LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
AGRICULTURE AND RURAL DEVELOPMENT

TENDER NO ACDP 23/16

TENDER DOCUMENT
FOR

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

NAME OF TENDERER	
TOTAL TENDERED AMOUNT	
TOTAL TENDERED AMOUNT IN WORDS	
VAT NUMBER (if registered for VAT)	
SUPPLIER CSD REGISTRATION NUMBER	
TAX COMPLIANCE STATUS PIN (to verify bidder's tax compliance status)	
PROJECT DURATION	
TEL NUMBER	
FAX NUMBER	

PREPARED FOR:

LIMPOPO PROVINCIAL GOVERNMENT
DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

HEAD OF DEPARTMENT
LIMPOPO DEPT OF AGRICULTURE &
RURAL DEVELOPMENT
PRIVATE BAG X 9487
POLOKWANE
0700

PREPARED BY

LIMPOPO PROVINCIAL GOVERNMENT
DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

ENGINEERING SERVICES HEAD OFFICE
LIMPOPO DEPT OF AGRICULTURE &
RURAL DEVELOPMENT
69 BICCARD STREET
POLOKWANE
0700

CLOSING DATE: 29 JANUARY2024 TIME 11:00 AM

BRIEFING MEETING: 10 JANUARY 2024 TIME 10:00 AM

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

TENDERER'S DETAILS

NAME OF TENDERER …….

…….

…….

PHYSICAL ADDRESS …….

…….

…….

POSTAL ADDRESS …….

…….

…….

CONTACT PERSON (NAME)……

(SURNAME)……

(PHONE No)……

(CELL No)……

(FAX No)……

(E-MAIL)……

LIMPOPO DEPARTMENT OF AGRICULTURE & RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

Contents

Drawings

SCHEDULE OF TENDER DRAWINGS

The following drawings, which are bound in, form part of this Contract in terms of Clause 1(i) (j) of the General Conditions of Contract:

DRAWING NO:	DESCRIPTION:

The Tenderer shall satisfy himself that the sets of drawings are complete in accordance with the above schedule, and if any are found to be missing or duplicated, or the writing or figures indistinct, he shall apply to the Engineer immediately and have the discrepancy rectified. No liability whatsoever will be admitted by the Employer in respect of errors in Tenders attributed to any such discrepancy.

PART T1: TENDERING PROCEDURES

TABLE OF CONTENTS

T1.1: TENDER NOTICE AND INVITATION TO TENDER

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
AGRICULTURE AND RURAL DEVELOPMENT

TENDER NO ACDP 21/28

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

T1.1 Tender Notice and Invitation to Tender

Tenders are hereby invited to tender for an Irrigation Framework Agreement for the Development of Irrigation Projects of 30Ha and less and the Repair and Maintenance of existing Irrigation Schemes in the Limpopo Province. **Tenderers should have a CIDB contractor grading of 5SH or 5CE and Higher.**

Tender documents will be obtainable from 14 December 2023, from the Departmental Website, on the following link: www.ldard.gov.za No payment is required to down-load the document from the Website.

Duly completed tenders enclosed in a sealed envelope marked **"TENDER: A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES, TENDER NO ACDP 23/16, CLOSING DATE: 29 January 2024"** with the name of the Tenderer, shall be deposited in the clearly marked tender box provided at Limpopo Department of Agriculture, 67 Biccard Street, Temo Towers Ground Floor, Polokwane before 11h00 on the closing date. The tenders will be opened in public.

A Compulsory briefing session will be conducted on **10 January 2024** and prospective Contractors are requested to meet the Engineer at 10:00 at the Offices of the Department of Agriculture and Rural Development in the Foyer of the Agrivillage 1 Building at 69 Biccard Street, Polokwane, Limpopo Contract documentation will **not** be available on the Tender Briefing, and the Engineer will not be available for consultation purposes on any other occasion.

A preferential point system shall apply whereby a contract will be allocated to a tenderer in accordance with the Preferential Procurement Policy Framework Act, Act No 5 of 2000 and as defined in the Conditions of Tender in the tender document, read in conjunction with the Preferential Procurement Policy of Limpopo Department of Agriculture & Rural Development where 80 points will be allocated in respect of price and 20 points in respect of targeted goals. Tenderers must have the necessary skills, experience and capacity to perform the required work.

Employer:	**Engineer:**
Limpopo Department of Agriculture and Rural Development Head of Department Private Bag X9487 Polokwane, 0700 For Administrative Enquiries: Mr VS Ndlozi Tel: 015 294 3564 E-mail: ndloziv@agric.limpopo.gov.za	**Limpopo Department of Agriculture and Rural Development** For Technical Enquiries: Mr. MJ Gouws Tel: 015 294 3539 / 060 967 4127 E-mail: gouwsmj@agric.limpopo.gov.za

T1.2. TENDER DATA

The Conditions of Tender in the Standard Conditions of Tender as contained in Annex F of CIDB Standard Uniformity in Construction Procurement. (See www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of Tenderers in this Tender in the section T1.3 of the Tender Data.

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

F.1.1 The Employer for this Contract is: **Limpopo Department of Agriculture and Rural Development**

F.1.2 Tender Documents

The Tender Document consists of the following:

TENDER

T1: Tendering Procedures
- T1.1: Tender Notice and Invitation to Tender
- T1.2 : Tender Data
- T1.3 : Standard Conditions of Tender

T2 : Returnable Documents
- T2.1: List of Returnable Documents
- T2.2: Returnable schedules

CONTRACT

Part 1: Agreements and Contract Data
- C1.1: Form of Offer and Acceptance
- C1.2: Contract Data
- C1.3: Form of Guarantee
- C1.4: Agreement with Adjudicator
- C1.5: Agreement in terms of Section 37(2) of the Occupational Health and Safety Act (No 85, 1993)

Part 2: Pricing Data
- C2.1: Pricing Instructions
- C2.2: Bill of Quantities

Part 3: Scope of Work
- C3.1: Standard Specifications
- C3.2: Project Specifications
- C3.3: Particular Specifications

Part 4: Site Information
- C4.1: Locality Plan
- C4.2: Construction Notice Board

DRAWINGS

No Drawings are bound in this document.

