top and placed flush in ground or paving.

C3.2.11T GULLEYS
Gulleys shall be built up of traps, vertical piping and gulley heads with loose gratings, all encased in unreinforced concrete to finish flush with gulley head top and taken up to at least 50mm above surrounding finished surfaces. The outer top edge of the concrete encasing shall be splayed and the exposed surfaces plastered.

C3.2.12T DISHED GULLEYS
Dished gulleys shall be built up of traps, vertical piping and gulley heads with loose gratings, all encased in unreinforced concrete and with dished unreinforced concrete hopper size 450 x 450mm overall around gulley head with rounded kerb 50mm wide to front and sides and 25mm wide at back, 100mm high above top of dishing and the hopper plastered on exposed surfaces. Top of hopper shall be taken up to at least 50mm above surrounding finished surfaces.

C3.2.13T SUMPS, CATCHPITS, INSPECTION CHAMBERS, ETC.

C3.2.13.1T **Rainwater sumps**
Rainwater sumps shall be built with half-brick sides on 100mm thick unreinforced concrete bottom, plastered internally on walls and with 80mm high unreinforced concrete kerb at top rebated for grating or cover and plastered on exposed surfaces.

C3.2.13.2T **Stormwater catchpits and inspection chambers**
Brick catchpits and inspection chambers shall be built with one-brick sides on 150mm thick unreinforced concrete bottom projecting 100mm beyond walls all round, plastered internally on walls and with 100mm thick reinforced concrete cover slab with opening rebated for frame of grating or cover and plastered on
exposed surfaces.

Precast concrete catchpits and inspection chambers shall be constructed in accordance with the applicable details shown on Drawing LE-1 of SANS 1200LE. Precast concrete manhole sections and slabs shall comply with SANS 1294 and the requirements for pipes of SC type and Class A of SANS 677.

C3.2.13.3T **Sewer inspection chambers**
Brick inspection chambers shall be built as for brick stormwater inspection chambers and with the bottom of the chamber well benched around half round channels, bends, junctions, etc up to sides of chamber in unreinforced concrete finished smooth.

Precast concrete inspection chambers shall be constructed in accordance with the applicable details shown on Drawing LD-5 of SANS 1200LD. Precast concrete manhole sections and slabs shall comply with SANS 1294 and the requirements for pipes of SC type and Class A of SANS 677.

C3.2.13.4T **Stormwater drain junction boxes**
Junction boxes shall be formed of 150mm thick unreinforced concrete bottom and sides to suit the various sizes of the drain pipes and built after the pipes have been laid, with the sides taken up slightly higher than the highest pipe and finished level on top for and covered with a 75mm thick loose precast concrete slab.

C3.2.13.5T **Step irons**
Where inspection chambers exceed 1,2 m deep, cast iron step irons shall be provided, built into the wall at 300mm centres and staggered regularly in vertical rows spaced at 200mm centres horizontally.

C3.2.14T STOPCOCK AND METER BOXES

Stopcock and meter boxes shall be built with half-brick sides with a cast iron box and lid complying with SANS 558 set in 75mm wide unreinforced concrete kerb for the full depth of the cast iron box and plastered on exposed surfaces.

C3.2.15T VALVE CHAMBERS

Valve chambers shall be built with half-brick sides with 100mm thick unreinforced concrete kerb to top with rebate for cover and frame to finish flush with adjacent paving or finished ground level and plastered on exposed surfaces.

C3.2.16T CAST IRON COVERS, GRATINGS, ETC.

All cast iron covers, gratings, frames and surface boxes shall be coated with preservative solution. Frames shall be cast into concrete. Covers, except covers to stormwater drainage or electrical cable inspection chambers, shall be set in grease.

C3.2.17T CONCRETE ENCASING

Concrete encasing for pipes, bends, traps, gulleys, grease traps, etc shall be unreinforced concrete not less than 100mm thick all round.

C3.2.18T SANITARY FITTINGS

C3.2.18.1T **General**
Glazed ceramic, acrylic and porcelain enamelled sanitary fittings and component parts shall be white. Accessories for sanitary fittings shall be chromium plated brass.

Waste outlets for baths, basins, etc shall comprise chromium plated brass waste union with grating, rubber washers and locknut, fitted with rubber or vulcanite plug on a chromium plated brass chain and stay.

C3.2.18.2T **Stainless steel sanitary fittings**
Stainless steel sinks and draining boards, basins, wash troughs and urinals shall be AISI Type 304 satin finished stainless steel.

All stainless steel fittings shall be treated on the back with a vermin proof sound deadening coating.

Sinks, basins and wash troughs shall be provided with 40mm diameter screwed waste outlets.

C3.2.18.3T **Precast concrete wash troughs**
Reinforced precast concrete wash troughs shall have a sloping front with ribbed rubbing surface and shall be finished smooth on exposed faces with top edges and inner angles rounded. Each compartment shall be fitted with a 40mm diameter waste outlet. Wash troughs shall each be supported on two reinforced precast concrete pedestals finished smooth on exposed faces.

C3.2.19.4T **Steel baths**
Steel baths shall be porcelain enamelled internally and painted externally and fitted with waste outlet and overflow grating with coupling.

C3.2.19.5T **Acrylic resinous baths**
Acrylic resinous baths shall be fitted with waste outlet and overflow grating with coupling.

C3.2.19.6T **Acrylic resinous wash hand basins**
Acrylic resinous wash hand basins and vanity units shall have a smooth high gloss finish, with outlet openings, soap recesses, tap-holes and integral overflow and shall be fitted with waste outlet and overflow grating with coupling.

C3.2.19.7T **Glazed ceramic sanitary fittings**
Sinks shall be provided with integral weir overflows.

Washdown closet pans shall have washdown action and be provided with smooth finished injection moulded polypropylene heavy duty double flap seats fixed with non-ferrous bolts.

Urinal channels shall be provided with outlet gratings fitted in bitumen.

C3.2.19.8T **Flush and sparge pipes**
Flush pipes for high level cisterns shall be of plastic or drawn galvanized steel.

Flushpipes for low level cisterns shall be of plastic.

Flush and sparge pipes for urinals with high level cisterns shall be of chromium plated copper piping and of the sizes recommended by the manufacturer of the urinal.

C3.2.20T INSTALLATION OF SANITARY FITTINGS

Sanitary fittings shall be installed as follows:

C3.2.20.1T **Precast concrete wash troughs**

Precast concrete wash troughs shall be bedded on top of pedestals which shall be bedded on floors in 1:3 cement mortar.

C3.2.20.2T **Stainless steel wash troughs and wash hand basins**
Stainless steel wash troughs and wash hand basins shall be fixed to walls on a pair of galvanized mild steel gallows brackets bolted to wall with 6mm diameter expanding bolts.

C3.2.20.3T **Acrylic resinous wash hand basins**
Acrylic resinous wash hand basins shall be fixed to walls on a pair of standard painted cast iron brackets screwed to underside of basin and bolted to wall with 6mm diameter expanding bolts.

C3.2.20.4T **Ceramic wash hand basins**
Ceramic wash hand basins shall be fixed to walls on a pair of standard painted steel or cast iron brackets bolted to wall with 6mm diameter expanding bolts.

C3.2.20.5T **Acrylic resinous baths**
Acrylic resinous baths shall be bedded in 1:5 cement mortar on three cross rows of bricks or bedded solid on a layer of dry river sand and fixed to wall with galvanized steel brackets under edges (in the middle of the sides against walls) bolted to wall with 6mm diameter expanding bolts and sealed along top against wall finishes with patent mildew resistant silicone rubber.

C3.2.20.6T **Washdown closet pans and cisterns**
Washdown closet pans shall be bedded on floors in 1:3 cement mortar. Cisterns shall be fixed to walls with 6mm diameter expanding bolts.

C3.2.20.7T **Ceramic urinals**
Ceramic stall and slab urinals shall be bedded on floors and against walls in 1:3 cement mortar. Slabs, channels, treads, etc shall be jointed in 1:3 cement mortar and pointed in white cement.

Ceramic bowl urinals shall be fixed to walls on standard steel brackets bolted to wall with 6mm diameter expanding bolts. Cisterns shall be fixed to walls on standard brackets bolted to wall with 6mm diameter expanding bolts.

C3.2.20.8T **Stainless steel urinals**
Stainless steel stall and slab urinals shall be bedded on floors in 1:3 cement mortar and with backs and sides against walls filled in with fine unreinforced concrete. Cisterns shall be fixed as cisterns for ceramic urinals.

C.3.2.21T FIRE HOSE REELS
Fire hose reels shall each be fitted with a 30 m long hose of internal diameter not less than 19mm with a 4,8mm internal diameter chromium plated brass nozzle.

C3.2.22T FIRE EXTINGUISHERS
All fire extinguishers shall be fully charged.

C3.2.23T TESTS
Sewerage pipe lines, sanitary plumbing including fittings and hot and cold water supply and fire service shall be tested to the approval of the Principal Agent and Local Authority.

The Contractor shall provide all testing apparatus, material and labour required for the tests and inspections.

C3.2.U Glazing

C3.2.1U MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Glazing putty	680	-
Silvered glass mirrors	1236	A
Safety and security glazing materials	1263	-
Silicone-rubber-base sealing compounds	1305	-
	CKS Specification	
Glass for glazing	55	
	BS Specification	
Glass	952	
	SABS Code of Practice	
Installation of glazing materials in buildings	0137	

C3.2.2U PUTTY, ETC.

Glazing putty shall be Type I for wooden sashes and Type II for steel sashes. Putty for glazing to unpainted hardwood shall be tinted to match the colour of the wood.

Back putty shall not exceed 3mm thick. Putty shall not be painted until it has formed a surface crust, and if the putty does not form a surface crust it shall be replaced.

Butyl putty shall be used where glass is to be fixed in aluminium sashes with glazing beads.

Non-setting compounds shall be used where laminated glass is fixed in sashes with glazing beads

C3.2.V Paintwork

C3.2.1 V MATERIALS

Materials shall comply with the following specifications and requirements:

Material	SABS Specification	Grade or Type
Matt or eggshell decorative paint for internal works	515	-
Decorative high gloss enamel paint for internal and exterior work	630	Grade I
Primers for wood for external work	678	Type I
Primers for wood for internal work	678	Type III
Zinc chromate primers for steel	679	Type I
Undercoats for paints (except emulsion paint0	681	Type I
Aluminium paint	682	Grade II
Roof paints	683	Type B
Structural steel paint	684	Type B
Wash primer (metal etch primer)	723	-
Varnish for interior use	887	Type I
Calcium plumbate primer	912	-
Emulsion paints	1586	-

C3.2.2V PREPARATORY WORK

C3.2.2.1V **Plastered surfaces, etc.**
Plastered surfaces shall be thoroughly inspected and, if necessary, washed down and brushed in order to remove any traces of efflorescence and allowed to dry completely before any paint finish is applied. Before any paint is applied, holes, cracks and irregularities in plaster and other surfaces shall be filled with a suitable filler and finished smooth. Unfinished concrete surfaces shall have all projections rubbed off and shall be thoroughly cleaned with a spirits-of-salts solution (1 part concentrated spirits-of-salts to 4 parts water).

C3.2.2.2V **Metal surfaces**
Metal surfaces shall be sanded, where necessary, washed with a suitable cleaning agent and left smooth.

Protective coatings applied by manufacturers to galvanized metal surfaces shall be removed with a suitable agent and the surfaces washed down.

Rust, grease and defective factory primers on metal surfaces, as well as pitch on cast iron pipes, shall be removed.

C3.2.2.3V **Wood surfaces**
Knots in woodwork shall be treated with knotting. Minor blemishes shall be filled with a suitable filler. Wood surfaces shall be sanded smooth.

C3.2.3V APPLICATION OF PAINT
Primers to wood surfaces shall be applied by brush. Primers to other surfaces may be applied by roller with the approval of the Principal Agent. Undercoats and finishing coats may be applied by brush or roller.

Paint shall not be sprayed on except in the case of cellulose and other special paints where spray painting is the accepted method of application.

Before subsequent coats of paint are applied the previous coat shall be properly dry and shall be sanded down where necessary.

C3.2.4V COLOUR SCHEME
A colour scheme comprising colours and the blending of colours approved by the Principal Agent shall be used for the paintwork. The tints of the undercoats shall closely match the finishing coat but nevertheless differ sufficiently to indicate the number of undercoats. Colour samples of the finishing coats shall be provided in all cases.

C3.2.5.V GENERAL
Paintwork shall include the preparation of surfaces, filling, stopping, sanding and priming of nail heads and screws.

Where windows, sashes, etc are to be painted, the rebates of the openings to be glazed shall be

The Contractor shall be responsible for carrying out all necessary process control tests on the density and moisture content of the compacted sub-grade, base course, etc to ensure that the required compaction is being attained.

C3.2.6 V FENCING, ETC

C3.2.7 V **Materials**
Materials and workmanship shall comply with the following specifications and requirements :

Material	SABS Specification
Straining eye bolts, hinge bolts, bolts, nuts etc	135
Treated timber posts, stays and droppers	457
Galvanised fencing wire (plain and barbed)	675
Steel washers	1149
Prefabricated concrete components for fencing	1372
Galvanised and plastic coated chainlink fencing and its wire accessories	1373
	CKS Specification
Anti-intruder fences	451
Metal droppers and standards	451

C3.2.8V **Galvanized wire**
All galvanized wire shall be zinc coated wire with Class B zinc coating. Straining wire shall be 4mm diameter galvanized mild steel wire. Tie wire shall be 1,6mm diameter galvanized mild steel wire.

C3.2.9V **Plastic coated wire**
Plastic coated straining wire shall be 3,15mm diameter Class C galvanized mild steel wire plastic coated to an overall diameter of 3,95mm.

Plastic coated tie wire shall be 1,8mm diameter Class C galvanized mild steel wire plastic coated to an overall diameter of 2,5mm.

C3.2.10V **Galvanized barbed wire**
Galvanized barbed wire shall be 2,5mm diameter mild steel double strand reverse twist zinc coated barbed wire with Class A zinc coating.

C3.2.11V **Galvanized wire mesh**
Galvanized wire mesh shall be 50mm mesh chain link netting of 2,5mm diameter Class C galvanized mild steel wire.

C3.2.12V **Plastic coated wire mesh**
Plastic coated wire mesh shall be 50mm mesh chain link netting of 2,5mm diameter Class C galvanized mild steel wire plastic coated to an overall diameter of 3,25mm.

C3.2.13V **Galvanized welded wire mesh**
Galvanized welded wire mesh shall be fabricated from pre-galvanized wires to rectangular pattern welded together at each intersection using a welding method which forms a zinc oxide protective coating at each intersection.

C3.2.14V **Razor wire**
Razor wire shall be fabricated from 2,5mm diameter galvanized high tensile steel wire fitted with razor barbs formed of 0,5mm galvanized steel strip clipped on at 37,5mm centres.

C.3.2.15V **Metal droppers and standards**
Droppers shall be of ridged T section mild steel with a mass of not less than 0,55 kg/m. Standards shall be of I section mild steel with a mass of not less than 3 kg/m or of ridged edge Y section mild steel with a mass of not less than 2,5 kg/m, and shall be driven 600mm deep into the ground.

Droppers and standards shall have either galvanized, sprayed metal or painted finish as described in the items and in accordance with CKS 451. In addition, those surfaces of standards embedded in the ground shall be coated with bitumen.

C3.2.16V **Metal posts and stays**
Posts and stays shall comply with CKS 451 and shall be of black galvanized mild steel tubing as specified.

Straining posts shall be of 108mm outside diameter x 3mm wall thickness tubing, each with a 300 x 300 x 5mm thick mild steel sole plate and a steel cap welded on.

Intermediate posts shall be of 50mm outside diameter x 2,5mm wall thickness tubing, each with a 230 x 230 x 5mm thick mild steel sole plate and a steel cap welded on.

Stays for straining posts shall be of 50mm outside diameter x 2,5mm wall thickness tubing, each with a 230 x 230 x 5mm thick mild steel sole plate welded on and fixed raking with top end flattened, bent, holed and bolted to straining post with and including a 5mm diameter galvanized mild steel bolt with nut and washer.

Posts and stays shall have either galvanized or painted finish as described in the items and in accordance with CKS 451. In addition, sole plates and portions of posts and stays embedded in ground shall be coated with bitumen.

C3.2.17V **Timber posts, stays and droppers**
Timber posts shall be 125mm diameter, timber stays shall be 100mm diameter and timber droppers shall be 30mm diameter.

C3.2.18V **Prestressed concrete posts and stays**
Prestressed concrete posts and stays shall be finished smooth from the mould and uniformly stressed by means of high tensile longitudinal prestressing wires with concrete cover to wires of not less than 20mm.

Corner and straining posts shall be 100 x 100mm and intermediate posts and stays shall be 75 x 75mm. Stays shall be fixed raking with top end splayed and glued to posts with a suitable epoxy compound.

C3.2.19V **Bolts, nuts and washers**
Straining eye bolts, hinge bolts, bolts, nuts and washers shall be galvanized.

C3.2.20V **Precast concrete fencing**
Precast concrete fencing over sloping terrain shall be stepped to suit terrain, including the use of increased lengths of posts as necessary, excavation, etc.

C3.2.21V **Concrete bases**
Bases in ground for posts, stays, etc shall be of Class B prescribed mix concrete with tops 100mm below surface of ground.

Sizes of concrete bases for posts, stays, etc shall be as follows:

Straining and gate posts – 450 x 450 x 700mm deep
Intermediate posts – 300 x 300 x 600mm deep
Stays – 600 x 300 x 500mm deep

C3.2.22V **Security overhangs**
Where fencing is described as having a security overhang, the posts and standards shall have angular (single arm) extension arms.

Extension arms shall be attached to the posts and standards by welding in the case of steel and by spiking in the case of timber.

Concrete extension arms shall be cast integrally with the post or standard.

Barbed wire to security overhangs shall be tightly strained and wired at each intersection with extension arms and shall have barbed wire braces at 450mm centres between standards, posts, etc, wired onto the barbed wire and the top straining wire.