The Tender Document shall be obtained from the Employer or his authorized representative from the Departmental Website, on the following link: www.ldard.gov.za No payment is required to off-load the document from the Website.

F.1.4 The Employer's agent is:

Name	:	District Engineer (Capricorn; Mopani; Sekhukhune; Vhembe; Waterberg)
Name	:	Limpopo Department of Agriculture & Rural Development
Address	:	District Office (Capricorn; Mopani; Sekhukhune; Vhembe; Waterberg)

Telephone

E-Mail Address :

F.1.5 The Employer's right to accept or reject any Tender Offer

The Employer may accept or reject any variation, deviation, Tender Offer, or alternative Offer, and may cancel the Tender process and reject all Tender Offers at any time before the formation of a Contract. The Employer shall not accept or incur any liability to a Tenderer for such cancellation and rejection, but will give written reasons for such action upon written request to do so. The Employer will reserve the right to appoint more than one (1) tenderer.

F.2.1 Eligibility

A Tenderer will not be eligible to submit a Tender if:

(a) The Contractor submitting the Tender is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt of fraudulent practices;
(b) The Tenderer does not have the legal capacity to enter into the Contract;
(c) The Contractor submitting the Tender is insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of the foregoing;
(d) The Tenderer does not comply with the legal requirements stated in the Employer's procurement policy;
(e) The Tenderer cannot demonstrate that he possesses the necessary professional and technical qualifications and competent, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the Contract;
(f) The Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the Contract.
(g) Only those Tenderers who have in their employ management and supervisory staff satisfying the requirements of the Scope of Work for Labour Intensive Competencies for supervisory and management staff are eligible to submit Tenders.
(h) Only those Tenderers who are registered with the CIDB as defined in the Regulations 09 June 2004 and 22 July 2005), in terms of the CIDB Act No 38 of 2000 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 a 5SH or 5CE or higher class of construction work, are eligible to submit Tenders.
(i) The Contractor submitting the Tender is not registered on the Employer's Supplier Database
(j) Irrigation Companies that have in-house irrigation design and construction abilities must have a CIDB registration of 5SH or 5CE and higher.
(k) A Joint Venture or a Company that Sub-contract the construction part or design part, only the Construction Partner must have a minimum CIDB registration of 5SH or 5CE and higher.

Joint Ventures are eligible to submit Tenders provided that:

1. At least one (1) member of the Joint Venture is registered with the CIDB and the partner with the CIDB grading has a Contractor grading designation in the 5SH or 5CE or higher class of construction work.
2. In terms of the Preferential Procurement Regulations, 2017 pertaining to the Preferential Procurement Policy Framework Act 5 of 2000, a trust, consortium or joint venture must submit a consolidated B-BBEE Status Level Verification Certificate for every separate bid.
3. Should this bid be submitted by a joint venture, the joint venture agreement must accompany the bid document before the closing date and time of bid. The joint venture agreement must clearly specify the percentage of the contract to be undertaken by each company participating therein.
4. The non-submission of a B-BBEE Certificate by a trust, consortium or joint venture will result in disqualification.

5. Each party to a Joint Venture/ Consortium must submit an original valid Tax Clearance Certificate together with the bid before the closing date and time of bid.
6. The joint venture or consortium must submit a formal agreement that outlines the roles and responsibilities of each member of the joint venture or consortium, nomination of an authorised person to represent the joint venture or consortium in all matters relating to this bid and the details of the bank account for payments to be effected.
7. The joint venture or consortium must comply with Central Suppliers Database (CSD) registration requirements as per National Treasury directive.

F.2.7 Site visit and clarification meeting

The arrangements for the compulsory tender briefing meeting are as follows:

Location: Foyer of Agrivillage 1 Building
69 Biccard Street, Polokwane, Limpopo

Date: 10 January 2024 Starting time: 10H00

Enquiries and confirmation of attendance at least one full working day in advance regarding the meeting may be directed to:

Name	:	MJ Gouws
Name	:	Limpopo Department of Agriculture & Rural Development
Address	:	67/69 Biccard Street Polokwane, 0699
Telephone	:	015 294 3539 / 060 967 4127
E-Mail	:	gouwsmj@agric.limpopo.gov.za

Bidders must sign the attendance list and name of the Bidding entity. Addenda will be issued and Bids will be received only from those Bidding entities appearing on the attendance list.

F.2.10 Pricing the Tender Offer

(a) Value Added Tax

- The Valued Added Tax (VAT) rate shall be 15% or as otherwise provided for by Legislation.
- The successful Tenderer shall be required to produce a VAT invoice that shall only be prepared once measurements and valuations for work done in Terms of Contract Offer have been agreed with the Employers agent and a Certificate of Payment issued.
- Payment of VAT to non-VAT vendors shall be processed from the month in which the Tenderer's liability with the South African Revenue Services is effective.

F.2.11 Alterations to document

A Tender Offer shall not be considered if alterations have been made to the Forms of Tender data or Contract data (unless such alterations have been duly authenticated by the Tenderer) or if any particulars required therein have not been completed in all respects.

F.2.12 Alternative Tender Offers

No alternative Offers will be considered.

F2.13 Submitting a Tender Offer

F.2.13.3 Tender Offers shall be submitted as an original only.

Under no circumstances whatsoever may the Tender forms be retyped or redrafted.

Photocopies of the original Tender documentation may be used, but an original signature must appear on such photocopies.

F.2.13.5 The Employer's address for delivery of Bid Offers and identification details to be shown on such Bid Offer package are:

Location of Bid box: Physical address:	Limpopo Department of Agriculture and Rural Development 67/69 Biccard Street Polokwane, 0700
Identification details:	**A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES**
Tender No:	**ACDP 23/16**
Closing Date**:**	**29 January 2024 at 11:00**

F.2.15 Closing Time

The closing time for submission of Tender Offers is: **11h00** on 29 January 2024 as stated in the Tender Notice and Invitation to Tender.

Telephonic, telegraphic, telex, facsimile, electronic or e-mailed Tenders will not be accepted.

F.2.16 Tender Offer validity

The Tender Offer validity period is 120 days from the closing time for submission of Tenders.

F.2.17 Clarification of tender offer after submission

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

Note: Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so, this may include negotiations for fair market related prices.

F.2.18 Provide other material

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

F.2.19 Access

Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.

F.2.20 TENDER EVALUATION CRITERIA

F.2.20.1 <u>Qualifying Criteria</u>

Pre-Compliance Evaluation

Criteria	**Requirements**
Pre-compliance criteria.	The Service Provider must submit all documents as outlined below.
Preferential points for specific goals.	Bidders will be allocated preferential points for specific goals as per table 7.2.2 c. in SBD 6.1.

The evaluation process entails the following:
Phase 1: Pre-Compliance evaluation

i. During this phase, tender responses are registered to ascertain the number of tenders responses received before the closing date and time.
ii. REQUIRED DOCUMENTS
Misrepresentation of facts will render your tender non-responsive.

F.2.20.2 Submission of Required Documents

Bidders will be disqualified if not meeting the following requirements:

Documents that must be submitted	Non-submission will result in disqualification	Requirement
Invitation to Bid – SBD 1	YES	Must fully complete and sign the supplied pro forma document.
Pricing Schedule – SBD 3.2	YES	Must fully complete and sign the supplied pro forma document.
Bidders Disclosure – SBD 4	YES	Must fully complete and sign the supplied pro forma document. (Must declare if they have interests in other Companies. Refer to Paragraph 2.3). In case of J/V's bidders should complete separate SBD 4's.
Preference Point Claim Form – SBD 6.1	YES	Non-Returnable of the supplied pro forma document will lead to Disqualification. Non-claiming of points on this form will lead to zero (0) even if supporting documentation is attached.
Joint Ventures (J/V)	YES	Attach a valid JV agreement. Non-submission will lead to disqualification. In the case of an award, the company need to register on CSD as a JV. The process is that the service providers must register the JV at SARS and then open a JV bank account. With those documents they can then register the JV on the CSD. The department will only make payment to a JV account.
Form of intent by a bank or insurance company to provide a 10% performance guarantee and insurance of the works.	YES	Must be submitted with the tender by the closing date and time of the bid. In case of JV, both partners must submit/ be represented on the submission.
Workmen's Compensation Registration Certificate	NO	Must submit valid copy of COIDA certificate or proof of payment thereof. In case of JV, both partners must submit.
Completeness of the tender document.	YES	Bidders are required to complete the entire bid document without omission of pages and in the provided sequence. Supporting documents must be attached with list of indexes/ Annexures and in order of the indicated index sequence. The tender document to be fully completed in Black ink (not typed)
Specification	YES	Must comply with the specification
Current works load declaration.	YES	Wrong declaration on current works and / or if the bidder is in default, will lead to disqualification.
Bank Rating	YES	Bank rating letter from a financial institution with track record of at least 6 months. Bidders must have a minimum rating of C. In case of JV, both partners must submit.
Bill of Quantities	YES	All items of the BOQs must be fully completed (rates, amounts and sums), responsive and submitted with the bid by the closing date and time.
CIDB grading certificate	YES	Bidder must submit CIDB grading certificate of 5SH or 5CE and higher. In case of JV, Calculated CIDB grading must be submitted.
Compulsory Enterprise Questionnaire	YES	Must be fully completed, signed by the authorized person/s and submitted with the bid by the closing date and time. In case of J/V's bidders should complete separate forms or be represented.
Attendance Register for the Compulsory site briefing	YES	Must attend the compulsory site briefing as per scheduled date and time and ensure to sign the attendance register.

iii. The Service Provider must ensure that they meet the following requirements before the bid can be awarded:

CRITERIA	REQUIREMENT
Tax compliance status	Tenderer must be tax compliant before the bid is awarded, i.e. *Where the recommended tenderer is not tax compliant, the tenderer will be notified of their non-compliant status and must be requested to submit written proof from SARS of their tax compliance status or proof that they have made an arrangement to meet their outstanding tax obligations within 7 working days. The tenderer should thereafter provide the accounting officer or accounting authority with proof of their tax compliance status which should be verified via the Central Supplier Database or e-Filing"*
Business registration	The Company must be in business
Company registration with central supplier database (CSD)	Company must be registered on central supplier database (CSD). If not registered must proceed to complete the registration prior to submitting your proposal. Visit https://secure.csd.gov.za/ to obtain your vendor number.
In the service of the State status	The bid will not be considered if Shareholders or directors are employed by state/ government departments, municipalities, municipal entities, or public entities unless the approval from executive authority to do business with the state is submitted with the proposal
Tender defaulting and restriction status	Entity and directors must not be restricted

F.2.20.3 Functionality Evaluation Criteria = 100 points

The minimum score required for functionality is 70 points in order to qualify to be registered into the Departmental Data base for the Drilling, Testing and equipping of Boreholes. A tenderer who scores less than 70 points on functionality will be disqualified.
Misrepresentation of facts will render a bid non-responsive.

CRITERIA	EVIDENCE	Value	Weighting
1. Irrigation Construction Team: Qualified and/or Experience Staff Evidence Bidders must attach brief CV with certified copies of qualification and Identity document for each Key member of the Irrigation Construction Team for evaluation.	No information.	0	20
	Comply <u>only partly</u> with the minimum: of a Project Manager with 2 years and more Irrigation construction experience and at least 2 of each of the 2 groups of the Construction Staff with 3 years and more applicable experience: 1) Technician and Site Agent or Site Foreman 2) Civil Artisan or Mechanical Artisan and Electrician	1	
	Have a Project Manager with 2 years and more Irrigation construction experience and at least 2 of each of the 2 groups of the Construction Staff with 3 years and more applicable experience: 1) Technician and Site Agent or Site Foreman 2) Civil Artisan or Mechanical Artisan and Electrician	3	
	Have a Project Manager with 5 years and more Irrigation construction experience and at least 2 of each of the Staff of the 2 groups of the Construction Team with more than 5 years applicable experience: 1) Technician and Site Agent and Site Foreman 2) Civil Artisan and Mechanical Artisan and Electrician	5	
2. Construction Vehicles, Plant & Equipment. Evidence: Bidders must attach copies of Ownership documents or copies of Hire contracts or Letter of intention to Hire from the Hire Company with their submission.	No information or None	0	20
	<u>Only comply (Own or Hire) with 1 of the 3 groups</u> of the following number of Vehicles, Plant and Equipment available for this contract: 1) <u>One</u> of: Earthmoving equipment: Trencher or Backhoe loader (TLB) or Excavator 2) <u>One</u> of: Transport vehicle for material: Tractor and Trailer or Truck 3) <u>One</u> of: Applicable support vehicles.	1	
	Own or Hire the following number of Vehicles, Plant and	3	