C3.2.23V **Gates**
Gates shall be formed of 40mm outside diameter x 2,5mm wall thickness mild steel tubular framework with welded joints, strongly braced as necessary and filled in with wire mesh as described above, properly strained and securely bound to framework with tie wire.

PART 2 ELECTRICAL SPECIFICATIONS: NOTICE TO ELECTRICAL CONTRACTORS

Eligibility

The electrical sub-contractors shall also be registered with The Department of Labour. The company shall have a registered electrical installer for single phase installations.

PART 2: GENERAL SPECIFICATION FOR ELECTRICAL WORK

CONTENTS

1 TESTS
2 MAINTENANCE OF INSTALLATIONS
3 REGULATIONS
4 NOTICES AND FEES
5 SCHEDULE OF FITTINGS AND EQUIPMENT
6 QUALITY OF MATERIALS
7 WORKMANSHIP AND STAFF
8 CERTIFICATE OF COMPLIANCE
9 CABLE SLEEVE PIPES
10 DRAWINGS
11 BALANCING OF LOAD
12 MAINTENANCE OF ELECTRICAL SUPPLY

1 TESTS

After completion of the works and before first delivery is taken, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installations will be inspected and the Contractor shall make good, to the satisfaction of the Engineer, any defects which may arise.

The Contractor shall provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installations at completion.

2 MAINTENANCE OF INSTALLATIONS

With effect from the date of the First Delivery Certificate the Contractor shall at his own expense undertake the regular servicing of the installation during the maintenance period and shall make all adjustments necessary for the correct operation thereof.

If during the said period the installations is not in working order for any reason for which the Contractor is responsible, or if the installations develops defects, he shall immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Engineer, at his own expense replace the whole of the installations or such parts thereof as the Engineer may deem necessary with apparatus specified by the Engineer.

3 REGULATIONS

The installation shall be erected and tested in accordance with the Acts and Regulations as indicated in the scope of works

4 NOTICES AND FEES

The Contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority.

On production of the official account, only the net amount of the fee charged by the Supply Authority for connection of the installation to the supply mains, will be refunded to the Contractor by the Client.

The Contractor shall issue all notices and make the necessary arrangements with Supply Authorities, Eskom and other authorities as may be required with respect to the installation.

5 SCHEDULE OF FITTINGS AND EQUIPMENT

In all instances where schedule of light, socket outlet and power points are attached to or included on the drawings, these schedules are to be regarded as forming part of the specification.

All equipment and fittings supplied must be in accordance with the appended specification, suitable for the relevant supply voltage and frequency and must be approved by the Engineer.

6 QUALITY OF MATERIALS

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Engineer.

Wherever applicable the material is to comply with the relevant South African Bureau of Standards, specifications, or to British Standard Specifications, where no SABS Specifications exist.

Materials wherever possible, must be of South African manufacture.

7 WORKMANSHIP AND STAFF

An accredited person shall exercise general control over all electrical installation work being carried out.

The workmanship shall be of the highest grade and to the satisfaction of the Client.

All inferior work shall, on indication by the Engineer, immediately be removed and rectified by and at the expense of the Contractor.

8 CERTIFICATES OF COMPLIANCE

On completion of the service, a certificate of compliance must be issued to the Engineer and the Client in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

9 CABLE SLEEVE PIPES

Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in asbestos-cement pipes, earthenware or high-density polyethylene pipes.

The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

10 DRAWINGS

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

11 BALANCING OF LOAD

The Contractor is required to balance the load as equally as possible over the multiphase supply.

12 MAINTENANCE OF ELECTRICAL SUPPLY

All interruptions of the electrical supply that may be necessary for the execution of the work, will be subject to prior arrangement between the Contractor, Engineer, user Client (Beneficiaries, the Local Municipality/Eskom).

1 GENERAL

1.1 This part of the specification should be read in conjunction with the Bills of Quantities and drawings as listed in this specification.

1.2 The latest edition, including all amendments up to date of tender of the following RSA specifications, publications and codes of practice shall be read in conjunction with this specification and shall be deemed to form part thereof:

1.2.1 Occupational Health and Safety Act of 1993

1.2.2 SANS 10142-1 – Wiring of premises

1.2.3 SABS 0400 – Building regulations

1.2.4 SABS 0313 – Earthing of structures

1.2.5 The standard specification as Part I of this document

1.2.6 Manufacturer's specifications and installation instructions

1.2.7 The Contractor shall ensure that all safety regulations and measures are applied and enforced during construction, refurbishment, repair and maintenance work on cabling, wiring, distribution boards, luminaires and power outlets.

1.2.8 Applicable SANS specifications and requirements with respect to installation of electrical material and workmanship.

PART 4: BILLS OF QUANTITIES

PREAMBLE

TYPICAL ITEMS/PREAMBLES TO BE INSERTED IN THE BILLS OF QUANTITIES

1. The descriptions in these bills of quantities shall be read in conjunction with the specification.

2. The unit rate for each item in the Bills of Quantities shall include for all materials, labour, profit, transport, etc., everything necessary for the execution and complete installation of the work in accordance with the description.

3. The Bills of Quantities shall not be used for ordering purposes. The Contractor shall check the lengths of cables and overhead conductors on site before ordering any of the cables. Any allowance for off-cuts shall be made in the unit rates.

4. The rates shall exclude Value-Added Tax and the total carried over to the final summary.

5. All material covered by this Specification shall, wherever possible, be of South African manufacture.

C.5.2 SCOPE OF WORKS

The contract covers the supply of all material and fitting and construction of all works relating to the shed. Below are the general scope of works for the civil services.

C.5.1.1 **Siting:** determination of exact site location in consultation with relevant Departmental staff;

C.5.1.2 **Land survey** of the site including all adjacent buildings and roads that can serve as reference points up to at least 100m away from the shed, plus power and water lines;

C.5.1.3 **Earthworks**: remove topsoil from the shed area and surrounding zone and store at a pre-approved area. This material later to be placed back and/or spread out equally so that no heaps remain;

C.5.1.4 **Excavate** site platform and banks (minimum area 70m x 50m) to desired level and Slopes *ensuring that all portal bases will be located in 'cut'.*

C.5.1.5 **Portal bases**: set out; excavate; cast and cure all concrete bases for the shed as per the attached plan (Drawing 1) with required reinforcing in bases as per supplier's specification.

C.5.1.6 **Steel structure:** Supply and erection of an engineer certified steel portal frame structure with 0,50mm widespan roof sheeting. The storeroom is to be fitted with bubble foil insulation under the roof sheeting. The office will also have a rhino board ceiling at 2.50m height.

C.5.1.7 **Steel structure finishings:** roof closures throughout; guttering and down pipes; roof flashing and barge boards; side panelling/cladding as per drawing and specs; 2 roller shutter doors 4.0m wide x 4.0m high, + 1 roller shutter door 2.5m x 2.5m.

C.5.1.8 **Foundations:** excavate foundation trenches, dispose or stockpile soil, compact, provide and install foundation reinforcing, supply, mix, pour, compact, finish and cure concrete to level and specification.

C.5.1.9 **Foundation wall:** Supply and delivery of materials for foundation wall (bricks), construction of foundation walls to specification.

C.5.1.10 **Floor:** establishment of final floor **base** level (base at +0.05m above NGL): cut to 50mm below NGL, compact in situ sub-base, add 100mm of aggregate and compact. Final floor surface is at + 0.2m NGL. Stockpile materials or dispose, Soil treatment (ant poisoning), damp proofing, provide and install formwork for floor (well/adequately braced). Provide and install reinforcement works for floor area and ramp in front of roller shutter door. Supply, mix, pour, compact, finish and cure concrete to specification.

C.5.1.11 Walls: DPC placed under walls, walls built up including brick- and block reinforcing as specified, doors, windows, lintels, ring-beams and columns built in as specified.

C.5.1.12 Finishings:

- Plastering,
- Sills and window surrounds, glazing, painting,
- Tank stands and tanks, plumbing, guttering,
- Site clearing, topsoil replacement and re-shaping,
- repaint any damaged metalwork and paint exposed steelwork,

- final clean up of site.

C.5.3 PRELIMINARIES AND GENERAL

The contractor is to note that all insurances (UIF, workmen's compensation, works, public liability etc.); site and equipment safety; site establishment and security; services (water and electricity); testing of materials and any specialist services are for the contractors responsibility and attention throughout the contract duration until handover of the project. Please also refer to general conditions of contract. The Department reserves the right to stop progress of the works until these conditions are complied with.

C.5.4 EARTHWORKS AND SITE PREPARATIONS

C.5.3.1 Normal regulations regarding safety, municipal by-laws, contamination of water sources, erosion, siltation etc. will still apply. Site preparations & establishment: SABS 1200 AA (4)
Setting out of works: SABS 1200 AA (5.1.1)
Permissible deviations: SABS 1200 GA (6.4) Degree of accuracy II for all bases.
Restricted Excavations: SABS 1200 AA (5); SABS 1200 DA (5.1; 5.2.2)

C.5.3.2 The site must be cleared and stripped of all plant materials, roots and topsoil prior to site levelling. **Minimum size of the area to be cleared and levelled 70 x 50m.**

C.5.3.3 The cleared and stripped material is to be stockpiled away from the construction site and is to be levelled/replaced once all construction is complete.

C.5.3.4 The site is to be levelled prior to any construction. This includes excavation of in situ material to provide a level platform and well compacted sub base for the structure

C.5.3.5 Material excavated and suitable for backfilling will be placed in even, thin layers and compacted with thickness applicable to the compaction method/machinery used but not exceeding 150mm.

C.5.3.6 Compaction of the site shall take place at optimum moisture content (OMC) to a maximum dry density of at least 95% of Mod. AASHTO. *The Contractor shall arrange independent compaction testing, before any building is taking place*. At least 3 evenly distributed places per site shall be tested, once off, after completion of the platform and again after sufficient compaction (**test results are to be provided**). The platform is to be **inspected** prior to the pouring of any concrete.

C.5.3.7 Compaction of the foundation trenches and under floor fill is to meet or exceed that of the platform compaction as tested with a penetrometer (contractor to supply). The trenches are to be **inspected** prior to the pouring of any concrete.

C.5.3.8 Fences will be reinstated to the same condition as before their removal (where applicable).

C.5.5 MATERIALS AND CONSTRUCTION

All materials must conform to SABS specifications for the products. This includes all items such as bricks, blocks, brick reinforcement, damp proofing, lintels, glazing, plumbing and drainage etc All construction works must conform to the applicable standard specifications and installation requirements as per the regulations of the National Building Regulations and Building Standards Act 103 of 1977as amended by the Standards Act 30 of 1982 and the NBRBSA Acts 36 (1984),62 (1989) and 49 (1995), and manufacturers' recommendations. All concrete works to conform to Cement & Concrete Institute standards and recommendations.

C.5.6 STANDARD CONCRETE MIXES:

C.5.5.1 Mixing, pouring and curing of concrete: SABS 1200 GA (5.4)
C.5.5.2 Materials: SABS 1200 AA (3); SABS 1200 GA (3)
C.5.5.3 Cement: Common cement 32,5N or R to SANS 50197-1
C.5.5.4 Testing: SABS 1200 AA (7); SABS 1200 GA (7)
C.5.5.5 Quality control through the slump test SABS 1200 GA (5.4.1.2) SABS method 862. The contractor is to supply the slump testing equipment. Tolerances to SABS 1200 GA (6.4)
C.5.5.6 Formwork: Refer to SABS 1200 GA (4.4; 5.2) <>
C.5.5.7 Reinforcing: SABS 1200 GA (5.1).
C.5.5.8 Standard Concrete Mixes

STANDARD CONCRETE MIXES:

Concrete for non-structural purposes shall be "Prescribed mix concrete" produced in accordance with the requirements indicated in table 5.1, and the Contractor is also referred to the foregoing preambles insofar as they apply: -

Concrete Class	*Estimated Minimum Compressive Strength in MPA at 28 Days*	*Maximum Nominal Size of Coarse Aggregate in mm*	*Proportion of Constituents*		
			Cement (Parts)[1]	*Fine Aggregate (Parts)*	*Coarse Aggregate (Parts)*
A	*10*	*37,5*	*1 (= 2 bags)*	*4*	*5*
B	*15*	*19,0*	*1 (= 2 bags*	*3*	*4*
C	*20*	*19,0*	*1 (= 2 bags*	*2½*	*3½*
D	*25*	*19,0*	*1 (= 2 bags*	*2*	*3*
E	*30*	*19,0*	*1 (= 2 bags*	*2*	*2½*

[1] Cement and aggregates shall be mixed by volume and the contents of a 50kg sack of cement shall be taken to be 33L or 0,033m³.

*[2] **If the mix is made using wheelbarrows as measurement (65L or 0.65m³), the volume of 1 wheelbarrow would equate to 2 bags of cement**.*

Water addition should be kept to a minimum. Only sufficient water should be used to produce a workable mix of 60-100mm slump. A recommended maximum water : cement ratio is 1 for a 10MPa; 0.8 for a 15MPa; 0.65 for a 20MPa; 0.59 for a 25MPa; 0.53 for a 30MPa mix, however the lower the ratio, the better the durability of the concrete. Approximately 210 litres per m³ of concrete is required for an average quality sand and optimum quantity 19mm stone.

C.5.5.9 Finishes to in-situ Concrete

Class U1 Ordinary Finish

Immediately after placing, the concrete shall be finished rough by screeding with the edge of a wooden board of straight and true line and working between guides set accurately to level. No mortar shall be added and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after removing or tamping down the offending aggregate.

Class U2 Wood Float Finish

The concrete surface shall first be brought to the standard Class U1 ordinary finish and then floated with a wood float. Floating shall be started as soon as the screeded finish is stiffened sufficiently and bleed water has evaporated or been removed and it shall be the minimum necessary to produce a surface free from screed marks and uniform in texture.

Class U3 Coarse Brush Surface Finish

The concrete surface shall first be brought to a Class U1 ordinary finish. A coarse brush finish is then applied with a coarse bristle brush. "Brushing" shall be started soon after screeding to produce a uniform patterned coarse surface finish with a rough surface texture in the direction of the desired drainage direction.

Class U4 Steel Float Finish

The concrete surface shall first be brought to the standard Class U1 ordinary finish and then floated with a steel power float. Floating shall be started as soon as the screeded finish is stiffened sufficiently and bleed water has evaporated or been removed and it shall be the minimum necessary to produce a surface free from screed marks and uniform in texture.

C.5.5.10 Mortar & Plaster classes

MORTAR CLASS:	MIX RATIO: (By Volume)	MASONRY CEMENT: kg	LIME: L	SAND: (loose and damp) L (max)
I	1 : 4	50	0-10	130
II	1 : 6	50	0-40	200

PLASTER CLASS:	MIX RATIO: (By Volume)	MASONRY CEMENT: kg	LIME: L	SAND: (loose and damp) L (max)
Rich mix (foundns, wet areas)	1 : 4	50	0-10	130
General purpose	1 : 5	50	0-40	165

C.5.7 STEEL STRUCTURE

C.5.6.1 **The final structural design must be by a qualified professionally registered structural engineer and conform to SABS 0160 and 0162 design codes and come with an engineering certificate and general arrangement drawings.** It must be designed for all applicable loading factors including wind and snow loading where applicable.

C.5.6.2 **Anchor plates** – suitable dimensions to match columns as per structural engineer's design.

C.5.6.3 **Holding down bolts** – appropriate size to match columns as per structural engineers design.

C.5.6.4 Hot dip galvanised **purlins** – slip tie, to suit beam spacing. Roof sheeting anchoring as per structural engineer's design.

C.5.6.5 **All fasteners, bearing bolts, friction grip bolts, welding and connections** to be supplied and all works to conform to the applicable SABS Code of Practices. E.g. Welding to SABS Code of Practice 044 etc.

C.5.6.6 All **dimensions** of steel elements used are to be specified.

C.5.6.7 **Concrete column footings** as per structural engineer's design (minimum 25MPa, dimensions 600(l) x 600(w) x 800(d) mass concrete but structural engineer's design to take preference).

C.5.6.8 All steel columns are to have square stub bases elevated approximately 200mm above the levelled earthworks platform.

C.5.6.9 Galvanized metal **closures** between roof sheeting and purlins are to be provided for vermin proofing.

C.5.6.10 **Cross braces at the roof** (angle iron type)) between the columns (vertical, behind cladding) and rafter beams (under roof sheets) of the first and second, and the second last and last portals. Two times four is 8 cross braces in total.

C.5.6.11 **Priming** of structural steelwork: Surfaces are to be cleaned in accordance with SABS 064 and painted with red oxide zinc chromate primer or equivalent in accordance with SABS Specification 909 prior to delivery. Upon delivery to the site and again after erection any bared or damaged surfaces and connections are to be made good with similar primer.

C.5.6.12 **Painting** of structural steelwork: Any surfaces that may be damaged/welded are to be rubbed down over to a sound surface and then restored by re-applying the removed coat properly merged in with the existing. Two finishing coats of Super Universal Enamel (NY-1G) or equivalent are to be applied after construction is complete to any exposed structural steelwork.

PAINTING OF STRUCTURAL STEELWORK

Priming: *Priming of steelwork (non-galvanized): Surfaces are to be cleaned in accordance with SABS 064 and painted with red oxide zinc chromate primer or equivalent in accordance with SABS Specification 909 prior to delivery. Upon delivery to the site and again after erection any bared or damaged surfaces and connections are to be made good with similar primer.*

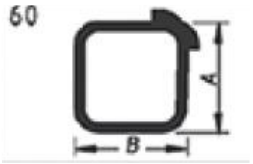
Finishing: *Painting of steelwork (non-galvanized): Any surfaces that may be damaged/welded are to be rubbed down over the damaged and surrounding area to a sound surface and then restored by re-applying the removed coat properly merged in with the existing. Two finishing coats of Super Universal Enamel (NY-1G) or equivalent are to be applied after construction is complete to any exposed structural steelwork. Galvanized surfaces requiring surface treatment are to be coated with cold galvanizing.*

C.5.8 FOUNDATIONS

C.5.7.1 All foundations to be on suitable well compacted material (to extend through any fill material where applicable and well compacted). **The foundation trenches are to be inspected prior to the pouring of any concrete.**

C.5.7.2 All external and internal walls are to be centrally constructed on a minimum 650x250mm strip footing, suitably reinforced with a minimum of 4 x Y12 OR 6 x Y10 rods throughout all foundations

tied to base reinforcing and suitably tied together with stirrups (R6 @ 600mm CTC with a minimum cover of 40mm) to bending code 60 with shape code dimensions of A=150mm and B=550mm.