(Hire Company proof of ownership documents) Copies must be certified.	Equipment available for this contract: 1) <u>One</u> of: Earthmoving equipment: Trencher or Backhoe loader (TLB) or Excavator 2) <u>One</u> of: Transport vehicle for material: Tractor and Trailer or Truck 3) <u>One</u> of: Applicable support vehicles.		
	Own or Hire the following number of Vehicles, Plant and Equipment available for this contract: 1) <u>Two</u> of: Earthmoving equipment: Trencher or Backhoe loader (TLB) or Excavator 2) <u>Two</u> of: Transport vehicle for material: Tractor and Trailer or Truck 3) <u>Two</u> of: Applicable support vehicles.	5	
3. Experience and demonstrated capacity to implement Irrigation Construction projects timeously, according to specifications and within budget Evidence/ means to verify. Bidders must attach a table indicating the Irrigation projects that they have successfully constructed and completed. The table must state: 1. Client with contact information, 2. Project name, 3. Date of site handover, 4. Date of completion. Also attached copies of appointment letters and or documents that state the contract period, site handover certificates / letters, completion certificates / letters and contact information of the clients for verification.	No information or information is not relevant to enable a proper evaluation.	0	35
	One to two Irrigation projects completed after the "Due Completion Date" including approved "Extension of Time" (Contract period) since January 2014. Table and means of verification attached.	1	
	Three to Four Irrigation projects successfully completed within the "Due Completion Date" including approved "Extension of Time" (Contract period) since January 2014 Table and means of verification attached.	3	
	Five and Above Irrigation projects successfully completed within the "Due Completion Date" including approved "Extension of Time" (Contract period) since January 2014 Table and means of verification attached.	5	
4. Current Obligation Works. NB!! Completion of this provided Table is mandatory for points to be allocated. Do not refer to any attachment. If no projects at the moment, the tenderer must indicate on the table (Not applicable will be deemed as non-responsive).	Current obligation value is equal or greater than twice the maximum value of the required CIDB grade	0	15
	Current obligation value is greater than the maximum value of the required CIDB grade but less than twice the maximum value of the required CIDB grade	1	
	Current obligation value is within the required CIDB threshold	3	
	Current obligation value is less than the minimum value of the required CIDB grade	5	
5. Proof of physical address Evidence Bidders must submit proof of residence from Local Municipality (Utility bill) or Confirmation of pre-paid utility from ESKOM (not older than 3 months) and Title Deed or Lease agreement or PTO and any other proof of address.	Office of bidder outside borders of Limpopo Province	0	10
	Office of bidder within borders of Limpopo Province	5	
TOTAL			100

F.3.11 Evaluation of Offers
Evaluation in terms of 90/10 preference point system.

a) The preferential points will be allocated for specific goals as prescribed in Section 2 of the Preferential Procurement Policy Framework Act (5 of 2000), Paragraph 3.2.1 and 7.7 of the Reconstruction

and Development Programme White Paper of 1994 and the Broad-Based Economic Empowerment Act, 2003.

b) When calculating prices:
   i. Unconditional discounts must be taken into account for evaluation purposes; and
   ii. Conditional discounts must not be taken into account for evaluation purposes but should be implemented when payment is affected.

c) The formulae to be utilized in calculating points scored for price are as follows:
80/20 Preference point system [(for acquisition of goods or services for a Rand value equal to or above R30 000 and up to R50 million) (all applicable taxes included)]

$$Ps = 90(1-((Pt-Pmin)/Pmin))$$

Where
Ps = Points scored for comparative price of bid or offer under consideration
Pt = Comparative price of bid or offer under consideration
Pmin = Comparative price of lowest acceptable bid or offer.

d) A maximum of 10 points will be awarded in accordance with the table below:

NO	PREFERANTIAL GOALS	10 POINTS	MEANS OF VERIFICATION
1	Black People ownership > 51%	7	CSD and/ or copy of company registration report
2	Women Ownership > 51%	1	CSD Report
3	Persons with Disability Ownership >51%	1	CSD and Medical Certificate from recognized Medical Practitioner
4	Youth Ownership >51%	1	CSD Report
TOTAL POINTS		10	

e) The points scored by a tenderer in respect of the specific goals above must be added to the points scored for price and the total must be rounded off to the nearest two decimal places.
f) Only the tender with the highest number of points scored may be selected for an award.

Special Conditions

- All costs incurred in the preparation and presentation of the proposal shall be wholly absorbed by the bidder. Supporting documentation submitted with the proposal will become the property of the Limpopo Provincial Government unless otherwise requested by the bidder at the time of submission.
- General Conditions of Contract 2010 2nd edition (GCC2010) shall be used to manage the contract. Service provider must acquire their own copy.
- All works under this contract are re-measurable.
- The documentation required before commencement with Works execution is:
  - Health and Safety Plan (Refer to GCC Clause 4.3)
  - Initial programme (Refer to GCC Clause 5.6)
  - Security (Refer to GCC Clause 6.2 – Performance Guarantee)
  - Insurance (Refer to GCC Clause 8.6)
- The penalty for failing to complete the works is **0.05%** of the Total Tender Sum per Calendar Day.
- The limit of retention money is 10% of the Tender offer, excluding VAT and limited to 5% of the Contract amount, excluding Contract Price Adjustment, Contingencies and VAT. A Retention Money Guarantee will not be permitted.