C.5.7.3 Class C concrete and surface finishes as per drawing (min U2 finish): ±20MPa/19mm, 1:2½:3½ mix, slump to SABS 1200GA (5.4.1.2). All foundations are to be properly cured for a minimum period of seven days by keeping moist and covered over this time or by applying a concrete curing compound (applied as per manufacturer's specifications).

C.5.7.4 Permissible deviations: SABS 1200 GA (6.4) Degree of accuracy III for concrete.

C.5.9 FOUNDATION WALLS

C.5.8.1 The Exterior and Internal foundation walls are to be constructed of SABS standard stock bricks or SABS solid concrete brick units (220mm wide) with SABS galvanized brick force **in every second course** installed to SABS installation practice. All brickwork shall be built in stretcher bond in class I mortar for foundation walls. The use of any clay masonry units require that the units are wet before being laid and the course of units last laid shall be wet before laying a fresh course upon it.

C.5.8.2 Final foundation levels are to correspond to the finished floor level, minimum 200mm above (levelled) ground level.

C.5.8.3 The foundation wall is to be constructed as detailed in the drawing, using a double brick wall which contains galvanized SABS brick reinforcing in every course. The mortar is to be a rich mix (class I). Unless otherwise specified is to be Portland cement of normal setting quality, is to comply with SABS Specification 471, and must be used fresh. Cement containing more than 15% blast furnace slag will not be permitted to be used.

C.5.8.4 Permissible deviations: SABS 1200 GA (6.4) Degree of accuracy III for concrete.

C.5.8.5 All brick/block work to be sealed with a **rich plaster mix on both sides** before backfilling with soil. Unless otherwise specified is to be Portland cement of normal setting quality, is to comply with SABS Specification 471, and must be used fresh.

C.5.10 FLOOR

C.5.9.1 **Sub-Base:** The soil layer under the floor slab is to be well and uniformly compacted. Backfilling & soil compaction to SABS 1200 DA (3.2; 5.2.3.2). The floors are to be on a leveled base and well compacted to minimum 95% Mod AASHTO – Contractor to supply test results proving compaction results – Department Engineer to be notified of test and observe test procedures.

C.5.9.2 **Base:** On top of the compacted soil a layer of 75mm of 19mm stone and 25mm of river sand will be applied and compacted. The floor base is to be inspected prior to the pouring of any concrete. **The base is to be inspected prior to laying of the damp proofing or pouring of any concrete.**

C.5.9.3 **Pest control soil poisoning** is to be applied under floor by reputable pest control specialists (registered with the Department of Agriculture and members of the pest control association). Certification is to be provided.

C.5.9.4 Damp proof sheeting SABS (minimum 375 micron thickness) is required throughout the structure.

C.5.9.5 **Reinforcing: Ref 395** reinforcing mesh is required throughout the shed. It must be sized and placed so it doesn't go across the joints and is to be **inspected**. Ref 100 reinforcing mesh is required for the aprons.

C.5.9.6 **Floor:** Class D concrete and surface finishes as per drawing (min U2): ≥25MPa/19mm, 1:2:3 mix, slump to SABS 1200GA (5.4.1.2). The main floor area is to be a minimum of 150mm thick with a class U2 finish. The office and store room floors are to have a steel trowel finish, or alternatively be steel floated (U4 finish). The relevant concrete strength certification is to be supplied by the contractor. An **inspection** is required during the pouring of the concrete. Permissible deviations: SABS 1200 GA (6.4) Degree of accuracy III for concrete.

C.5.9.7 The floor slab is to be properly **cured** for a minimum period of seven days by keeping moist and covered over this time or by applying a concrete curing compound (applied as per manufacturer's specifications). The curing compound is to be applied after the floating process.

C.5.9.8 The floor slab is to be **jointed** with joints spaced at a maximum spacing of 6mx3m. The entire floor must be cast in one pour and jointed using saw cuts 40mm deep to be done at the 'ideal' time (when slight raveling of the sawn surface is evident when cutting). Reinforcing is not to extend through joints.

Screed mixes where applicable: 1 part masonry cement (ENV 413-1) : 4 parts sand (SABS 1090) by volume.

C.5.9.9 **Apron:** A concrete apron is to be constructed around the entire structure 1000mm wide. The dimensions are to be 100mm thick and slope away from the structure. The aprons are to be constructed in panels not exceeding 3m length x 1.0m wide and reinforced (Ref 193 mesh).

C.5.9.10 **Ramps:**

Roller shutter door 1: One 4.00m wide, widening out to 6.00m, concrete ramp (25 MPa/19mm) to be constructed of 4.00m length in front of big roller shutter door (1) at the back. The top of it must be level with the finished floor level. Use Ref 395 reinforcement. Minimum thickness (at toe) 125mm. Base and sub base as per the floor requirements.

Roller shutter door 2: One 10m x 6m long 25MPa/19mm, Ref 395 concrete loading platform at the roller shutter door in front (no. 2), with two ramps widening out to 7.0m.

Roller shutter door 3: The area in front of this roller shutter door will not have concrete but be paved with G5 aggregate plus gravel to enable the construction of a below ground dump pit at a later stage.

C.5.11 SUPER STRUCTURE:

Materials: SABS 1200 AA (3); SABS 1200 GA (3)
Cement: Common cement 32,5N or R to SANS 50197-1
Testing: SABS 1200 AA (7); SABS 1200 GA (7)
Tolerances to SABS 1200 GA (6.4)

PLASTER MIX: 1 part masonry cement (ENV 413-1) : 5 parts sand (SABS 1090) by volume.
Plaster must be greater than 10mm thickness- an average of 15mm thickness is assumed throughout.

PAINTING: 1 coat of plaster primer is to be applied followed by 2 coats of superior exterior PVA paint to be used for all external walls and internal walls.

C.5.12 WALLS

C.5.11.1 SABS damp proof course is required at the base course above the floor slab level throughout.

C.5.11.2 Blocks must be SABS approved. Use only SANS M200 & M150 blocks for all walls as indicated on the drawing. The use of any clay masonry units require that the units are wet before being laid and the course of units last laid shall be wet before laying a fresh course upon it. All block/brickwork shall be built in stretcher bond in class II mortar for super structure walls. The mortar is to be a general purpose mix (class II). Unless otherwise specified is to be Portland cement of normal setting quality, is to comply with SABS Specification 471, and must be used fresh.

C.5.11.3 All walls to be reinforced with brick force (SABS) every second course and reinforced as detailed on the drawing.

C.5.11.4 Both internal and external walls are to be **plastered and painted**.

C.5.11.5 **An inspection** is required when the brickwork reaches lintel height.

C.5.11.6 **An inspection** is required before the plastering of any walls.

C.5.13 ENTRANCES

C.5.12.1 SABS approved concrete **lintels** to be used over all pedestrian doors and windows. Use 145 x 70mm pre-stressed lintels openings. All recommended transporting, conveying and installation methods including bracing and support of lintels and minimum overlaps of lintels into brickwork to be strictly adhered to.

C.5.12.2

GUIDELINES FOR THE INSTALLATION OF LINTELS			
	Span width		
	<1.5m	**1.5 - m**	**> 2.5m**
*Bearing on each side, minimum	150mm	250mm	350mm
Brick courses above lintel, minimum	4	4	5
Support/props every –x- metres	1m	1.5m	1.5m

No. of days that support required	7	7	7

C.5.12.3 Two heavy-duty solid meranti doors to be installed, one at the shed front outside and one inside the shed as office door. *Outside door* to be protected with a hinged steel security door as per drawing RDN/2012/08a/STO. *Office door* to have burglar gate. See Drawing RDN/2017/032/STO.

C.5.12.4 Double leaf double steel doors and frames will be required for the store room.

C.5.12.5 In addition, **two roller shutter doors** are required in the front and back of the shed (4.00m x 4.00m), whereas one is required along the side (2.50m x 3.00m). Steel thickness: 22 gauge. Guided ribbed corrugation type. Fully galvanized, Grade E steel, 22 gauge steel (0.64mm) with lockable chain drive and channel lining. Lockable from the inside also with 2 barrel bolts into side walls.

C.5.14 WINDOWS

C.5.13.1 All windows to be steel (primed at factory) with brass stays, fasteners, handles and suitable glazing (4mm clear glass) with factory fitted burglar guards, or as per the specifications of Drawing 4H. Super Universal Enamel is to be painted for all non-galvanized steelwork finishing. Alternatively, galvanized windows may be used throughout which require no additional finishing.

C.5.13.2 Windows required :- a) 11 x G9 steel cottage frame 1511mm x 359mm;
b) 1 x D54 steel cottage frame 1511mm x 1540mm.

C.5.15 BRANDERED OFFICE CEILING

C.5.14.1 Use 9.5mm thick ceiling Rhinoboard (e.g. RhinoCeil Prestige S9,5mm from Gyproc).

C.5.14.2 Use SABS approved SA Pine, Saligna branders fixed at 400mm centres in one direction onto which 9,5mm Taper or Square-edge Rhinoboard is fixed at right angles to the branders with printed side up 13.3.Use 32mm grabber screws spaced at 150mm centres.

C.5.14.3 All joints to be covered with RhinoTape (double over butt joints) and the ceiling then plastered with a 3-6mm coat of RhinoLite or Crete Stone plaster applied as per manufacturer's instructions.

C.5.14.4 Use 75mm cornices between ceiling and wall

C.5.16 PLUMBING

C.5.15.1 Two plastic water tanks (Jojo type or equivalent) are required (5000 l each). These tanks need to be installed onto steel tank stand as per specifications. The tanks are to be elevated above the ground level but beneath the eaves to allow for rainwater harvesting from the structures roof.

C.5.15.2 Seamless aluminium roof gutters with funnels and aluminium downpipes are to supply water to these tanks. The tanks are to be placed as indicated in the plan. A ball valve is to be connected to the outlet of each tank. The tanks must be well anchored and secured to the stands and to the bases. The overflow is to spill away from the structure.

C.5.17 GUTTERS AND DRAINAGE

C.5.16.1 Seamless aluminum gutters are to be used to collect rainwater from the roof and supply the two water tanks. Down pipes are required along the length of the gutter either side of the structure. Refer to Drawing 2. These are required at the end of the structure.

C.5.16.2 All guttering and down pipes must be adequately fixed to the roof and structure. Two down pipes are to feed into the tanks, whereas the remaining ones will spill into 2.0m long precast concrete rainwater channels away from the shed

C.5.16.3 All surface run off must be diverted away from the structure during and after construction by the provision of a cut off drain above the slope cut face and also at the toe of the bank as per the site leveling diagram attached.

C.5.18 ELECTRICAL WORKS

C.5.17.1 The shed should have a connection with the electricity grid. Assume 100 m of cabling.

C.5.17.2 All electrical installations to be done by a qualified electrician. If the recommended specifications below differ from the specialist's ones, the latter should prevail. Installation should come with an electrical certificate issued by a registered electrician.

C.5.17.3 Inside the shed only some basic reticulation will be installed. The final reticulation plan and its installation will follow at a later stage and does not form part of this contract.

C.5.17.4 Provisional Scope of works for the lighting.

a. Hall: 2 x 11 T8 (25W) sets of fluorescent tube fixtures (No's. 7-28). Eleven (11), on each side of the hall, 2 x 2 per bay. Positioned as at Drawing RDN/2017/040/STO. Separate switches for left & right hand sides of the hall.
b. Entry: One T8 fixture (#29) at entry (inside). Outside: 1 bulkhead lighting fitting (BH-5).
c. Store room: 3 x T8 sets in store room and office, spaced 1.5m apart.
d. Office: 3 x T8 sets in store room and office, spaced 1.5m apart.
e. Loading zone E: 3 x T8 (25W) fluorescent tube fixtures mounted against the wall
f. Loading zone F: 2 x T8 (25W) fluorescent tube fixtures mounted against the wall.
g. On cladding: 4 bulk head type security lights (BH-1-BH-4). Two on water tanks side of the shed, one above the roller shutter door (1) at the back of the shed, one above door (2) in front.

C.5.17.5 Use T8-fixtures (34 in total, 68 tubes @ 25W = 1700W) with electro-magnetic ballast, mounted in weatherproof fibre glass or plastic housing with a continuous gasket between the lens and fixture. No open fixtures (without lens) or fixtures with lenses without gaskets will be allowed. The fixture should have at least 6 clips to hold the lens on, or be appropriately sealed, in order to prevent dust or water entering into the fixture and polluting the tubes.

C.5.17.6 Security lights: metal, cage bulkhead type round fixtures (5x), with 60W or eq. energy saving bulb.

C.5.17.7 Light switches: 6 in total.
Four (4) at pedestrian entry:

a. Two for main hall (one switch for each side (=11 fixtures) of the hall)
b. One for the T8's in the covered areas (5x),
c. one for all security lights (5x).
d. One at the store room for 3 x T8 fixtures
e. One at the office for 3 x T8 fixtures

C.5.17.8 Distribution box should allow for the installation of 6 groups.

C.5.19 SAFETY

C.5.18.1 Three 9kg fire dry chemical fire extinguishers to be supplied and installed at strategic places. Red/white striped boards behind the extinguishers to be fixed unto wall to improve visibility.

C.5.18.2 All safety equipment required to construct the facility are for the contractor's responsibility and provisioning. Examples include: safety and protective clothing; sound scaffolding; false work and bracing; ladders etc… all equipment, tools and safety equipment are to be in a safe operating condition and must be used by the workers where appropriate.

C.5.18.3 Refer to general conditions for site safety. Site operations and conditions requiring special attention include but are not limited to:

C.5.18.4 Equipment, machinery, tools: (stationary or mobile) such as vehicles, generators, pumps, drills, augers, picks, spades, hand tools, ladders, scaffolding to be in a safe operating condition and are to be used in a safe and responsible manner. The contractor is responsible for all such monitoring and control of site operations and equipment throughout the works for the entire contract duration.

C.5.18.5 Lifting and lowering of materials or personnel in any way whatsoever.

C.5.18.6 Personnel access and operations at raised levels or on raised platforms or scaffolding

C.5.18.7 Excavation works and holes are to be clearly indicated to prevent injury to personnel

C.5.18.8 Potential ingress of water on/through the site.

C.5.18.9 Potentially hazardous services may be present on site such as water and sewerage mains, electricity cables etc…

C.5.18.10 Chemical transport, storage and usage whatsoever – this includes chemical contact through equipment use such as fuels and oils; materials such as creosote, paints, solvents, cement, concrete…

C.5.18.11 Barriers and safety cordons, safety and warning signage, sirens, lighting etc. as required.

C.5.18.12 Safety equipment: Safety and protective clothing, gloves, goggles, masks, hard hats, boots, harnesses etc.

C.5.18.13 A first aid box is to be provided and available at all times on site during working hours and is to comply with the requirements of the Occupational Health and Safety Act.

C.5.18.14 Additional risks associated with specific methods of construction selected by the contractor that are not necessarily covered in the above.

C.5.19 ENGINEERING CERTIFICATES

NOTE: Structural engineers are required by legislation to:
• certify the structural system of a building or home in terms of the National Building Regulations and Building
Standards Act 103 of 1977 or the Housing Consumers Protection Measures Act 95 of 1998, respectively;
• report in terms of the Sectional Titles Act 95 of 1986 on the general physical condition of building with specific
reference to any defects in the buildings and the services and facilities relating thereto; and
• inspect a completed structure prior to its commissioning and issue a completion certificate to the contractor
and conduct an annual inspection of a completed structure in accordance with the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Regulations of 1993
3.6.2 A structural engineer shall provide a certificate of completion whenever a new structure is constructed or altered using Form 1, Form 2 or Form 3, as relevant, and include such information in the record information.

C.6 STAFF HOUSES, OFFICE & GUARD HOUSE

The contract covers the supply of all material and fitting and construction of all works relating to the three houses, office and guard house facility. Below are the general scope of works for the construction of these structures.

C.6.1 **Siting:** determination of exact site location in consultation with relevant Departmental staff;
C.6.2 **Land survey** of the site including all adjacent buildings and roads that can serve as reference points up to at least 100m away from the structure, plus power and water lines;
C.6.3 **Earthworks**: remove topsoil from the shed area and surrounding zone and store at a pre-approved area. This material later to be placed back and/or spread out equally so that no heaps remain;
C.6.4 **Foundations:** raft type foundation to be used with steel reinforcement.
C.6.5 **Floor:** establishment of final floor **base** level (base at +0.05m above NGL): cut to 50mm below NGL, compact in situ sub-base, add 100mm of aggregate and compact. Final floor surface is at + 0.2m NGL.

Stockpile materials or dispose, Soil treatment (ant poisoning), damp proofing, provide and install formwork for floor (well/adequately braced). Provide and install reinforcement works for floor area and ramp in front of roller shutter door. Supply, mix, pour, compact, finish and cure concrete to specification.

C.6.6 **Walls :** to be double standard brick for external walls and single brick for internal walls.
C.6.7 **Soakpit:** to be constructed a minimum of 5m from buildings.
C.6.8 **Finishings:**

i. Sills and window surrounds, glazing, painting,
ii. Burglar proofed windows and doors,
iii. Insulated suspended ceilings,
iv. All electrical work,
v. Tank stands and tanks, plumbing, guttering,
vi. Site clearing, topsoil replacement and re-shaping,
vii. repaint any damaged metalwork and paint exposed steelwork,
viii. final clean-up of site.

C.7 WATER SUPPLY

To Facilitate the Siting, Drilling, Testing and Equipping of boreholes as indicated in Section A: Project Particulars, clause 1.

a. Geohydrological Desktop study, Geophysical survey (instruments) and selection of drilling target.

- Geohydrological services are to conform to the standards detailed in the "Minimum Standards and Guidelines for Groundwater Resource Development for the Community Water Supply and Sanitation Programme" by the Department of Water Affairs and Forestry 1997. The consultant / organization must be recognized for their proficiency in hydro-geological services.

- Study and interpretation of published geological and hydro-geological maps,

- aerial photography and ortho photos (if available)

- Interrogation of available existing databases - National Groundwater Archive (NGA) and the Groundwater Resource Information Project (GRIP) and WARMs

- The siting of a potential groundwater borehole position must be preceded by the pre-feasibility desktop study to maximise the success rate within the most cost effective and productive manner. Drilling targets need to be identified based on scientific methods and offering the greatest potential success in terms of yield and access.

- Geophysical borehole siting is to be conducted utilizing a minimum of two methods by an experienced hydro-geological consultant / team Geophysical techniques include but are not limited to:
  - Magnetic surveys
  - Frequency domain electromagnetic surveys
  - Gravimetric surveys
  - Electrical resistivity surveys
  - Seismic refraction surveys

- More than one potential position is required per project, based on whether or not the geophysical results show good potential for ground-water. The minimum requirements are as follows:

  - Production application: a minimum of two (2) potential positions (pegs) required per project.

Geophysical techniques include but are not limited to:

b. Drilling of boreholes.

- The drilling contractor will function under the direct and full-time on-site supervision of the hydro-geological consultant (unless otherwise specified). The hydro-geological consultant will be responsible for guiding the borehole construction for all aspects of that construction, inclusive of technical and management aspects. The hydro-geological consultant will be required to verify and document the construction parameters of the borehole as well as to log the geological formation encountered in that borehole.

Drilling method	Geological formation for drilling method used
Rotary air percussion	All consolidated rock formations (with limited overburden)
ODEX / Symetrix	In all formation
Rotary mud flush	In extensive unconsolidated soil formation

c. Pump Test, Water Sampling and laboratory water analysis.

- The test pumping contractor will function under the direct supervision of the hydro-geological consultant (unless otherwise specified). The hydro-geological consultant will be responsible for the required instruction and on site supervision of the testing of the borehole and for all aspects of the testing of that borehole, inclusive of technical and management aspects. The hydro-geological consultant will be required to verify, document and interpret test results and make borehole utilisation and pumping recommendations. Payment shall be made according to the type of test performed and per borehole tested. Test pumping will typically be as follows:

    - Step test (4 x 1 hr duration and 4 hrs maximum recovery or 95% recovered, 24 hour constant discharge test (CDT) and associated recovery (of maximum 24 hrs of 95% recovered)

- Groundwater sampling during the CDT with laboratory supplied containers and submission within 24 hrs for a SANS 241: 2015 Drinking Water Standards Abbreviated Analysis.

d. Equipping of borehole.

- The hydro-geological consultant will be required to verify, document and interpret test results and make pump and pumping recommendations. The pump specifications will be guided by the sustainable yield, hydraulic head conditions and the water requirements at the site.
- The borehole will be equipped with the recommended submersible pump powered by the recommended power supply i.e. Generator
- Proposed SVM Solar Pump, Motor 1.1Kw and Solar Sub-Drive Control Box Std 1.1Kw (or equivalent to be discussed with Engineer before installation), supplied by 4mm X 4 core electric cable and secured with heavy duty nylon ski-rope.
- PEXB Solar Panels – 4 Panels minimum
- Galvanized Solar Panel Stand (3m High), secured with 20MPa concrete footings (500 mm X 500 mm X 500 mm).
- 3m Galvanised Tank Stand secured with 20MPa concrete footings (500 mm X 500 mm X 500 mm).
- 5000L plastic tank braced with 4mm wire ties to tank stand
- 500L drinking troughs secured to the ground with 50mm X 50mm X 2mm galvanised frame. Frame to be secured in the ground with concrete footings.
- Tap and tap stand secured in concrete and pvc piping 800mm above the concrete slab.
- Concrete slab is to be 15Mpa (1.2m X 1m X 200mm). The slab is to be recessed 50mm below natural ground level and runoff must drain away from the water collection point.
- Supply (rising main) and delivery lines is to be 50mm HDPE class 10 (SABS approved), 100 m supply from borehole and a maximum of 200 m delivery to water points.
- Trenching for piped water supply to be 600mm deep by 300 mm wide
- Fittings – control valves must be visited on both independent supply lines from the Jojo tank to the drinking troughs and the tap. The drinking troughs are to be further fitted with control valves before the float valve.
- The borehole pump will be secured in a concrete ring. Galvanised lockable lid to be used to secure control box and pump (Alternative to be discussed with Engineer prior to any installations). The ring or lid to be fitted with ease of use lockable box which houses plug lead to prevent the continuous opening and closing of the lid.
- All operation and service manuals to be supplied on commissioning.

e. Testing and commissioning of boreholes.

- A complete operational test will be performed of the borehole pump and all associated pipes and fittings. The Geohydrologist will be required to be present on site to verify proper functioning of the borehole and to commission each project.

f. Technical Report.

- The PSP will compile a comprehensive technical report based on the findings and results of the investigation. This would include the outcomes of the desktop review, geophysical investigation, drilling and testing data, analysis and interpretation, equipping and reticulation design.

2) MATERIALS AND CONSTRUCTION

All materials must conform to SABS specifications for the products. This includes all items such as piping, HDPE fittings, tank stands, reservoir tank, all other fittings, borehole pump and control box, etc.

All construction works must conform to the applicable standard specifications and installation requirements as per NBR requirements and manufacturers recommendations. All concrete works to conform to Cement & Concrete Institute standards and recommendations.

STANDARD CONCRETE MIXES: (Class B concrete Slabs and footings)

Mixing, pouring and curing of concrete: SABS 1200 GA (5.4)
Materials: SABS 1200 AA (3); SABS 1200 GA (3)
Cement: Common cement 32,5N or R to SANS 50197-1
Testing: SABS 1200 AA (7); SABS 1200 GA (7)
Quality control through the slump test SABS 1200 GA (5.4.1.2) SABS method 862. The contractor is to supply the slump testing equipment.
Tolerances to SABS 1200 GA (6.4)
Formwork: Refer to SABS 1200 GA (4.4; 5.2)
Reinforcing: SABS 1200 GA (5.1)
Refer to standard concrete mixes specification.

PPS 1 FENCING

PPS 1.1 RAZOR MESH

The razor mesh shall be fully galvanised wire conforming to SANS 23-4:2003/EN 10223-4:1998. The Razor Mesh shall have a height of 2.1m and be secured to five straining wires at 350mm apart for the top and bottom wires, and 525mm apart for the other three wires.

PPS 1.2 BINDING WIRE

The binding wire shall be fully galvanised wire conforming to SANS 23-4:2003/EN 10223-4:1998. The binding wire shall have a 2.0mm diameter.

PPS 1.3 STRAINING POSTS

The straining posts shall be mild steel conforming to SANS CKS 82:1973 and shall be placed every 30m.The straining posts shall be galvanized according to SANS 121: 2000 – ISO 1461:2001 and will have the following dimensions: 100mm diameter x 2mm wall thickness x 2.9m long. Straining posts shall be set in 400x400x600mm deep concrete bases at all corners, intersections, and at distances not exceeding 30m apart.

PPS 1.4 STRAINING WIRE

The straining wire shall be fully galvanised wire conforming to SANS 23-4:2003/EN 10223-4:1998. Five strands of 4.0mm straining wire shall be secured to the straining posts and securely tied to each standard.

PPS 1.5 INTERMEDIATES

The intermediates shall consist of 3m long “Y” section steel standards conforming to SANS CKS 82:1973 and shall be placed every 3m.

PPS 1.6 STAYS

Each stay shall have a 100mm diameter, 2mm wall thickness and have a length of 2.4m. Stays shall be bolted 700mm down from the top of the post with the other end set in 300x300x400mm concrete bases. There shall be two stays per corner and intermediate posts. There shall be one stay per end or gate post. All stays shall be galvanized according to SANS 121: 2000 – ISO 1461:2001.

PPS 1.7 GATE

The gate is to comprise of steel hollow tubing conforming to SANS 657-1:2005. The following dimensions are to be used for the single leaf gate: 0.9m wide x 2.1m high. The gate shall be manufactured from 50mm diameter steel tubing with one horizontal and, including adjustable

16mm diameter fully threaded hinge eyebolts. The gate and fitting shall be hot-dipped-galvanized after manufacture according to SANS 121: 2000 – ISO 1461:2001.

PPS 1.8 CONCRETE FOOTINGS

The footings shall consist of 25MPa concrete in accordance with SANS 1200 G.

PPS 1.9 PAINTING

All surfaces that require painting must be prepared in accordance with SANS 8502-5:2008/ISO 8502-5:1998, IDT, Ed. 1. All painting must be carried out in accordance with SANS 10305-5:2005.

PART 4 : DRAWINGS

Drawing Number	Title Description
001	Cross Brace Details
002	Sectional Details
003	Foundation Details
004	Tractor Shed Cross Section

REFERENCES TO THE SCOPE OF WORKS IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS: HEALTH AND SAFETY SPECIFICATION

1. SCOPE

1.1 Scope of Specification

This specification covers the principles, duties, responsibilities, liabilities, and requirements applicable in respect of health and safety in the work place on construction work.

This document constitutes the Employers' Health and Safety Specification as defined in the Construction Regulations, 2003 of the Occupational Health and Safety Act (Act 85 of 1993).

This specification applies to tunnelling although the minimum requirements for tunnelling are contained in the Mines Health and Safety Act. This specification however does not apply to underground construction at this point in time as covered by the Mines Health and Safety Act, 1996 (Act 29 of 1996) as amended.

1.2 Philosophy

Some of the terms and requirements of the Occupational Health and Safety Act and its Regulations may be novel to Contractors. This specification has therefore been prepared as an instructive guideline without being prescriptive, constraining the competitive advantage or interfering with the legal obligations of the responding parties.

The Health and Safety Plan required in terms of this specification may also be novel to Contractors. This specification has therefore been prepared in such a way to allow Contractors to employ the services of specialist consultants for the preparation and implementation of the same during the construction of the Works.

Health and safety can only be assured on construction works if all stakeholders buy into the Health and Safety plan and when the health and safety of all is an integrated line accountability of all management staff and workers on site. The management systems that are provided for in this specification is to enable the performance statistics of health and safety to be regularly captured, the intention of these systems is not to achieve health and safety by policing the conduct of the Contractor's employees.

In addition to ensuring health and safety, the intention of the management system is rather to commercially exploit the benefit of doing things right the first time that goes hand in hand with top health and safety performance. Accidents and injuries never pay. The loss of production and the cost of injuries, however, relatively infrequent they may be, far outweigh the effort required to maintain top health and safety on construction.

The specification accordingly provides for:

a) Independent periodic audits to ensure an unbiased pursuit of health and safety,
b) Follow-up audits to ensure the implementation of prescribed remedial actions,
c) The review of the efficiency and effectiveness of the Contractor's Health and Safety Plan,
d) The preparation of regular reports of inspections and accidents to enable the tracking of changes in health and safety performance,
e) The monitoring of conditions on a continuously pro-active basis to ensure that hazards are without delay identified, assessed and remedied should it threaten the health and safety of persons and property,
f) Ad hoc inspections to ensure that health and safety is pursued with dedication and not out of intimidation or coercion, and

g) Development of all aspects of the Contractor's Health and Safety Plan.

The fundamental intention of this specification is that the preservation of health and safety will become a core value of all involved during the construction of the Works.

This Specification does not require the preparation of an unduly extensive or complex risk assessment. The Contractor should rather prepare a risk assessment which takes the size of the project, the size of the Contractor's organization, the conditions of the workplace and the nature, complexity and significance of the hazards likely to be encountered during the execution of the Works into account.

2. INTERPRETATIONS

2.1 Supporting specifications

Where this specification is required for a project, the following specifications (as amended) shall, inter alia, form part of the contract document:

a) Occupational Health and Safety Act, 1993, and its regulations which shall include, but shall not be limited to the following:

Construction Regulations, 2003,
General Safety Regulations,
General Administrative Regulations, 1996,
Driven Machinery Regulations, 1988,
Electrical Installation Regulations, 1992,
Electrical Machinery Regulations, 1988,
Environmental Regulations for Workplaces, 1987, and
Facilities Regulations, 1990.

b) Clauses 4.5.2, 4.6, 4.7 and 4.8 of the Contract Data.

2.2 Application

This specification contains clauses that are applicable to the occupational health and safety requirements of the Occupational Health and Safety Act, 1993 and its Regulations, in particular the Construction Regulations, 2003 promulgated on 18 July 2003 in terms of Section 43 of the Act.

2.3 Definitions

In the Contract (as defined in clause 1.(1)(e) of the Conditions of Contract) the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires:

(a) "Assistant Construction Supervisor" means a competent person appointed in accordance with regulation 6.(2) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
(b) "Batch Plant Supervisor" means a competent person appointed in accordance with regulation 18.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
(c) "Construction Health and Safety Officer" means a competent person appointed in accordance with regulation 6.(6) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
(d) "Construction Supervisor" means a competent person appointed on a full-time basis in accordance with regulation 6.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(e) "Construction Vehicles & Mobile Plant Inspector" means a competent person appointed in accordance with regulation 21.(1)(j) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(f) "Contractor" means the natural or juristic person or partnership whose tender has been accepted by or on behalf of the Employer and, who is defined as the Principal Contractor in the Construction Regulations, 2003.

(g) "Demolition Work Supervisor" means a competent person appointed in accordance with regulation 12.(1) of the Construction Regulations, 2003, in writing by the Contractor with written notification to the Engineer.

(h) "Employer's Designer" means the natural or juristic person or partnership named in the Appendix to Tender or any other natural or juristic person or partnership appointed from time to time by the Employer for the design of the portion of the Permanent Works which the Employer is responsible to design in terms of this Contract.

(i) "Contractor's Designer" means the natural or juristic person or partnership appointed from time to time by the Contractor and notified in writing to the Engineer and Employer for the design of the portion of the Permanent Works which the Contractor is responsible to design in terms of this Contract, and for the design of the Temporary Works.

(j) "Electrical Temporary Installation Inspector" means a competent person appointed in accordance with regulation 22.(d) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(k) "Employer" means the natural or juristic person or partnership for whom the Works are to be executed, who is named as the Employer in the Conditions of Contract and who is known as the "Client", in the Occupational Health and Safety Act, 1993 and its regulations.

(l) "Engineer" means the natural or juristic person or partnership named as the Engineer in the Conditions of Contract and appointed by the Employer to act as the Engineer in terms of this Contract.

(m) "Engineer's Representative" means the person appointed by the Engineer in terms of Clause2 of the Conditions of Contract.

(n) "Excavation Work Supervisor" means a competent person appointed in accordance with regulation 11.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(o) "Explosive Powered Tools Issuer" means a competent person appointed in accordance with regulation 19.(2)(g)(i) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(p) "Fall Protection Developer" means a competent person appointed in accordance with regulation 8.(1)(a) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(q) "Fire Extinguisher Inspector" means a competent person appointed in accordance with regulation 27.(h) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(r) "Formwork and Support Work Supervisor" means a competent person appointed in accordance with regulation 15.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(s) "Hazard" means any object, action or condition that can potentially harm the health and safety of persons or property.

(t) "Hazard Identification" means the identification and documenting of existing or expected hazards.

(u) "Health and Safety Consultant" means the natural or juristic person or partnership appointed by the Contractor to assist in any matters related to health and safety on the construction site.

(v) "Health and Safety Plan" means a documented plan, prepared by the Contractor, of work procedures to mitigate, reduce or control hazards identified.

(w) "Health and Safety Specification" means a documented specification of all health and safety requirements and criteria to mitigate, reduce or control hazards identified.

(x) "Health and Safety Representative" means the person/s designated in accordance with section 17 of the Occupational Health and Safety Act.

(y) "Ladder Inspector" means a competent person appointed in accordance with regulation 13 of the General Safety Regulations, in writing by the Contractor, with written notification to the Engineer.

(z) "Material Hoist Inspector" means a competent person appointed in accordance with regulation 17.(8)(a) of the Construction Regulations, 2003 in writing by the Contractor, with written notification to the Engineer.

(aa) "Method Statement" means a document detailing the key activities to mitigate, reduce or control hazards identified.

(bb) "Professional Engineer" means any person employed from time to time by either the Employer or Contractor who holds registration as either a Professional Engineer or Professional Certificated Engineer under the Engineering Profession Act, 2000 (Act No. 46 of 2000).

(cc) "Professional Technologist" means any person employed from time to time by either the Employer or Contractor who holds registration as a Professional Technologist under the Engineering Profession Act, 2000 (Act No. 46 of 2000).

(dd) "Risk" means the likely occurrence and impact of a hazard.

(ee) "Risk Assessment" means a programme carried out to identify and evaluate the likely occurrence and impact of all hazards.

(ff) "Risk Assessor" means a competent person appointed in accordance with regulation 7.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(gg) "Safety Agent" means a competent natural or juristic person or partnership named in the Appendix to Tender or any other person appointed from time to time by the Employer and notified in writing to the Contractor to act on behalf of the Employer for the purposes of this specification.

(hh) "Scaffolding Supervisor" means a competent person appointed in accordance with regulation 14.(2) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(ii) "Stacking Supervisor" means a competent person appointed in accordance with regulation 26.(a) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

(jj) "Subcontractor" means the natural or juristic person or partnership who is appointed by the Contractor with prior consent of the Engineer to execute certain tasks associated with the Works and who is also an employer as defined in section 1 of the Occupational Health and Safety Act.