- **It is compulsory for a person to register for VAT if the value of taxable supplies made or to be made, is in excess of R1 million**
- The defects liability period is **12 months.**
- The latent defect period is **5 years**
- Bidders who intend to cede their rights to payment to an institution as prescribed in 9.1 should attach cession agreement with their bid proposal.
- Payment will only be made in accordance with the delivery of service that will be agreed upon by both parties and upon receipt of an original invoice.
- The service provider is required to provide a quote for all items, failure to quote according to the specification will invalidate your bid.
- The Department will not make any upfront payment to a successful service provider.
- The department reserves the right to conduct a risk assessment for the recommended service provider to verify the provided information and authenticate the supporting documentation and may disqualify the service provider if the risk analysis feedback is negative.

Inspection of Bidders

The premises of the Tenders that achieved the minimum score of 70% mayl be inspected. The inspection will be done on the following:

a) Physical structure or business where business activities take place.
b) Main business activities
c) Track record will be verified.
d) Relatedness of the main business activities to the tender under review.
e) Office furniture and space.
f) Office Equipment, IT facilities and computer software used to produce the required service.
g) Registration documents and accredited certificates.
h) Audited Financial annual statements to verify financial position.
i) Verification of Drilling and Testing Equipment, including 3rd party premises if required.

Joint Ventures

1. Should this bid be submitted by a joint venture, the joint venture agreement must accompany the bid document before the closing date and time of bid. The joint venture agreement must clearly specify the percentage of the contract to be undertaken by each company participating therein.
2. Each party to a Joint Venture/ Consortium must submit an original valid Tax Clearance Certificate together with the bid before the closing date and time of bid.
3. The joint venture or consortium must submit a formal agreement that outlines the roles and responsibilities of each member of the joint venture or consortium, nomination of an authorised person to represent the joint venture or consortium in all matters relating to this bid and the details of the bank account for payments to be effected.
4. The joint venture or consortium must comply with Central Suppliers Database (CSD) registration requirements as per National Treasury directive.
5. Both companies to a J/V should complete separate forms or be represented for Compulsory Enterprise Questionnaire.
6. Both companies to a J/V should submit Bank Rating
7. Both companies to a J/V should submit should complete separate SBD 4 for each company
8. In case of JV, Calculated CIDB grading must be submitted.

Cession

1. Cession of payments will only be permissible to a registered financial institution in terms of the Financial Advisory and Intermediary Services Act 37 of 2002 or an approved credit provider in terms of the National Credit Act of 2005
2. Bidders who intend to cede their rights to payment to an institution as prescribed in 8.1 attach cession agreement with their bid proposal.

Unsatisfactory Performance

Unsatisfactory performance occurs when performance is not in accordance with the contract conditions.

(i) The departmental official shall warn the contractor in writing that action will be taken in accordance with the

contract conditions unless the contractor complies with the contract conditions and delivers satisfactory supplies or services within a specified reasonable time (7 days minimum). If the contractor does not perform satisfactorily despite the warning, the official will:
(a) Take action in terms of its delegated powers; and
(b) Make a recommendation to the Accounting Officer for cancellation of the contract concerned.

(ii) When correspondence is addressed to the contractor, reference will be made to the contract number/item number/s and an explanation of the complaint.

Validity Period of Bid and Extension thereof

1. The validity (binding) period for the bid will be 120 days from close of bid. However, circumstances may arise whereby the department may request bidders to extend the validity (binding) period. Should this occur, the department will request bidders to extend the validity (binding) period under the same terms and conditions as originally offered for by bidders. This request will be done before the expiry of the original validity (binding) period.
2. VAT vendors must calculate VAT at 15% VAT.

Site Inspection

1. As part of the evaluation process of this bid, the Department will conduct site inspections of premises of all service bidders who have submitted bids and
2. The purpose of the site inspections is to confirm validity and accuracy of the information submitted in the bidder's bid document. Where the validity and accuracy of the information submitted in the bidder's bid document cannot be confirmed during the site visit, the bidder will be disqualified.

Completion of Bid Document

The following are minimum requirements for completion of the bid document: -
1. Bidders are required to complete the entire bid document in terms of the requirements contained herein.
2. Where the space provided in the bid document is insufficient, separate schedules may be drawn up in accordance with the given formats. These schedules shall then be bound together with suitable contents page and submitted with the bid documents.
3. All bid documents, certificates, schedules (including additional schedules as mentioned above) and all forms required by this bid must be completed in black ink and signed by the authorized signatory.
4. Bid document should be returned in the provided sequence. Attachments must be inline with the index sequence of the bidder.
5. Bidders must ensure that there are no missing or duplicated pages. LDARD shall not accept liability regarding claims by bidders that pages are missing or duplicated.
6. Correction fluid is not allowed and any cancellation, alteration or amendment on the bid document must be signed for by the authorized signatory.
7. Completed bid document with supporting documents shall be packaged, bound, sealed, marked, and submitted strictly as stipulated in this bid document.

F.3.13 Acceptance of Tender Offer

F.3.13.1 Tender Offers will only be accepted on condition that:

(a) The Tender Offer is signed by a person authorised to sign on behalf of the Tenderer;

(b) the Tenderer's declaration of compliance with the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2003, is included with his Tender submission;

(c) a Tenderer who submitted a Tender as a Joint Venture has included an acceptable Joint Venture Agreement with his Tender;

(d) the Tenderer or a competent authorised representative of the Contractor who submitted the Tender has attended the compulsory clarification meeting or site inspection;

(e) the Contractor who submits the Tender has been registered with the Construction Industry Development Board in accordance with the Construction Industry Development Board Act No. 38 of 2000 and the CIDB Regulations 2003 promulgated in terms of the Act, or if the Contractor can

submit proof or evidence that he will be able to register within 10 days of the closing date for submission of Tenders;

(f) the Tenderer or any of its principals is not listed on the register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the Public Sector;

(g) the Tenderer has not abused the Employer's Supply Chain Management System or has failed to perform on any previous Contract and has been given a written notice to this effect;

(h) The Tenderer or any of its Principals, Directors or Managers is not employed in the service of the State or any Municipality. In the event that such Principals are involved, official approval from the Executing Authority regarding carrying out remunerative work outside of the Public Service must be included in the Tender Submission.

(i) the Employer is satisfied that the Tenderer or any of his Principals have not influenced the Tender Offer and acceptance by the following criteria:

a. having Offered, promised or given a bribe or other gift or remuneration to any person in connection with the obtaining or execution of this Contract;

b. having acted in a fraudulent or corrupt manner in obtaining or executing this Contract;

c. having approached an Officer or employee of the Employer or the Employer's Agent with the objective of influencing the award of a Contract in the Tenderer's favour;

d. having entered into any agreement or arrangement, whether legally binding or not, with any other Person, Firm or Company to refrain from Tendering for this Contract or as to the amount of the Tender to be submitted by either party;

e. having disclosed to any other Person, Firm or Company other than the Employer, the exact or approximate amount of his proposed Tender;

f. The Employer may, in addition to using any other legal remedies, repudiate the Tender Offer and acceptance and declare the Contract invalid should it have been concluded already.

F.2.22 Return of Bid Documents

Not applicable.

F.2.23 Certificates

The Bidder is required to submit with his Bid the following:

- Joint Venture Agreement and Power of Attorney in case of Joint Ventures;
- VAT Registration Certificate from South African Revenue Services (SARS);
- Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993);
- Form of intent by a bank or insurance company to provide a performance guarantee; (for open Bids)
- Company / CC / Trust / Partnership registration certificates;
- Certified Copies of Identity Document of all members of the entity (certification should not be more than 3 months old).

Bidders must ensure that they meet the following requirements before the bid can be awarded.

Criteria	*Requirement*

Criteria	*Requirement*
Tax compliance status	Bidder must be tax compliant before the bid is awarded, i.e. *Where the recommended bidder is not tax compliant, the bidder will be notified of their non-compliant status and be granted reasonable timeframe to rectify their tax compliance status with the South African Revenue Service. The bidder must thereafter provide the procuring entity with proof of its tax compliance status which must be verified via the Central Supplier Database or e-filing".*
Business registration	The Company must be in business
Company registration with central supplier database (CSD)	Company must be registered on central supplier database (CSD)
In the service of the state status	Shareholders or directors must not be employed by state departments, municipalities, municipal entities, public entities
Tender defaulting and restriction status	Bidders Must not be listed as defaulters and/or restricted
Workmen's Compensation Registration Certificate	Appointed bidders must submit a valid COIDA certificate or proof of payment thereof

F.3.4 Opening of Bid Submissions

Bid will be opened immediately after the closing time for Bids. The time and location for opening of the Bid Offers are:
Time: **11:00**
Date: 29 January 2024
Venue: Limpopo Department of Agriculture and Rural Development, at the Tender Box

F.3.5 The two-envelope system will **not** apply to this Tender.

F.3.18 Copies of Contract
The number of paper copies of the signed Contract to be provided by the Employer is ONE.

T1.3: Annex F: Standard Conditions of Tender

(As contained in Annexure F of South African National Standard: Construction procurement processes, Methods and procedures: SANS 294: 2004 Edition)

F.1 General

F.1.1 Actions

The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently.

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

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

F.1.3.3 For the purposes of these conditions for the calling for expressions of interest, the following definitions apply:

a) **Comparative offer** means the tenderer's financial offer after the factors of non-firm prices, all unconditional discounts and any other tendered parameters that will affect the value of the financial offer have been taken into consideration

b) **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; and

c) **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

d) **Quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

F.1.4 Communication and employer's agent

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

F.1.5 The employer's right to accept or reject any tender offer

F.1.5.1 The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection but will give written reasons for such action.

F.1.5.2 After the cancellation of a tender process or the rejection of all tender offers the employer may abandon the proposed procurement and re-issue a similar tender notice and invitation to tender not less than three months after the closing dated for tender offers or have it performed in another manner at any time.

F.2 Bidder's obligations

The Bidder shall comply with the following obligations:

F.2.1 Eligibility

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

F.2.2 Cost of tendering

Accept that 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 satisfy requirements.

F.2.3 Check documents

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

F.2.4 Confidentiality and copyright of documents

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

F.2.5 Reference documents

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

F.2.6 Acknowledge addenda

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

F.2.7 Clarification meeting

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

F.2.8 Seek clarification

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

F.2.9 Insurance

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

F.2.10 Pricing the tender offer

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

F2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

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

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

F.2.11 Alterations to documents

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. Erasures and the use of masking fluid are prohibited.

F.2.12 Alternative tender offers

F.2.12.1 Submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted. The alternative tender offer is to be submitted with the main tender offer together with a schedule that compares the requirements of the tender documents with the alternative requirements the tenderer proposes.

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

F.2.13 Submitting a tender offer

F.2.13.1 Submit a tender offer to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

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

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

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

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

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

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

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

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

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

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Proof of posting shall not be accepted as proof of delivery. The employer shall not accept tender offers submitted by telegraph, telex, facsimile or e-mail, unless stated otherwise in the tender data.

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

F.2.16 Tender offer validity

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

F.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period.

F.2.17 Clarification of tender offer after submission

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

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

F.2.18 Provide other material

F.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer’s

commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

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

F.2.19 Inspections, tests and analysis

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

F.2.20 Submit securities, bonds, policies, etc.

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

F.2.21 Check final draft

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

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

NOTE: Failure to submit any of the above documents will result in disqualification

F.3 The employer's undertakings

The employer undertakes to:

F.3.1 Respond to clarification

Respond to a request for clarification received up to five working days prior to the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date of the Tender Notice until seven 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, will then notify it to all tenderers who drew documents.

F.3.3 Return late tender offers

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

F.3.4 Opening of tender submissions

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

F.3.4.2 Announce at the opening 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, the total of his prices, preferences claimed and time for completion, if any, for the main tender offer only.

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

F.3.5 Two-envelope system

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

F.3.5.2 Evaluate the quality 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 quality evaluation above the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.

F.3.6 Non-disclosure

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

F.3.7 Grounds for rejection and disqualification

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

F.3.8 Test for responsiveness

Determine, on opening and before detailed evaluation, whether each tender offer properly received:

a) Meets 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.

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:

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

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

F.3.9 Arithmetical errors

Check responsive tender offers for arithmetical errors, correcting them in the following manner:

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

- If a bill of quantities (or schedule of quantities or schedule of rates) applies and there is an error in the line item resulting from the product of the unit rate and the quantity, the rate shall be binding and the error of extension as entered in the bid offer will be corrected by the Employer in determining the Contract Price.