(kk) "Suspended Platforms Supervisor" means a competent person appointed in accordance with regulation 15.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

2.4 Duties, responsibilities and liabilities

2.4.1 Principal Parties

This section covers the duties, responsibilities and liabilities of the following principal parties:

Employer
Employer's Safety Agent
Contractor
Subcontractor
Employer's Designer
Contractor's Designer

The duties and responsibilities of the various principal parties are briefly summarized below (the numbers indicated correspond to the applicable regulation number in the Construction Regulations, 2003). The intention of the summary is not to replace the Regulations, but is included for indicative purposes. The liabilities of each party are also shown.

a) Employer

In addition to the duties, responsibilities and liabilities specified in the Conditions of Contract, the Employer shall have the following duties and responsibilities to ensure compliance with the Construction Regulations, 2003:

4.(1)(a) Prepare health and safety specifications for the Works.
4.(1)(a) Provide copies of the specifications to Tenderers or to the appointed Contractor.
4.(1)(b) Provide any information to the Contractor that may affect the health and safety of his employees.
4.(1)(c) Appoint the Contractor in writing for the Works.
4.(1)(d) Take reasonable steps to ensure that the Contractor's Health and Safety Plan is implemented and maintained on the Works (which shall include monthly audits).
4.(1)(e) Stop the Contractor from executing work, not in accordance with, his Health and Safety Plan or which poses a threat to the health and safety of persons.
4.(1)(f) Ensure that sufficient health and safety information and appropriate resources are made available to the Contractor when changes are brought about to the design.
4.(1)(g) Ensure that the Contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to the commencement of the Works.
4.(1)(h) Ensure that Tenderers have made provision in their tenders for the cost of health and safety measures during the construction of the Works.
4.(2) Discuss and negotiate the contents of the Contractor's Health and Safety Plan.
4.(2) Approve the Contractor's Health and Safety Plan for implementation.
4.(3) On request, make available copies of the Contractor's Health and Safety Plan to his employees, his Subcontractors and inspectors.
4.(4) Satisfy himself on the competencies and resources of the Contractor he intends appointing.
4.(6) Satisfy himself on the competencies and resources of his Safety Agent should he decide to appoint one.

In terms of Clause 4.6 of the Contract Data, the Contractor accepts sole liability as mandatory for due compliance with the Occupational Health and Safety Act, 1993 and all its regulations including the Construction Regulations, 2003. The Employer will only be responsible for the duties imposed on the Employer in terms of the Construction Regulations, 2003 as listed above.

b) Employer's Safety Agent

Where the Employer decides to appoint an agent in accordance with regulation 4.(5) of the Construction Regulations, 2003, the duties and responsibilities as imposed by these regulations upon the Employer shall as far as reasonably practicable apply to his Safety Agent.

c) Contractor

In addition to the duties, responsibilities and liabilities specified in the Conditions of Contract, the Contractor shall have the following duties and responsibilities to ensure compliance with the Construction Regulations, 2003:

3.(1)(a) Notify the provincial director in writing of the commencement of the construction works.
3.(3) Ensure that a copy of the notification letter is kept on site for inspection on request as well as proof of its receipt by the Department of Labour.

5.(1) Demonstrate a Health and Safety Plan, based on the Employer's health and safety specifications.
5.(1) Apply the Health and Safety Plan from the Commencement Date until completion of the Works.
5.(2) Ensure co-operation between all contractors to enable each to comply with the provisions of Construction Regulations.
5.(3)(a) Provide any Tenderer or Subcontractor with copies of the Employer's health and safety specifications.
5.(3)(b) Appoint Subcontractors in writing.
5.(3)(c) Ensure that each Subcontractor's Health and Safety Management Plan is implemented and maintained on their portion of the Works.
5.(3)(d) Stop any Subcontractor from executing Works, not in accordance with, the Contractor's Health and Safety Plan or which poses a threat to the health and safety of persons.
5.(3)(e) Ensure that sufficient health and safety information and appropriate resources are made available where applicable, to the Subcontractor when changes are brought about to the design of the Works.
5.(3)(f) Ensure that his Subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to the commencement of the Works.
5.(3)(g) Ensure that his Tenderers have made provision in their tenders for the cost of health and safety measures during the construction of the Works in line with the requirements of the Employers Health and Safety Specification and his Health and Safety Management Plan.
5.(5) Discuss and negotiate the contents of his Subcontractor's Health and Safety Plan, to ensure compliance with the Employer's Health and Safety Specification and consistent with the Contractors Health and Safety Management Plan.
5.(5) Approve his Subcontractor's Health and Safety Plan for implementation and to keep records of all such approvals on site for auditing purposes.
5.(6) On request, make available a copy of his and his Subcontractor's Health and Safety Plan to an employee, inspector, contractor, the Employer or the Employer's Safety Agent.
5.(7) Open and maintain a record management system regarding health and safety for the Contractors own and Subcontractors' Health and Safety Documentation on the construction site.
5.(7) Upon request, make available his health and safety record management system to an inspector, Employer, the Employer's Safety Agent or the Contractor.
5.(8) Deliver the health and safety record management system to the Employer upon completion of the Works.
5.(9) Ensure that a comprehensive and updated list of all his Subcontractors (including their respective subcontracting agreements) are included in the health and safety record management system.
5. (10) Satisfy himself on the competencies and resources of the Subcontractor he intends appointing.
6. (1) Appoint a construction supervisor.
6. (3) Appoint assistant construction supervisors if required by an inspector.
6. (5) Appoint individual construction supervisors for individual construction sites.
6.(6) The Contractor shall after due consideration of the complexity, size and potential hazards and associated risks as well as controls towards the mitigation of risks, appoint a safety officer in writing. The contractor shall submit a detailed CV of the envisaged Safety Officer appointment for final acceptance thereof by the Employer or his Safety Agent.
6.(7) Provide opportunities to the construction safety officer to provide inputs into the Health and Safety Plan.
6.(8) Satisfy himself with the competencies and resources of the construction safety officer he intends appointing.

7. (1) Perform a risk assessment prior to the commencement of any construction work.
7. (2) On request, make available copies of the his/her risk assessment.
7. (3) Consult with the health and safety committee on the development, monitoring and review of the risk assessment.
7. (4) Ensure that all employees are informed, instructed and trained regarding any hazard and the related work procedures before any work commences. The contractor shall ensure that proof of such is available on site for auditing purposes.
7. (5) Ensure that all Subcontractors are informed regarding any hazard as stipulated in the risk assessment. Further that Subcontractors conduct their own risk assessments as and when required
7. (6) Analyse ergonomic related hazards and address the same in the risk assessment.
7. (7) Ensure that all employees undergo health and safety induction prior to permitting each employee access to the Works. The Contractor shall ensure that proof of such is available on site for auditing purposes.
7. (8) Ensure that all visitors undergo health and safety induction and are provided with the necessary personal protective equipment. The Contractor shall ensure that proof of such is available on site for auditing purposes.
7. (9) Ensure that every employee is in possession and carries at all times his proof of health and safety induction training.
9. (1) (a) Prevent the uncontrolled collapse of any structure which may become unstable due to the carrying out of construction work.
9. (1) (b) Ensure that no structure is loaded in an unsafe manner.
9. (3) Ensure that all construction drawings are on site and available on request by an inspector, contractors, Employer, the Employer's Safety Agent or employee.

In terms of Clause 4.6 of the Contract Data, it shall be deemed that the parties to this Contract have agreed in writing in terms of Section 37(2) of the Occupational Health and Safety Act, 1993 that the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 and all its regulations, including the Constructions Regulations, 2003, for which he is liable as mandatory.

d) Subcontractor

To ensure compliance with the Construction Regulations, the Subcontractor shall:

5.(4) Demonstrate a Health and Safety Plan, based on the Employer's health and safety specification.
5.(4) Apply his Health and Safety Plan from the Commencement Date and until completion of the Works.
5.(12) Satisfy himself on the competencies and resources of any Subcontractor he intends appointing.
5.(14) Provide the Contractor with any information which might affect the health and safety of any person or which might justify a review of the Health and Safety Plan.

In addition to the above items, the Subcontractor shall, to ensure compliance with the Construction Regulations, comply with regulations 5.7, 6.(1), 6.(3), 6.(5), 6.(6), 6.(7), 6.(8), 7.(1), 7.(2), 7.(3), 7.(4), 7.(6), 7.(7), 7.(8), 7.(9), 9.(1)(a), 9.(1)(b) and 9.(3), summarized in Section 2.4.1(c) above.

e) Designer (Employer's Designer or Contractor's Designer)

To ensure compliance with the Construction Regulations, 2003, the Designer (as defined in the Construction Regulations, 2003) shall:

9.(2) Make available to the Employer all relevant information affecting the pricing of the Works.
9.(b) Inform the Contractor of any hazards relating to the Works.
9.2(b) Make available all information required for the safe execution of the Works.
9.2(c) Ensure that information relating to geo-sciences, designs loads, and the methods and sequencing of construction processes are made available to the Contractor in a report.
9.2(d) Not include dangerous procedures or hazardous materials in the structure's design which could be avoided.
9.2(e) Make provision in the design of the Works for hazards likely to be encountered during its subsequent maintenance.
9.(2)(f) Carry out inspections of the construction work during the construction period to ensure compliance with the designs.
9.2(f) Keep records of the inspections carried out on the construction site.
9.2(g) Stop any contractor from executing works not in accordance with the designs.
9.2(h) Conduct a final inspection of the completed Works prior to its commissioning.
9.2(h) Issue a completion certificate to the Contractor subsequent to a successful final inspection.
9.(2)(i) Ensure that cognizance is taken of ergonomic design principles in order to minimize related hazards.

The Employer's Designer shall only accept responsibility to comply with the Construction Regulations, 2003 for that portion of the Permanent Works which the Employer is responsible to design in terms of the Contract.

The Contractor's Designer shall accept sole responsibility and liability to comply with the Construction Regulations, 2003 for that portion of the Permanent Works for which the Contractor is responsible to design in terms of the Contract as well as the design of the Temporary Works.

2.4.2 Secondary Parties

This section covers the duties, responsibilities and liabilities of the following secondary parties:

Construction Health and Safety Officer
Contractor's Employees Fall Protection Developer
Health and Safety Consultant
Health and Safety Representative
Risk Assessor

a) Construction Health and Safety Officer

The Construction Health and Safety Officer will act as Health and Safety advisor to the site management staff, ensuring the integrity of the Safety management System and Plan and its implementation. The Construction Health and Safety Officer can therefore never take over the line management responsibilities for safe work practices.

The Contractor is responsible for the development of the position outcomes descriptors for the Construction Health and Safety Officer. This documentation shall be available on site for auditing purposes.

The Construction Health and Safety Officer shall if given an opportunity, provide an input into the Contractor's Health and Safety Plan.

b) Contractor's Employees

All employees will be responsible for safety on the construction site and the work place as prescribed in section 14 of the Occupational Health and Safety Act, 1993 and briefly summarized as follows:

Take reasonable care for the health and safety of himself and of other persons who may be affected by his acts,
Co-operate with his employer with regards to health and safety to ensure that his employer complies with requirements imposed on him,
Obey the health and safety rules and procedures laid down by his employer,
Report any unsafe or unhealthy situation to his employer or to the health and safety representative for his workplace,
Immediately report any incident in which he was involved which has caused an injury to himself or others, and
Assist in inquiries and incident investigations.

No employee shall intentionally or recklessly interfere with, damage or misuse anything which is in the interest of health and safety

c) Fall Protection Developer

The Fall Protection Developer will be responsible for the preparation and maintenance of a fall protection plan to be implemented by the Contractor, in such a manner to ensure compliance with regulation 8 of the Construction Regulations, 2003.

d) Health and Safety Consultant

The Health and Safety Consultant shall assist the Contractor in any health and safety matters on the Works for which he is appointed.

e) Health and Safety Representative

The Health and Safety Representative shall fulfil the duties as set out in section 18 of the Occupational Health and Safety Act, (Act 85 of 1993). A health and safety representative shall not incur any civil liability by reason of the fact only that he failed to do anything which he may do or is required to do in terms of the Act.

f) Risk Assessor

The Risk Assessor shall facilitate the risk assessment process of the Contractor or Subcontractor. The Risk Assessor shall be responsible for the compilation and implementation of a management plan towards the continuous mitigation of identified risks to as low as is reasonable practicable.

2.4.3 Supervisors, Inspectors and Issuers

This section covers the duties, responsibilities and liabilities of the following Supervisors, Inspectors and Issuers likely to be found on the Works:

a) Batch Plant Supervisor

The Batch Plant Supervisor shall be required to ensure compliance with regulation 18 of the Construction Regulations, 2003. In addition, he shall fulfil the following duties and responsibilities:

Manage the day to day operation of a batch plant,
Be responsible for the maintenance of the batch plant,
Be able to identify developing defects and hazardous situations,

Act as the Occupational Health and Safety Representative at the batch plant, and
Take responsibility for the safety of the personnel at the batch Plant.

The Batch Plant Supervisor will have the authority to stop operation of the plant should any hazardous situation require it.

b) Construction Supervisor

The Construction Supervisor shall be responsible for supervising the construction work inclusive of the implementation and maintenance of safe work practices.

c) Construction Vehicle & Mobile Plant Inspector

The Construction Vehicle and Mobile Plant Inspector will ensure the safety of all construction vehicles and plant in such a manner to ensure compliance with regulation 21 of the Construction Regulations, 2003. The inspector will also be responsible for the regular inspection of all vehicles and plant and the recording of his findings. The Contractor shall ensure that proof of such is available on site for auditing purposes.

d) Demolition Work Supervisor

The Demolition Work Supervisor will supervise and control all demolition work on the Works in such a matter to ensure compliance with regulation 12 of the Construction Regulations, 2003. The supervisor will be responsible for all administration related to the demolition works. The Contractor shall ensure that proof of such is available on site for auditing purposes.

e) Electrical Temporary Installation Inspector

The Electrical Temporary Installation Inspector will control all temporary electrical installations on the Works to ensure compliance with regulation 22 of the Construction Regulations, 2003, the Electrical Installations Regulations, 1992 and SANS 0142. The Contractor shall ensure that proof of such is available on site for auditing purposes.

f) Excavation Work Supervisor

The Excavation Work Supervisor will supervise all excavation work on the Works in such a matter to ensure compliance with regulation 11 of the Construction Regulations, 2003 and shall in particular ensure that every excavation is inspected:

On a daily basis before each shift,
After every blasting operation,
After an unexpected fall of ground,
After substantial damage to supports, and
After rains.

The Contractor shall ensure that proof of such is available on site for auditing purposes.

g) Explosive Power Tools Issuer

The Explosives Power Tools issuer will control the issuing and collection of explosive tools, cartridges and nails or studs to ensure compliance with regulation 19 of the Construction Regulations, 2003. The Contractor shall ensure that proof of such is available on site for auditing purposes.

h) Fire Extinguisher Inspector

The Fire Extinguisher Inspector will be responsible for the operation and inspection of all firefighting equipment on the Works to ensure compliance with regulation 27 of the Construction Regulations, 2003. The Contractor shall ensure that proof of such is available on site for auditing purposes.

i) Formwork and Support Work Supervisor

The Formwork and Support Work Supervisor will supervise all formwork and support work operations and will see to it that formwork and support work erectors, operators and inspectors are competent to carry out their work Works to ensure compliance with regulation 10 of the Construction Regulations, 2003. The Contractor shall ensure that proof of such is available on site for auditing purposes.

j) Ladder Inspector

The Ladder Inspector will be responsible for the regular inspection and recording of his/her findings of all ladders on the Works and to ensure compliance with regulation 13 of the General Safety Regulations. The Contractor shall ensure that proof of such is available on site for auditing purposes.

k) Material Hoist Inspector

The Material Hoist Inspector will be responsible for the daily inspection of material hoists or similar machinery and to ensure Works to ensure compliance with regulation 17 of the Construction Regulations, 2003. The inspector must have experience pertaining to the erection and maintenance of all hoists on the Works. The inspector must be able to determine the serviceability of the entire material hoist including guides, ropes and their connections, drums, sheaves or pulleys and all safety devices. The Contractor shall ensure that proof of such is available on site for auditing purposes.

l) Scaffolding Supervisor

The Scaffold Supervisor will be required to supervise all scaffolding work operations carried out on the Works and to ensure compliance with regulation 14 of the Construction Regulations, 2003 as well as ensure compliance with applicable SABS 085 specifications. The Contractor shall ensure that proof of such is available on site for auditing purposes.

m) Stacking Supervisor

The Stacking Supervisor shall supervise the stacking and storage of all articles on site and shall be responsible to ensure compliance with regulation 26 of the Construction Regulations, 2003.

n) Suspended Platform Supervisor

The Suspended Platform Supervisor will supervise all suspended platform work operations carried out on the Works and to ensure compliance with regulation 15 of the Construction Regulations, 2003. The supervisor will also see to it that all suspended platform erectors, operators and inspectors are competent to carry out their work. The Contractor shall ensure that proof of such is available on site for auditing purposes.

3. GENERAL REQUIREMENTS OF HEALTH AND SAFETY PLAN

3.1 General

It will be expected from the Contractor to include in his safety plan method statements on how to accomplish the requirements relating to the Construction Regulations, 2003 and related incorporated standards and regulations.

Contractors should describe how their safety management systems will work and what control procedures they plan on using to ensure safety on the construction site

The following generic aspects should be covered in their safety plan

What administrative procedures the Contractor envisages to use in the implementation and maintenance of the safety plan with reference to the construction site
How continuous assessment of the safety plan will be assessed and implemented with respect to construction site
What control systems the Contractor envisages to implement on site to support his safety program
How the Contractor will ensure that he adheres to the construction regulations in respect of competent persons for appointments
What external resources the Contractor envisages on using to ensure successful implementation and sustainability of the safety plan
What training to employees the Contractor envisages and how he would go about to execute it
The Contractor should indicate which competent persons he plans on employing

During the tendering phase it will be expected from the tenderer to briefly explain how the abovementioned will be accomplished.