- Where there is an error in addition, either as a result of other corrections required by this checking process or in the Bidder's addition of prices, such error will be corrected by the Employer in determining the Contract Price.

- The Contract Price for the completed Contract shall be computed from the actual quantities of authorized work done and compliant with the Contract Data, valued at rates contracted against the respective items in the Bill of Quantities, Schedule of Quantities or Schedule of Rates and shall include such authorized Provincial Sums and items of extra work as have become payable in terms of the Contract Data.

F.3.10 Clarification of a tender offer

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

F.3.11 Evaluation of tender offers

F.3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate it using the tender evaluation method that is indicated in the Tender Data and described below:

Method 1: Financial offer	1) Rank tender offers from the most favorable to the least favorable comparative offer. 2) Recommend highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 2: Financial offer and preferences	1) Score tender evaluation points for financial offer. 2) Confirm that tenderers are eligible for the preferences claimed and if so, score tender evaluation points for preferencing. 3) Calculate total tender evaluation points. 4) Rank tender offers from the highest number of tender evaluation points to the lowest. 5) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 3: Financial offer and quality	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data. 2) Score tender evaluation points for financial offer. 3) Calculate total tender evaluation points. 4) Rank tender offers from the highest number of tender evaluation points to the lowest. 5) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 4: Financial offer, quality and preferences	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data. 2) Score tender evaluation points for financial offer. 3) Confirm that tenderers are eligible for the preferences claimed, and if so, score tender evaluation points for preferencing. 4) Calculate total tender evaluation points. 5) Rank tender offers from the highest number of tender evaluation points to the lowest. 6) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.2 Scoring Financial Offers

Score the financial offers of remaining responsive tender offers using the following formula:
N_{FO} = W_1 x A where:
N_{FO} = the number of tender evaluation points awarded for the financial offer.
W_1 = the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.
A = a number calculated using either formulas 1 or 2 below as stated in the Tender Data.

Formula	Comparison aimed at achieving	Option 1	Option 2
1	Highest price or discount	$A = (1+ \frac{(P - Pm)}{Pm})$	A = P / Pm
2	Lowest price or percentage commission / fee	$A = (1 - \frac{(P - Pm)}{Pm})$	A = Pm / P

Where:
Pm = the comparative offer of the most favorable tender offer.
P = the comparative offer of tender offer under consideration.

F.3.11.3 Scoring quality (functionality)

Score quality in each of the categories stated in the Tender Data and calculate total score for quality.

F.3.12 Insurance provided by the employer

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

F.3.13 Acceptance of tender offer

F.3.13.1 Accept tender offer only if the tenderer satisfies the legal requirements stated in Clause F.2.1 of the Tender Data.

F.3.13.2 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful tenderer as described in the form of offer and acceptance.

F.3.14 Notice to unsuccessful tenderers

After the successful tenderer has acknowledged the employer’s notice of acceptance, notify other tenderers that their tender offers have not been accepted.

F.3.15. Prepare contract documents

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,
c) Other revisions agreed between the employer and the successful tenderer, and
d) The schedule of deviations attached to the form of offer and acceptance, if any.

F.3.16 Issue final contract

Prepare and issue the final draft of contract documents to the successful tenderer for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any). Only those documents that the conditions of tender require the tenderer to submit, after acceptance by the employer, shall be included.

F.3.17 Complete adjudicator's contract

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

F.3.18 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 T2: RETURNABLE SCHEDULES

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T2.1 List of Returnable Documents

The Tenderer must complete the following Returnable Documents:

1 Returnable Schedules required only for Tender Evaluation purposes

A: Central Database (CSD) Summary Report
B: Record of Addenda to Tender Documents
C: Certificate of Authority for Joint Ventures / Close Corporation/ Partnership/ Company/ Sole Proprietor (Certified copies of Identity Documents for all members of Joint Ventures / Close Corporation / Partnership / Company / Sole Proprietor)
D: Registration Certificates of entities – Joint Ventures / Close Corporation/ Partnership/ Company/ Sole Proprietor
E: Compulsory Enterprise Questionnaire
F: Schedule of the Tenderer's Experience
G: Schedule of Key Personnel
H: Format of Curriculum Vitae
I: Proposed Amendments, Qualifications and Alternatives
J: Schedule of Subcontractors
K: Schedule of Plant and Equipment available for this contract
L: Copy of the Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993)
M: Company profile, including track record
N: Construction Industries Development Board (CIBD) Registration – 5SH or 5CE or higher.

2 Other Documents required only for Tender Evaluation purposes

O: Tax Compliance Status
P: Financial Standing – Attach Letter of Intent
Q: SBD Forms Required to be completed
R: Execution Programme / Program of Works

3 Returnable Schedules that will be incorporated into the Contract

S: Detailed Method Statement
T: Contractor's Health and Safety Declaration

4 Other Documents that will be incorporated into the Contract

U: Contractor's Safety Plan
V: Proforma Notification form in terms of the Occupational Health and Safety Act 1993, Construction Regulations, 2003
W: Monthly Labour Report
X: Bidder's Detailed Experience – Reference Sheet

5 The Offer portion

Part C1 Agreement and Contract Data
Part C2 Pricing Data
Part C3 Scope of Work
Part C4 Site Information

T2.2 Returnable Schedules to be completed by Tenderer.

A. CENTRAL DATABASE (CSD) SUMMARY REPORT

[Tenderer's CENTRAL SUPPLIER DATABASE (CSD) SUMMARY REPORT to be attached here

B. 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:		
1.		
1.		
2.		
3.		
4.		
5.		

Attach additional pages if more space is required.

Signed..... Date.....

Name..... Position.....

Tenderer.....

C. CERTIFICATE OF AUTHORITY OF AN ENTITY

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

(I) Company	(II) Close Corporation	(III) Partnership	(IV) Joint Venture	(V) Sole Proprietor

(I) CERTIFICATE FOR COMPANY

I ....., chairperson of the Board of Directors of ....., hereby confirm that by resolution of the Board (copy attached) taken on ..... 20....., Mr/Ms ....., acting in the capacity of ....., was authorised to sign all Documents in connection with this Tender and any Contract resulting from it on behalf of the Company.