Once a successful tenderer has been appointed, the Contractor shall supply a detailed Health and Safety Plan for review by the Employer, prior to site mobilization, to ensure compliance with the Construction Regulations, 2003. Mobilization shall be dependent upon the acceptance of the Contractor's Health and Safety Management Plan by the Employer. The Contractor's Health and Safety Plan should include, but not be limited to, those sections indicated in Section 3.2 of this specification.

3.2 Outline of Health and Safety Plan

The Contractor's Health and Safety Plan prepared in accordance with this specification shall consist of at least the following sections and sub-sections:

1. Aim and Scope of Plan,
2. Risk Assessment,
    a. Alternative Forms of Risk Assessment,
    b. Methodology of Risk Assessment,
    c. Elements of Risk Assessment,
        i. Scope of assessment,
        ii. Risks Identified,
        iii. Risk Analysis,
        iv. Risk Evaluation,
        v. Risk Treatment,
        vi. Monitoring and reviewing,
3. Resources,
    a. Health and Safety Staffing Organogram,
    b. Supervisors, Inspectors and Issuers,
    c. Employees,
    d. Subcontractors inclusive of their scope of work and their core resources,
    e. Training,
    f. Plant,
    g. Vehicles,
    h. Equipment

4. Materials,
   a. Temporary Materials
   b. Permanent Materials
5. Categories of Work
6. Implementation of Health and Safety Plan,
   a. Administrative systems,
   b. Training,
   c. Reporting,
   d. Monitoring,
   e. Inspections,
7. Auditing,
   a. Internal audits,
   b. Follow-up audits,
8. Financial Aspects,
9. Emergency procedures and response

4. RISK ASSESSMENT

4.1 General

This section of the specification provides guidelines for the Contractor in preparation of risk assessments in order to ensure compliance with Regulation 7 of the Construction Regulations, 2003. This section highlights the principles related to the preparation of suitable and sufficient risk assessments. Contractor Staff intending to prepare risk assessments should be trained and suitably experienced in the application envisaged.

A suitable and sufficient risk assessment is an assessment which:

Accounts for risks that are likely to arise during the construction of the Works,
Enables the development and implementation of systems to manage the risks,
Remains valid for a reasonable period of time,
Provides a basis for training of employees, and
Improves working procedures and introduce long term controls.

The requirements of the Construction Regulations will not be satisfied by a single risk assessment exercise that holds good for all time. The risk assessment process on the Works is an ongoing process.

The objectives of risk assessments are to:

Identify the risks that are mostly in need of reduction,
Identify the various options for achieving such reduction,
Identify the risks that require careful ongoing management, and
Identify the nature of the required ongoing attention.

4.2 Forms of Risk Assessment

In order to ensure compliance with the Construction Regulations, the Contractor will be required to carry out the following three forms of risk assessment:

4.2.1 Baseline or datum risk assessments

The Contractor will be required carry out a risk assessment before the commencement of construction activities on the Works. This “baseline” or “datum” risk assessment will form part of the Contractor’s Health and Safety Plan. The risks and hazards to which persons, plant, vehicles and facilities may be exposed during the construction of the Works should be identified and evaluated. Measures to reduce or control these risks or hazards should be defined during this assessment. The effectiveness of the measures defined and the

baseline risk assessment prepared shall be monitored and reviewed from time to time to ensure that it remains relevant and accurate.

4.2.2 Issue based risk assessments

The Contractor will be required to carry out separate risk assessments during construction of the Works when methods and procedures are varied, for example when:

Designs are amended,
New machines are introduced,
Plant is periodically cleaned and maintained,
Plant is started-up or shut-down,
Systems of work change or operations alter,
Incidents or near-misses occur, or
Technological developments invalidate prior risk assessments.

4.2.3 Continuous risk assessments

The Occupational Health and Safety Act specifically requires that employers shall provide and maintain working environments that are safe and without risk to health. The general awareness of hazards needs to be raised as work ethic to maintain a safe and risk free environment on an ongoing basis. This is achieved by continuous risk assessments, the most important form of risk assessment that takes place as an integral part of day-to-day management. Examples of continuous risk assessments include:

Regular audits,
Maintaining general hazard awareness,
Pre-work risk assessment

4.3 Methodology for the Preparation of Risk Assessments

The Contractor shall in the preparation of his risk assessments, follow the following general principles:

Employ a team of suitably qualified individuals with appropriately varied and relevant experience in risk assessment,
The appointed risk assessor shall lead the risk assessment,
Provide the team with background data, scope of work, potential hazards and underlying causes, and
Where necessary employ experts for complex risk assessments and aspects of risk assessments that require experiential judgment,
Institute an ongoing system of identifying aspects of the work that require risk assessment, and
Conduct risk assessments in workshops of the team or by individual members of the team under guidance of the leader as appropriate to the situation.

4.4 Elements of a Risk Assessment

4.4.1 General

The process of carrying out a risk assessment consists of a number of well-defined steps. These steps improve decision-making by providing a greater understanding of the risks and their impacts. The main steps or elements of the risk assessment process are as follows:

1) Consider scope and nature or risks involved, determine purpose and physical and legal bounds of assessment and define risk evaluating criteria,
2) Systematically identify risks,

3) Analyze risks with regard to causes, likelihood of occurrence and possible consequences against the background of existing controls and its effectiveness,
4) Evaluate risks in terms of pre-established criteria to determine need and priority for attention,
5) Treat risks through a process of risk elimination, substitution, controlling risk at source, risk mitigation such as training and as far as risk remains, provide personal protective equipment (PPE),
6) Monitor and review progress and performance in terms of management system, and
7) Communicate and consult.

The following sections 4.4.2 to 4.4.7 deal with items (2) to (7) above.
These items form the continuing process of the risk assessment as indicated in Figure 1, below.

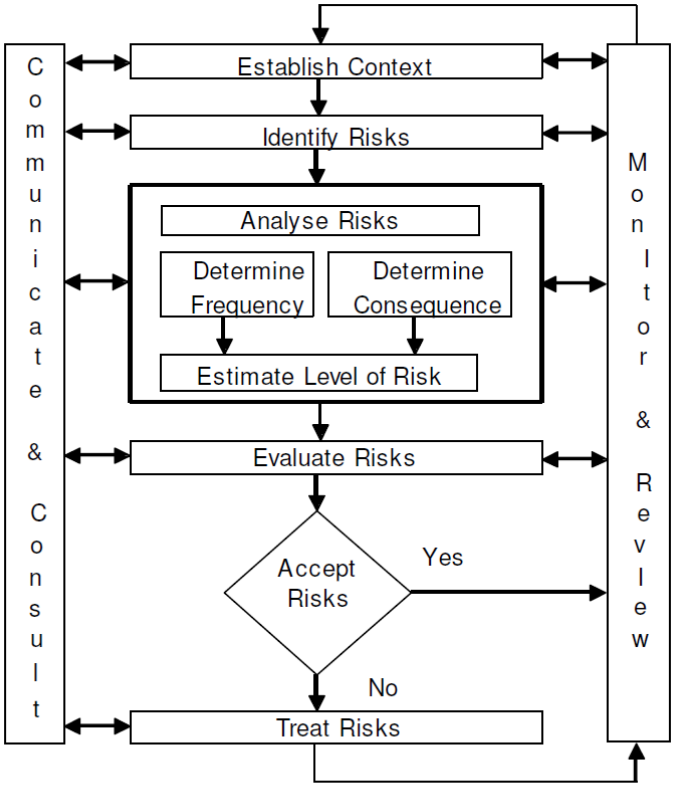


Figure 1: Risk Management Process

The Contractor shall ensure that the risk assessment compiled as part of his Health and Safety Plan contains at least these items.

4.4.2 Risk Identification

The Contractor should regard this step of the risk assessment as the most important. Subsequent analysis and evaluation of risks and the development of risk control measures are wasted if the risks or hazards on the Works are not carefully identified.

The Contractor should bear the following principles in mind when identifying the risks:

i) Systematically address all risks or hazards on the Works,
ii) Review all aspects of the work, but consider only those that have a potential to cause harm,

iii) Rank the risks identified in order of importance and then use appropriately advanced techniques to deal with major risks,
iv) Deal mainly with major risks and don't obscure these with unimportant information, especially minor risks,
v) Address what actually happens in the workplace during the work activity
vi) Consider all persons that may be affected,
vii) Highlight those groups and individuals who may particularly be at risk, and
viii) Review the adequacy and effectiveness of existing safety controls and measures

4.4.3 Risk Analysis

In this step, the Contractor will be required to analyze the risks identified by determining each risks frequency and magnitude or severity of the consequence of the risk or hazard.

The frequency of occurrence of a hazard may be expressed as the number of times that it may occur in a year, decade, lifetime, century, or longer period, according to comparative human experience. The magnitude of the likely consequence of a hazard may be expressed in terms of the degree of incapacitation, number of people or costs involved. The frequency of occurrence of a hazard and the magnitude of its consequence may be compounded as the risk that it poses as shown in the "risk matrix" in Figure 2 below.

Frequency of Occurrence of Hazard	Severity of Consequences of Potential Haz					
	1 Medically treatable	1 Compensable	10 Com	1 Permanently disabling	1 Fatality	10 Fatalities
Frequent; 1 or more occurrences per year	Medium	High	Very high	Severe	Severe	Severe
Several times during a career; 0.1 occ	Medium-low	Medium	High	Very high	Severe	Severe
Unlikely, but possible during a career; 0.01 occurrences per year	Low	Medium-low	Medium	High	Very high	Severe
Very unlikely during a career; 0.001 occurrences per year	Low	Low	Medium-low	Medium	High	Very high
Barely credible; 0.0001 occurrences	Low	Low	Low	Medium-low	Medium	High

Figure 2: Compounded Risk Matrix

The columns in the table represent the likely consequence of the hazard and the rows, the frequency of occurrence. The scales for both quantities represent consistent progressions, albe they qualitative. The risks evidently range from low to severe. Note that diagonals in the matrix represent the risks of the identified hazards, taking the effectiveness of controls into consideration.

The table represents a typical risk matrix that need not necessarily be adopted by the Contractor. The Contractor may use an alternative risk matrix provided that it is approved as part of his Health and Safety Plan.

4.4.4 Risk Evaluation

In this step the Contractor will be required to compare the assessed risk with similar risks previously experienced for the purpose of deciding how to treat the risk. A useful systematic approach for this purpose is as follows:

If the assessed risk exceeds similar risks that have occurred in the past and that are considered to be unacceptable, the assessed risk would require treatment depending upon its magnitude as discussed in Section 4.4.5, or

If the assessed risk exceeds similar historical risks that are acceptable, treatment of the assessed risk will depend on the extent by which it exceeds the historical risks, or

If the assessed risk is less than historical risks that are unacceptable, treatment of the assessed risk will depend on the extent by which it is less than the historical risks, or

If the assessed risk is less than historical risks that are acceptable, the assessed risk would also be acceptable and would not require any treatment.

4.4.5 Risk Treatment

In this step, the Contractor will select and implement appropriate measures for dealing with risk. Typically measures comprise the following:

Elimination by changing designs, procedures, management methods, etc, applicable to high frequency–high consequence risks, or
Reduction by changing designs, procedures, management methods, etc, applicable to high frequency–high consequence risks, or
Minimization by changing designs, procedures, management methods, etc, applicable to high frequency–low consequence risks, or
Transfer or share whole or part of the risk to another party by insurance, contractual arrangements or organizational structures, applicable to low frequency–high consequence risks, or
Control to ensure that risks do not increase, applicable to low frequency–high consequence risks, or
Retention together with provision of monitoring and personal protective equipment, applicable to low frequency–low consequence residual risks after reduction, or
Acceptance without particular action other than provision of personal protective equipment, applicable to low frequency–low consequence risks.

The following principles enable the optimum treatment to be determined:

Avoid risks altogether if possible by using different approaches, substances or methods of work,
Combat risks at source rather than by adopting secondary measures,
Adapt work to the individual rather than the individual to the work, that is, in the design consider the people and their attributes that will operate the system
Take advantage of technological and technical progress,
Risk prevention measures must be part of a coherent policy and approach to safety management that involves performance measurement, goal setting, feedback and analysis, Give preference to measures that protect the whole work force,

Ensure that those for whom protection is provided understand what they need to do to make sure that the protection works, and
Ensure that measures to control risks are an accepted part of an active health and safety culture supported by all levels of the organization; single risk reduction initiatives invariably fail.

4.4.6 Reporting and Recording

The Contractor shall ensure that the risk assessment process is recorded in the form of a report and included in his Health and Safety Plan. The report should be easily accessible to the Contractor's employees, their representatives, to inspectors, the Employer or his Safety Agent and the Engineer. The essential contents of the report should be as follows:

Objectives and expected outcomes, Description of the Works under assessment, Summary of context of study, Composition of risk assessment team, (including qualifications and relevant experience), Approach used to systematically identify risks, Identified risks (ranked in order of priority), Method adopted for assessing frequencies and consequences of risks, Consequences (ranked in order of magnitude), Identification of individuals and groups who may be affected by major hazards and risk and who may especially be at risk, Basis for defining safety standards to be achieved, Contractor's resources devoted to risk assessment, Actions proposed to reduce unacceptably high risks, Review effectiveness of existing safety measures to control risks, and Implementation programme of selected treatments (including controls to manage unacceptably high risks).

4.4.7 Monitoring and Review

It is necessary to monitor risks, the effectiveness of the risk treatment plan and the strategies and management system set up to control implementation. Control of the risk management program entails the setting of standards, monitoring actual performance, comparing the performance with the standards and correcting any deviations from the standard. Risks and the effectiveness of the control measures need to be monitored to ensure changing circumstances do not alter risk priorities. Few risks remain static.

Ongoing review is essential to ensure that the management plan remains relevant. Factors that affect the likelihood and consequences of an outcome may change, as may factors that affect the suitability or cost of the various treatment options. If an accident occurs, or if more is learnt about the hazards in the workplace, the risk assessment may need to be reviewed or modified. Hazards may be observed that have not been anticipated or previously identified and which may require appropriate measures to be taken. After an accident has occurred, it is important to determine whether it was predicted, whether preventive measures were identified, and if so, why they did not work, whether the risk assessment is still suitable and sufficient if it failed to predict the accident, whether to the decision to accept a predicted risk as tolerable is still valid, why the accident occurred and what should be done to prevent similar accidents occurring again. It is therefore necessary to regularly repeat the risk management cycle, the time between reviews being dependent on the nature of the risks and the degree of change likely to take place in the work activity. Review is an integral part of the risk management treatment plan.

4.4.8 Communication and Consultation

The Contractor will be required to communicate and consult with internal and external stakeholders during each step of the risk assessment process. Stakeholders will

include the Employer and his Safety Agent, the Engineer and the Contractor's employees and consultants.

Effective communication will ensure that those responsible for implementing the risk management process and those with a vested interest, understand the basis on which decisions are made and why particular actions are taken. It will also ensure that the perceptions of all those involved are noted and accommodated during the process.

5. RESOURCES

5.1 General

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health And Safety Act, 1993 and all its Regulations and related incorporated standards with regards to the resources and facilities intended for use on the temporary and permanent Works.

5.2 Employees

5.2.1 Inspectors, supervisors and Issuers

The Contractor shall provide in his Health and Safety Plan his intended Staffing Organogram for the Works. The organogram should include those inspectors, supervisors and issuers as envisaged in the Construction Regulations, 2003 required for the Works and any additional supervisory staff members as the Contractor (having taken the scope of the Works into account) considers necessary.

Copies of the supervisory staffs' curriculum vitae or portfolio of evidence and their appointment letters should be appended to the Contractor's Health and Safety Plan.

The Contractor's Health and Safety Plan should in addition cover at least the following aspects:

The number of unskilled, semi-skilled and skilled (including Foreman, Charge hands, Artisans, Operators, Drivers, Clerks, Storeman and Team Leaders) employees he intends employing on the Works,
The health and safety training to be provided to the Contractor's employees, The programme of the health and safety training,
Systems for the review of the effectiveness of the training provided, and
Systems to determine further training requirements throughout the construction period.

In preparing his Health and Safety Plan, the Contractor shall ensure compliance with Clause PS 22 in Section 4.2 of the Project Specifications.

Pro-forma letters of appointment for the various inspectors, supervisors and issuers as contemplated in the Construction Regulations, 2003 are included in Annexure 1 to this specification for use by the Contractor. The Contractor shall ensure that he includes in his Health and Safety Plan the appointment letters for all his inspectors, supervisors and issuers appointed for the Works.

5.2.2 Subcontractors

The Contractor shall with reference to the use of subcontractors on the Works and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

The steps intended to ensure that his Subcontractors prepare, implement and maintain Health and Safety Plans,
How health and safety information will be made available to his Subcontractors when changes are brought about to the design,
How he intends determining that his Subcontractors are registered and in good standing with the compensation fund or with a licensed compensation insurer prior to the commencement of the Works,
How he intends determining if his Subcontractors have made provision in their tenders for the cost of health and safety measures during the construction of the Works,
How he intends satisfying himself on the competencies and resources of Subcontractors he intends appointing, and
How he intends ensuring that his Subcontractors perform risk assessments prior to commencing their respective portions of the Works.

5.2.3 Competencies

The Contractor shall establish if a person is competent to perform a certain duty or be appointed in a certain capacity by requesting all candidates to supply the required certificates of competency. Where certificates of competencies cannot be delivered, the Contractor shall request a portfolio of evidence from the respective candidates.

Contractors should do enquiries at the South African Qualifications Authority (SAQUA) relating to the qualifications required for appointment of competent persons.

5.2.4 Physical and Psychological Fitness

Were required by the Occupational Health & Safety Act and its regulations the contractor shall ensure that his employees are in possession of a valid medical certificate of fitness to work in such an environment.

In terms of the Construction Regulations 2003 medical certificates of fitness are required for persons working at elevated positions (Regulation 8(2)(b)), persons working on suspended platforms (Regulation 15(12)a) tower crane operators (Regulation 20 (g)) and construction vehicle and mobile plant operators (Regulation 21 (1)(d)(ii)).

5.3 Plant, Vehicles and Equipment

5.3.1 Suspended platform

The Contractor shall with reference to Regulation 15: Suspended platforms of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends complying with SABS 1808 and SABS 1903,
What systems he intends using to ensure the safety of all suspended platforms,
What tests will be performed to establish the safety of suspended platforms,
How he intends maintaining suspended platforms being used, and
How he will document the design, testing, maintenance and inspections of the suspended platforms.

5.3.2 Boatswains chairs

The Contractor shall with reference to Regulation 16: Boatswains chairs of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

Explain what systems he intends using to ensure the safety of all boatswains chairs, Explain how he intends maintaining boatswains chairs in use,
What tests will be performed to establish the safety of boatswains chairs, and
How he will document the design, testing, maintenance and inspections of the boatswains chairs.

5.3.3 Material hoists

The Contractor shall with reference to Regulation 17: Materials Hoist, of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends confirming the construction stability of the material hoists,
What systems he intends using to ensure the safety of all material hoists,
What tests will be performed to establish the safety of all material hoists,
How he intends maintaining the material hoists being used, and
How he will document the design, testing, maintenance and inspections of all material hoists, and
What safety procedures and precautions are envisaged to ensure safe operation of the materials hoists.

5.3.4 Batch Plants

The Contractor shall with reference to Regulation 18: Batch plants of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

What systems he intends using to ensure the safety of all batch plants,
How he intends maintaining the batch plants in use, and
How he will document the design, testing, maintenance and inspections of batch plants in use.

5.3.5 Explosive powered tools

The Contractor shall with reference to Regulation 19: Explosive powered tools, of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends controlling the issuing of explosive powered tools,
How he intends implementing safety procedures prior to use of explosive powered tools, and
What safety measures will be required during the use of explosive powered tools.

5.3.6 Cranes

This section of the specification shall be read in conjunction with the provisions of the Driven Machinery Regulations, 1988.

The Contractor shall with reference to Regulation 20: Cranes, of the Construction Regulations, 2003 and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How will environmental factors be taken into account in respect to the use of cranes,

What systems he intends using to ensure the safety of all cranes in use,
How he intends maintaining cranes in use,
What tests will be performed to establish the safety of all cranes in use,
What safety procedures and precautions are envisaged to ensure the safe operation of all cranes in use,
How he will document the design, testing, maintenance and inspections of all cranes in use, and
The contractor shall proof compliance of the Driven Machinery Regulation, 1988, with reference to the lifting machinery and tackle being used.

5.3.7 Construction vehicles and mobile plant

The Contractor shall with reference to Regulation 21: Construction vehicles and mobile plant of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends ensuring that construction vehicles and mobile plant are:
- Of acceptable design and construction,
- Maintained and in good working order,
- Used according to design specifications, and
- Are protected from falling into excavations, water or areas lower than the working surfaces,

How he intends ensuring that workers are trained, authorised and physically fit to operate construction vehicles and mobile plant,
What traffic arrangements and safety precautions will be implemented to ensure safe operation of construction vehicles and mobile plant on the Works, and
How he intends safeguarding employees against construction vehicles and mobile plant moving on the construction site.

5.3.8 Electrical Installation and Machinery on construction sites

This section of the specification shall be read in conjunction with the provisions contained in the Electrical Installation Regulations, 1992.

The Contractor shall with reference to Regulation 22: Electrical Installation and machinery on construction sites of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends safeguarding employees against electrical cables or apparatus under, over or on site, and
How he will ensure that electrical installations are of adequate strength to withstand working conditions on a construction site.

5.3.9 Ladders

The Contractor shall with reference to Regulation 13A of the General Safety Regulations and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends ensuring that ladders used are safe and constructed of materials approved for its intended use, and
What precaution will be made to ensure the stability of ladders in use.

6. MATERIALS

6.1 General

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health and Safety Act, 1993 and all its regulations and related incorporated standards with regards to the design, supply, storage and erection of materials used for the temporary and permanent Works.

6.2 Fall Protection Equipment

The Contractor shall with reference to Regulation 8: Fall Protection Equipment of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

Compilation of a fall protection plan,
How the fall protection plan will be implemented and maintained,
How employees will be screened and declared medically fit to work in areas where fall protection equipment is needed,
How the safeguarding of persons, plant, vehicles, equipment and facilities on the construction site is contemplated,
Training of staff working at heights and in the use of fall protection equipment, How a continuous assessment of the situation will be executed,
How fall protection equipment will be inspected for safety, and
How corrective actions will be implemented
Emergency plans and procedures for treatment of incidents relating to falls from height.

6.3 Scaffolding

The Contractor shall with reference to Regulation 14: Scaffolding of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and

Safety Plan:

How compliance with SABS 085 will be ensured,
How scaffolding in use will be maintained,
What systems are intended to ensure the safety of scaffolding used, and
What tests will be performed to establish the safety of scaffolding used Training plan for scaffold erectors and inspectors.

6.4 Use and temporary storage of flammable liquids on construction sites

This section of the specification shall be read in conjunction with the provisions for the use and storage of flammable goods as determined in the General Safety Regulations.

The Contractor shall with reference to Regulation 23: Use and temporary storage of flammable liquids on construction sites of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How flammable liquids will be stored to minimize the risk of fire or explosions,
How the contractor will identify a flammable store
What safety precautions will be employed if ventilation of the flammable store is not possible.
How access to flammable stores will be controlled,
How empty vessels used for the storage of flammable liquids will be disposed of,
What quantity of flammable liquids will be stored on the construction site,
What systems are intended to ensure the safe storage of flammable liquids, and

What retaining methods will be used to prevent the spreading of any spillage.

6.5 Stacking and storage

This section of the specification shall be read in conjunction with the provisions for the stacking of articles contained in the General Safety Regulations.

The Contractor shall with reference to Regulation 26: Stacking and storage on construction sites of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

Who will supervise the stacking and storage of materials on site, and
What systems are intended to ensure the safe stacking and storage of materials on the site

6.6 Personnel Safety Equipment and Facilities

The Contractor shall comply with Section 2 of the General Safety Regulations, and shall in particular provide all necessary personnel protective equipment for his personnel for the duration of the construction period. To this end the Contractor shall without limiting his obligations indicate in his Health and Safety Plan:

Identify training requirements in the Contractors Training plan in the use and maintenance of personal protective equipment,
The type of personnel safety equipment he will provide, How he intends issuing it to his employees, and
How he will maintain the personnel safety equipment issued.

6.7 First Aid, Emergency Equipment and Procedures

The Contractor shall comply with Section 3 of the General Safety Regulations regarding first aid, emergency equipment and procedures.

7. CATEGORIES OF WORK

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health and Safety Act, 1993 and all its regulations and related incorporated standards with regards to the execution of the following categories of work.

7.1 General

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

7.1.1 Construction welfare facilities

Contractors will be required to adhere to Regulation 28: Construction welfare facilities of the Construction Regulations, 2003.

This regulation must be read in conjunction with the provisions of the Facilities Regulations, 1990 (as amended) and SANS 0400.

The Contractor must discuss the following in detail in his safety plan:

How will the Contractor establish the amount of facilities required for employees to shower, change, eat and attend to sanitary needs

What measures will the employer take to house employees on site who lives far form their residences or for the provision of transport

7.1.2 Environmental regulations for workplaces

The Contractor shall comply with the Environmental Regulations for Workplaces, 1987, and shall address the following aspects as described in the regulations in his Health and Safety plan:

Thermal requirements, Lighting, Windows, Ventilation, Housekeeping, Noise and hearing conservation, Precautions against flooding, and Fire precautions and means of egress.

7.1.3 Housekeeping on construction sites

Contractors will be required to adhere to Construction Regulation 25: Housekeeping on construction sites, of the Construction Regulations, 2003.

This regulation must be read in conjunction with the provisions of the Environmental Regulations for Workplaces, 1987 (as amended).

The Contractor must discuss the following in detail in his safety plan:

How will contractors ensure the neatness of construction sites
What measures does the Contractor envisage to
- o Store and/or stack materials,
- o Remove debris from site,
- o Prevent unauthorized entrance to the site
- o Protect employees or passers-by from falling objects

7.1.4 Fire precaution on construction sites

Contractors will be required to adhere to Construction Regulation 27: Fire precautions on construction sites, of the Construction Regulations, 2003.

This regulation must be read in conjunction with the provisions of the Environmental Regulations for Workplaces, 1987 (as amended).
The Contractor must discuss the following in detail in his safety plan:

How the Contractor will minimize the risk of fire on the site
How the Contractor will identify potential fire hazards
What prohibitions the Contractor will implement to manage risk areas
How many employees the Contractor will train in fire fighting
What organization the Contractor envisage to combat fires on sites
What precautions and procedures will be followed to evacuate employees in the case of a fire

7.1.5 Water Environments

The Contractor will be required to adhere to Construction Regulation 24: Water Environments, of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan:

What precautions will the Contractor take to identify dangers where employees may fall into water,
What safety procedures and equipment will the Contractor implement to safeguard employees working at water environments.

7.1.6 Structures

The Contractor will be required to adhere to Construction Regulation 9: Structures, of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan:

Explain what controls, test or precautions will be made to prevent structures from collapsing during construction,
The Contractor shall indicate what steps will be taken and implemented to ensure that structures or parts thereof will not be loaded in such a manner that it may collapse, and
What procedures does the Contractor envisage to implement in order to obtain all relevant data on structures before commencement of construction work.

7.1.7 Watching, barricading and lighting

The Contractor will be required to adhere to regulations 11.3.(i) and 11.3.(l) of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan in respect of any excavation or other dangerous activity adjacent to public roads and thoroughfares:

Type of barrier or fencing to be used,
Type and spacing of warning lights and warning signs, and
Control systems and personnel he intends employing to ensure that the above items are maintained.

7.1.8 Hazardous Chemical Substances

The Contractor will be required to adhere to the Regulations for Hazardous Chemical Substances 1995 as amended in the handling and storage cement of and other hazardous chemical substances.

The Contractor must discuss the following in detail in his safety plan in respect of each hazardous chemical substance that will be used in the works:
Storage of substance
Handling of substance
Protective clothing and other devices to be used while handling the substance
Medical surveillance.

7.2 Site Clearance

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

7.2.1 Demolition work

Contractors will be required to adhere to Construction Regulation 12: Demolition work, of the Construction Regulations, 2003.

The Contractor shall discuss the following in detail in his safety plan:

Briefly explain how he will safeguard people and property during and after demolition works
Briefly explain how he will protect staff from dangerous situations
Discuss the methods proposed to safeguard the public and property against harm during demolition works
Discuss what type of equipment he envisage to use during demolition work

How will the Contractor ensure the safety of equipment used during demolition work
What steps will the Contractor deem necessary to take where hazardous materials is encountered
Dust control measures
Noise control measures

7.3 Earthworks

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

7.3.1 Excavation work

Contractors will be required to adhere to Construction Regulation 11: Excavation work, of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan:

How will the Contractor establish the stability of ground prior to excavations,
What steps will the Contractor follow to ensure that bolstering, shoring and bracing is sufficient to ensure the safety of the excavation, and
What steps will the Contractor follow to ensure the equipment used to safeguard an excavation is sufficient and safe.

7.4 Concrete

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

7.4.1 Formwork and support work

The Contractor shall with reference to Regulation 10: Formwork and support work, of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How the design of formwork and support work will be carried out,
How the erection of formwork and support work will be managed,
How the continuous assessment of the safety of formwork will be done,
How the loading of formwork and support work will be managed or limited, and
How he intends keeping records of the above.

7.5 Pipes

The Contractor shall comply with Section 9 of the General Safety Regulations, with regards to the welding, flame cutting, grinding, soldering or similar operations associated with pipework.

8 IMPLEMENTATION OF CONTRACTOR'S HEALTH AND SAFETY PLAN

8.1 General

The Contractor shall describe in his Health and Safety Plan how he intends implementing his plan. The Contractor shall indicate the methods he intends using to ensure accurate record keeping of all critical elements identified in his risk assessment and covered in his Health and Safety Plan.

The Contractor shall indicate how internal audits will be carried out, how shortcomings will be addressed, how he intends to review the safety plans, how he would train staff and how he would implement the findings and recommendations of internal audits or inputs of employees.

8.2 Administrative Systems

.

The Contractor shall comply with Section 9 of the General Administrative Regulations, 1996. The Contractor's administrative system shall without limiting his obligations, cover the following:

Up keep of a safety file on site,
Maintenance of his Health and Safety plan,
Procedures to follow for the appointment of competent persons,
Application for permits,
Procedures to follow for notifications, Injury on duty [IOD] administration,
Recording of minutes of safety meetings, Recording of checklists,
Safe keeping of checklists, and
Internal audits.

The Contractor shall in particular ensure that at least one copy of the Occupational Health and Safety Act,1993 and its Regulations is available on the for every 20 employees employed.

8.3 Reporting Systems

The Contractor shall comply with Section 9 of the General Administrative Regulations, 1996 and shall in particular (in accordance with section 12) furnish an inspector with information relating to health and safety on the construction site, when requested to do so.

The Contractor shall notify the Employer of any investigations, complaint or criminal charge which may arise as a consequence of the provision of the Occupational Health and Safety Act, 1993 and its Regulations, pursuant to work performed in terms of this Contract.

8.4 Training

The Contractor shall train all his employees in accordance with the requirements of section 13 of the Occupational Health and Safety Act, 1993. The Contractor shall ensure that every employee is informed of the following:

The hazards of any work he has to perform or plant machinery or equipment he is permitted to use, and
The precautionary measures which should be taken regarding the above.

The Contractor shall, without limiting his obligations, indicate in his Health and Safety Plan how he intends:

Identifying the training needs of the personnel he intends employing, and
Implementing the training identified
What proof of induction training will be carried by his employees (e.g. laminated type identification card).

8.5 Safety Meetings

The Contractor shall conduct at least one formal safety meeting per month with his employees to ensure safety awareness and shall maintain appropriate records of

attendance and meeting content. Such records shall be made available to the Employers Safety Agent. Such meetings shall address at least the following:

Accident / safety incidents
Hazardous conditions
Hazardous materials / substances
Job or work projections
Work procedures
Protective clothing / equipment
Housekeeping
General safety topics

8.6 Inspections and Monitoring

The Contractor shall be required to inspect each workplace prior to works commencing to ensure that all protective equipment is in place and that by entering the workplace no person will be exposed to any hazard which could affect his health or safety. The Contractor shall without limiting his obligations, indicate the following in his Health and Safety Plan:

The inspection and monitoring procedures he intends employing to determine the safety of workplaces, and
Who will be responsible for the checking of each workplace at the commencement of each shift.

The Contractor shall include in his Health and safety Plan all the checklists he intends using during the inspection and monitoring of the implementation of his Health and Safety Plan.

The Contractor can expect inspections of the works by any of the following parties:

The Employer or his Safety Agent,
The Employer's Occupational Safety Officer, or
The designated officer serving in the Department of Manpower and appointed by the Minister as Chief Inspector or his representative.

In addition to site inspections performed by the Employer or his safety agent they shall also do audits and asses the safety situation at the works and investigate incidents. Follow-up inspections will be performed to ensure compliance to recommendations done.

The Employer, his Safety Agent or his Occupational Safety Officer may stop the work at any time under the following conditions:

If the Contractor is not compliant with his Health and Safety Plan Imminent threat to the health and safety of any person on site Continuous non-conformance to corrective action requests.

Inspections by the Chief Inspector or his representative will be by appointment and the purpose would be to investigate complaints received by the Inspector or to investigate serious incidents.

The Chief Inspector or his representative may issue prohibition notices to stop the activities at the works until the situation investigated has been resolved or he may issue an improvement notice whereby the Contractor will have a period to rectify any hazard identified by the inspector.

9. AUDITING

9.1 Internal Audits

The audits contemplated in regulation 4.(1)(d) of the Construction Regulations,2003 will be carried out by the Employer or his appointed Safety Agent.

The intervals for the audits shall be agreed between the Contractor and the Employer or his Safety Agent during the preparation of the Contractor's Health and Safety Plan, but shall be carried out at least once every month or at such shorter interval that an inspector may require. The Employer or his Safety Agent shall provide at least 7 calendar days notice prior to the conducting of an audit.

The findings of each audit will be made known to the Contractor and the Employer in a report prepared by the Employer or his Safety Agent and will be submitted to all parties within seven working days of the respective audit being completed. Any shortfalls identified will be documented in the audit report together with the Contractor's proposals to rectify the same. All audit reports will be filed in the Health and Safety File.

A date for a follow up audit will be negotiated with the Contractor to verify the implementation of all actions to rectify shortfalls as identified in the audit report .

The Contractor will ensure that the same arrangement detailed above be implemented with his Contractors to ensure his compliance with the Construction Regulations and contemplated in regulation 5. (3)(c).

The audits described above only constitutes part compliance by the Employer or the Safety Agent with regulation 4.(1)(c) of the Construction Regulations, 2003.

9.2 Audits by Employer or Safety Agent

The Employer or Safety Agent will be entitled to carry out additional audits or follow-up audits, as the case may be, at any time during the construction period provided that:

i) The audit or follow-up audit are carried out during ordinary working hours, and
ii) The Employer or Safety Agent gives the Contractor at least 24 hours notice of his intention to carry out such audits.

The Contractor's employees indicated in Section 9.1 will be present during any audit carried out by the Employer or his Safety Agent.

10. MEASUREMENT AND PAYMENT

10.1 Measurement and Payment

10.1.1 The scheduled items for health and safety will be as specified in clause 31 of section 001 of the Standard Specifications.

10.1.2 The Contractor shall price all items scheduled in this section of the schedule of quantities to enable the Employer to comply with clause 4.1.(h) of the Construction Regulations, 2003. Failure by the Contractor to price these items will force the Employer to reject the Contractor's tender in terms of clause 4.(4) of the Construction Regulations, 2003.

ANNEXURE 1

APPOINTMENT LETTERS
PRO-FORMA'S

COMPANY LETTER HEAD

Attention: (***Assistant Construction Supervisor's Name)***

APPOINTMENT OF THE ASSISTANT CONSTRUCTION SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 6(2)

I, (***contractor's name)*** hereby appoint **(*assistant construction supervisor's name)*** as the assistant supervisor responsible for **(*site address)*** to carry out the construction work of ***(description of construction work and area of responsibility).***

In terms of this appointment you are required to ensure that all construction work performed under your supervision is carried out as follows:

1. By persons suitably trained and competent to do such work;
2. That all persons are aware and understand the hazards attached to the work being carried out;
3. That the required risk assessments are carried out;
4. That precautionary measures are identified and implemented;
5. That discipline is enforced at the construction site at all times;
6. That all identified statutory requirements are met; and
7. That any other interest in terms of health and safety with respect to the responsible area is met.
8. You will accept the duties of the Construction Supervisor in his absence.

You are required to report any deviations of the above-mentioned instruction to **(*construction supervisor's name)*** and in his absence to the contractor's representative.

This appointment is valid from ***(date)*** to the completion of the stipulated construction work.

You shall submit a written weekly report any non-compliance with the construction Regulations, 2003.

_____ _____ _____

Contractor's Representative full name Signature Date

……

Kindly confirm your acceptance of this appointment by completing the following:

I, ***(assistant construction supervisor)*** understand the implications of the appointment as detailed above and confirm my acceptance.

_____ _____ _____

Assistant construction supervisor's Signature Date

COMPANY LETTER HEAD

Attention: (***Safety Officer's Name)***

APPOINTMENT OF THE CONSTRUCTION HEALTH AND SAFETY OFFICER IN TERMS OF CONSTRUCTION REGULATION 6(6)

I, **(*contractor's name)*** hereby appoint **(*safety officer's name)*** as the Construction Health and Safety Officer responsible for **(*site address)*** to manage all the health and safety issues as required in terms of the Act by establishing a health and safety program with elected health and safety Representatives.

You shall ensure that all the requirements in terms of the Act and in particular in terms of the Construction Regulations, 2003 are met. You shall also ensure that all appointed sub-contractors comply with the requirements as stipulated in the Construction Regulations, 2003.

You shall further ensure that all records, registers and required lists are maintained and shall stop construction work upon identifying any non-compliance by any contractor; this includes stopping any work should the competency of the person carrying out such work be questionable.

This appointment is valid from (***date****)* to the completion of the stipulated construction work.

_____ _____ _____

Contractor's Representative full name Signature Date

……

Kindly confirm your acceptance of this appointment by completing the following:

I, **(*construction health and safety officer's name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

_____ _____ _____

Construction Health & Safety Officer's full name Signature Date

COMPANY LETTER HEAD

Attention: ***(Construction Vehicle and Mobile Plant Inspector)***

APPOINTMENT OF THE CONSTRUCTION VEHICLE AND MOBILE PLANT INSPECTOR IN TERMS OF CONSTRUCTION REGULATION 21(1)(j)

I, (***contractor's name)***hereby appoint (***construction vehicles and mobile plant inspector's name****)* as the construction vehicles and mobile plant inspector responsible for (***site address****)* to inspect on a daily basis all construction vehicles and mobile plant, as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to construction vehicles and mobile plant that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations, 2003 are at all times met.

This appointment is valid from (***date****)* to the completion of the stipulated construction work.

Contractor's Representative full name	Signature	Date

……

Kindly confirm your acceptance of this appointment by completing the following:

I, **(*construction vehicles and mobile plant inspector's full name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

Construction vehicles and mobile plant inspector's full name	Signature	Date

COMPANY LETTER HEAD

Attention: ***(Sub-Contractor's Name)***

APPOINTMENT OF SUB-CONTRACTOR IN TERMS OF THE CONSTRUCTION REGULATION 5(3)(b)

I, ***(contractor's name)*** hereby appoint ***(sub-contractor's name)*** as the sub-contractor responsible for ***(site address)*** to carry out the construction work of ***(description of construction work)***.

You shall ensure that you meet all the requirements in terms of the Act and in particular in terms of the section 37(2) agreement and the Construction Regulations, 2003. You shall also ensure that all contractors appointed by yourself and reporting to you comply with the requirements as stipulated in the Construction Regulations, 2003.

You shall also ensure that all the information and specifications to ensure that the construction work is carried out in a safe manner are carried over to all contractors appointed and reporting to you.

You shall further ensure that all records, registers and required lists are maintained and that all persons appointed to carry out tasks as stipulated by these regulations are competent and have the necessary resources to complete their tasks effectively in such a manner that health and safety is not in any manner compromised.

This appointment is valid from (***date)*** to the completion of the stipulated construction work.

You shall submit a written weekly report on all shortfalls that have not been met in terms of these regulations.

_____ _____ _____

Contractor's Representative full name Signature Date

……

Kindly confirm your acceptance of this appointment by completing the following:

I, (***sub-contractor's name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

_____ _____ _____

Sub-Contractor's Representative full name Signature Da

COMPANY LETTER HEAD

Attention: ***(Construction Supervisor's Name)***

APPOINTMENT OF THE CONSTRUCTION SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 6(1)

I, ***(contractor's name)*** hereby appoint ***(construction supervisor's name)*** as the Supervisor responsible for ***(site address)*** to carry out the construction work of ***(description of construction work and area of responsibility)***.

In terms of this appointment you are required to ensure that all construction work performed under your supervision is carried out as follows:

1. By persons suitably trained and competent to do such work;
2. That all statutory appointments have been completed;
3. That, where required, health and safety committees are established and that meetings are accordingly held;
4. That all persons are aware and understand the hazards attached to the work being carried o ut;
5. That the required risk assessments are carried out;
6. That precautionary measures are identified and implemented;
7. That discipline is enforced at the construction site at all times;
8. That all identified statutory requirements are met; and
9. That any other interests in terms of health and safety with respect to the responsible area is met.
10. You will in writing delegate your duties to the Assistant Construction Supervisor while absent from site.

You are required to report any deviations of the above-mentioned instructions to **(*contractor's name)***. This appointment is valid from ***(date)*** to the completion of the stipulated construction work. You shall submit a written weekly report on all shortfalls that have not been met in terms of these regulations.

Contractor's Representative full name	Signature	Date

……

Kindly confirm your acceptance of this appointment by completing the following:

I, ***(construction supervisor)*** understand the implications of the appointment as detailed above and confirm my acceptance.

Construction Supervisor's full name	Signature	Date

COMPANY LETTER HEAD

Attention: ***(Excavation Work Supervisor's Name)***

APPOINTMENT OF THE EXCAVATION WORK SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 11(1)

I, ***(contractor's name)*** hereby appoint ***(excavation work supervisor's name)***as the excavation work supervisor responsible for ***(site address)*** to supervise and carry out all the necessary inspections in terms of all excavation work as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to excavation work that that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations are at all times met. This appointment is valid from ***(date)*** to the completion of the stipulated construction work.

_____ _____ _____

Contractor's representative full name Signature Date

……

Kindly confirm your acceptance of this appointment by completing the following:

I, **(*excavation work supervisor's full name)***understand the implications of the appointment as detailed above and confirm my acceptance.

_____ _____ _____

Excavation Work Supervisor full name Signature Date

COMPANY LETTER HEAD

Attention: ***(Form work and Support work supervisor's name)***

APPOINTMENT OF THE FORMWORK AND SUPPORT WORK SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 10(a)

I, ***(contractor name)*** hereby appoint **(*form work and support work supervisor's name)***as the formwork and support work supervisor responsible for ***(site address)*** to supervise and carry out all the necessary inspections in terms of all formwork and support work as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to formwork and support work that the necessary precautionary measures are taken and enforced. Hazards are reported in writing to the Construction, Health and Safety Officer and the Construction Supervisor.

You shall further ensure that the requirements of the Construction Regulations are at all times

met. This appointment is valid from **(*date)*** to the completion of the stipulated construction work.

_____	_____	_____
Contractor's representative full name	Signature	Date

Kindly confirm your acceptance of this appointment by completing the following:

I, ***(formwork and support work supervisor's full name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

_____	_____	_____
Formwork and Support Work Supervisor's full name	Signature	Date

COMPANY LETTER HEAD

Attention: ***(Ladder Inspector's Name)***

APPOINTMENT OF THE LADDER INSPECTOR IN TERMS OF CONSTRUCTION REGULATION 13(A)

I, ***(contractor's name)*** hereby appoint (***ladder inspector's name)***as the ladder inspector responsible for **(*site address*)** to manage ladders on site. You should inspect the ladders as per the checklist at least once a week.

You shall ensure that when becoming aware of any health and safety hazards in respect to ladders that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations, 2003 are at all times met.

This appointment is valid from **(*date)*** to the completion of the stipulated construction work.

_____	_____	_____
Contractor's representative full name	Signature	Date

Kindly confirm your acceptance of this appointment by completing the following:

I, **(*ladder inspector's full name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

_____	_____	_____
Ladder inspector's full name	Signature	Date

COMPANY LETTER HEAD

Attention: ***(Risk Assessor's Name)***

APPOINTMENT OF THE CONSTRUCTION SITE RISK ASSESSOR IN TERMS OF CONSTRUCTION REGULATION 7(1)

I, ***(contractor's name)*** hereby appoint ***(risk assessor's name)*** as the construction site risk assessor responsible for ***(site address)*** to carry out risk assessments prior to the commencement of construction work and any other risk assessment that may be required for the duration of the construction work.

You shall ensure that all risks are identified and analyzed and that safe working procedures are drafted and implemented to reduce, mitigate or controls the hazards that were identified.

You will at least use the risk evaluation program with the provided checklists.

This appointment is valid from **(*date)*** to the completion of the stipulated construction work.

_____	_____	_____
Contractor's representative full name	Signature	Date

Kindly confirm your acceptance of this appointment by completing the following:

I, **(*construction site risk assessor's name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

_____	_____	_____
Construction site Risk Assessor's full name	Signature	Date

COMPANY LETTER HEAD

Attention: ***(Scaffolding Supervisor's Name)***

APPOINTMENT OF THE SCAFFOLDING SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 14(2)

I, ***(contractor's name)*** hereby appoint **(*scaffolding supervisor's name*)** as the scaffolding supervisor responsible for **(*site address)***to supervise and carry out all the necessary inspections in terms of all scaffolding work. (Whether newly erected, altered or moved as per the provided checklist)

You shall ensure that when becoming aware of any health and safety hazards in respect to scaffolding work that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations, 2003 are at all times met.

This appointment is valid from ***(date)*** to the completion of the stipulated construction work.

_____	_____	_____
Contractor's Representative full name	Signature	Date

Kindly confirm your acceptance of this appointment by completing the following:

I, ***(scaffolding supervisor's full name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

_____	_____	_____
Scaffolding Supervisor's full name	Signature	Date

COMPANY LETTER HEAD

Attention: ***(Stacking and Storage Supervisor's Name)***

APPOINTMENT OF THE STACKING AND STORAGE SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 26(a)

I, ***(contractor's name)*** hereby appoint ***(stacking and storage supervisor's name)*** as the stacking and storage supervisor responsible for ***(site address)*** to manage all stacking and storage on site.

You shall inspect all new stacking and thereafter as often as needed according to the checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to stacking and storage that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations are at all times met. On identifying any shortfalls or hazards convey such information in writing to the construction supervisor.

This appointment is valid from ***(date)*** to the completion of the stipulated construction work.

Contractor's Representative full name	Supervisor	Date

Kindly confirm your acceptance of this appointment by completing the following:

I, ***(stacking and storage supervisor's full name)*** understand the implications of the appointment as detailed above and confirm my acceptance.

Stacking and Storage Supervisor's Full name	Signature	Date

ANNEXURE 2

NOTIFICATION TEMPLATES

COMPANY LETTER HEAD

Attention: The Provincial Director
The Department of Labour
[Postal Address*]

NOTIFICATION OF CONSTRUCTION WORK ON CONTRACT [NUMBER] [CONTRACT DESCRIPTION]

In terms of regulation 3.(1) of the Construction Regulations , 2003 promulgated on 18 July 2003 in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), we hereby notify you of our intention to commence construction works on the abovementioned contract, which:

Includes the demolition of a structure exceeding a height of 3 meters,
Includes the use of explosives to perform the construction work,
Includes the dismantling of fixed plant at a height greater than 3 meters,
Will exceed 30 days or will involve more than 300 person days of construction,

Includes excavation work deeper than 1 meter, or
Includes working at a height greater than 3 meters above ground or a landing.

1. Parties involved on the Contract

1.1 The Principal Contractor is: [Contractor's Name]
[Contractor's postal address]
[Contractor's postal address]
Att: [Contractor's contact person and telephone number]

1.2 The Client (Employer) is: [Employer's Name]
[Employer's postal address]
Att: [Employer's contact person and telephone number]

1.3 The Client's Safety Agent is: [Safety Agent's Name]
[Safety Agent's postal address]
Att: [Safety Agent's contact person and telephone number]

1.4 The Contractor's Construction Supervisor is: [Contractor's Construction Supervisor's name and telephone number]

2. Details of the construction works

2.1 The physical address of the works is: [Physical address of works]
[Physical address of works]

2.2 The nature of the construction works is: [Provide a description of the works].

2.3 The expected commencement date of the Works is : [Insert expected commencement date]

2.4 The expected completion date of the works is : [Insert expected completion date]

2.5 The estimated maximum number of persons on the construction site:

2.6 A total of _____ contractors will be accountable to the Principal Contractor on the construction site during the execution of the Works. The names of the contractors already chosen are as follows: [Provide a list of the Contractor's subcontractors already appointed]

3. Other details

3.1 The Principal Contractor's compensation registration number is: _____

3.2 In terms of regulation 3.(3) a copy of this notification will be kept on site for inspection. We trust the above is in order.

Yours faithfully,

_____ _____

Signature Date

* Postal Address of Provincial Director as indicated in regulation 1 of the General Administrative Regulations, 1996.

ANNEXURE 3

IDENTIFIED HEALTH AND SAFETY HAZARDS

ANNEXURE 3: IDENTIFIED HEALTH AND SAFETY HAZARDS

In terms of Regulation 4(1)(b) of the Construction Regulations 2003 the following hazards anticipated with the scope of work have been identified.

NOTE: The list of potential hazards is by no means intended to be all inclusive and is not limited to this list, and it remains the responsibility of the Contractor to identify all possible hazards with regards to his scope of work and to put measures in place to mitigate, reduce or control these hazards.

Potential Hazards

1. Commissioning of new installations
2. Confined space entry
3. Demolition/breaking into existing structures
3. Excavation shoring / brazing
4. Excavations been flooded during rain season
5. Explosives
7. Hazardous material handling / storage / management
8. Heat stress
9. Loading and off loading vehicles
10. Manual handling of materials
11. Plant and equipment integrity
12. Public and traffic safety
13. Requirements for plant isolations
14. Roofing and Cladding operations
15. Safe usage and storage of Oxygen, Acetylene and LPG cylinders
16. Scaffolding
17. Stacking and storage of equipment / materials
18. Tie-ins into existing equipment
19. Usage of compressed air and equipment
20. Work involving radioactive sources
21. Working in operational areas
22. Working on live electrical installations / sub-stations / MCC rooms
23. Working on moving equipment.

ANNEXURE 4

PART C4: SITE INFORMATION

C4 - SITE INFORMATION

CONTENTS

Item	Heading	Page
2.	**SITE INFORMATION**	**124**
	2.1 Locality Maps	125

Locality Plan

The Locality of the farm site is: **PORTION 27 (A PORTION OF PORTION 16) OF FARM WAAIKRAAL NO 385 JT**

GPS COORDINATES: ***Latitude: S 25.761994°***
Longitude: E 30.146961°

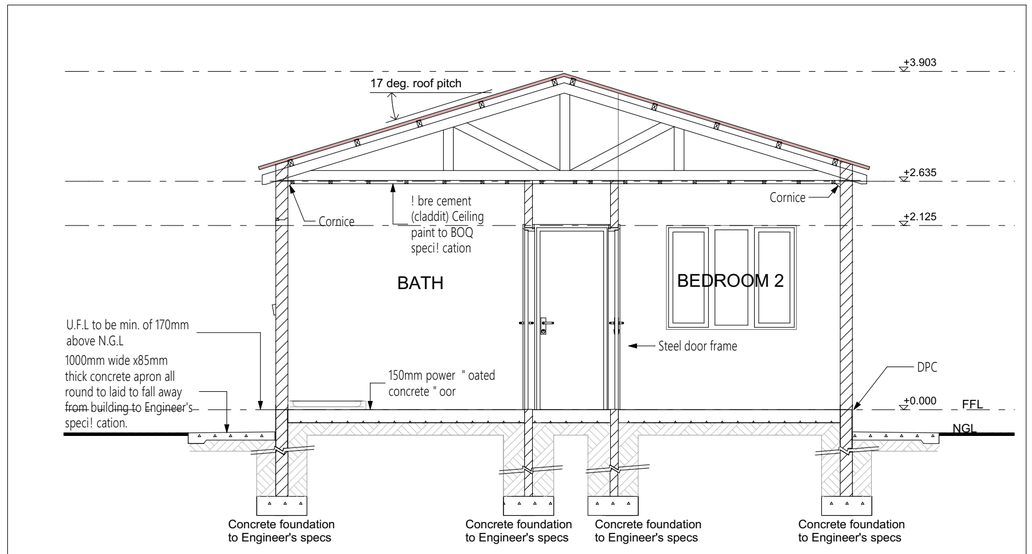
FOR PRESENTATION

AISLES ARCHITECTS
REGISTERED ARCHITECTS & PROJECT MANAGEMENT CONSULTANTS



Floor Area = 64 sqm

GROUND FLOOR PLAN 1:50



SECTION A-A
1:50