Signature of Chairman: .....

Signature of Signatory: .....

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date: .....

(II) CERTIFICATE FOR CLOSE CORPORATION

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

..... hereby authorise Mr/Ms .....,

acting in the capacity of ....., to sign all Documents

in connection with the Tender for Contract No and any Contract resulting from it on our behalf.

Signature of Signatory: .....

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date: .....

NAME	ADDRESS	SIGNATURE	DATE

Note: This Certificate is to be completed and signed by all of the key Members upon whom rests the Direction of the Affairs of the Close Corporation as a whole.

(III) CERTIFICATE FOR PARTNERSHIP

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

.....hereby authorise Mr/Ms…..

acting in the capacity of ..... , to sign all Documents in connection

with the Tender for Contract No and any Contract resulting from it on our behalf.

Signature of Signatory: .....

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date: .....

NAME	ADDRESS	SIGNATURE	DATE

Note: This Certificate is to be completed and signed by all of the key Partners upon who rests the Direction of the Affairs of the Partnership as a whole.

(IV) CERTIFICATE FOR JOINT VENTURE

We, the undersigned, are submitting this Tender Offer in Joint Venture and hereby authorize Mr/Ms

....., authorized signatory of the Company, ……..……

…….....acting in the capacity of Lead Partner, to sign all Documents in connection with the

Tender Offer for Contract No and any Contract resulting from it on our behalf.

This authorization is evidenced by the attached power of attorney signed by legally authorized signatories of all the Partners to the Joint Venture.

Signature of Signatory: .....

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date: .....

NAME OF FIRM	ADDRESS	AUTHORISING SIGNATURE, NAME AND CAPACITY
Lead Partner		

Note: This Certificate is to be completed and signed by all of the key Partners upon who rests the Direction of the Affairs of the Joint Venture as a whole.

V) CERTIFICATE FOR SOLE PROPRIETOR

I....., hereby confirm that I am the Sole Owner of the

business trading as:……..

Signature of Sole Owner: .....

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date: .....

D. REGISTRATION CERTIFICATE OF AN ENTITY

[Important note to Tenderer: Registration Certificates for Companies, Close Corporations, Partnerships and ID Documents for Sole Proprietors must be inserted here. In the case of a Joint Venture, a copy of a duly signed Joint Venture Agreement must be included]

E. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a Joint Venture, **separate** Enterprise questionnaires in respect of each Partner must be completed and submitted.

Section 1: Name of Enterprise: . . . . . .

Section 2: VAT registration number, if any: . . . . . .

Section 3: CIDB registration number, if any: . . . . . .

Section 4: Particulars of Sole Proprietors and Partners in Partnerships

Name*	Identity number*	Personal income tax number*

***** Complete only if Sole Proprietor or Partnership and attach separate page if more than 3 Partners

Section 5: Particulars of Companies and Close Corporations

Company registration number . . . . . .

Close Corporation number . . . . . .

Tax reference number . . . . . .

Section 6: Record in the service of the State

Indicate by marking the relevant boxes with a cross, if any Sole Proprietor, Partner in a Partnership or Director, Manager, Principal Shareholder or Stakeholder in a Company or Close Corporation is currently or has been within the last 12 months in the service of any of the following:

- ☐ a Member of any Municipal Council
- ☐ a Member of any Provincial Legislature
- ☐ a Member of the National Assembly or the National Council of Province
- ☐ a Member of the Board of Directors of any Municipal entity
- ☐ an Official of any Municipality or Municipal entity
- ☐ an employee of any Provincial Department, National or Provincial Public entity or Constitutional Institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- ☐ a Member of an Accounting Authority of any National or Provincial Public Entity
- ☐ an employee of Parliament or a Provincial Legislature

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

Name of Sole Proprietor, Partner, Director, Manager, Principal Shareholder or Stakeholder	Name of Institution, Public Office, board or organ of State and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the State

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a Sole Proprietor, Partner in a

Partnership or Director, Manager, Principal Shareholder or Stakeholder in a Company or Close Corporation is currently or has been within the last 12 months been in the service of any of the following:

- □ a Member of any Municipal Council
- □ a Member of any Provincial Legislature
- □ a Member of the National Assembly or the National Council of Province
- □ a Member of the Board of Directors of any Municipal Entity
- □ an Official of any Municipality or Municipal entity
- □ an employee of any Provincial Department, National or Provincial Public Entity or Constitutional Institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- □ a Member of an Accounting Authority of any National or Provincial Public entity
- □ an employee of Parliament or a Provincial Legislature

Name of spouse, child or parent	**Name of Institution, Public Office, Board or Organ of State and position held**	**Status of service (tick appropriate column)**	
		Current	**Within last 12 months**

*insert separate page if necessary

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

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

F. SCHEDULE OF THE TENDERER'S EXPERIENCE

The following is a Statement of Work of similar nature recently successfully executed by myself / ourselves (attach completion certificate for all completed projects as proof):

Employer: Contact Person and Telephone Number	Consulting Engineer: Contact Person and Telephone Number	Nature of Work	Value of Work (inclusive of VAT)	Date Completed or Expected to be Completed

SIGNATURE: .....…….. DATE: .....
(of person authorised to sign on behalf of the Tenderer)

G. KEY PERSONNEL

In terms of the Project Specification and the Conditions of Tender, unskilled Workers may only be brought in from outside the Local Community if such personnel are not available locally.

The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

Category of Employee	Number of Persons					
	Key Personnel, Part of the Contractors Organisation		Key Personnel to be imported if not locally available		Unskilled Personnel to be recruited from the local community	
	HDI	NON-HDI	HDI	NON-HDI	HDI	NON-HDI
Project Manager						
Irrigation Technician						
Site Agent						
Electricians						
Welders						
Builders						
Mechanics						
Plumbers						
Civil Technicians						
Quality control & Health and Safety						
Plant operators						
Unskilled Workers						
Others:						
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....

SIGNATURE: ..... DATE: ….....
(of person authorised to sign on behalf of the Tenderer)

H. CURRICULUM VITAE FORMAT OF KEY PERSONNEL

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

....
Signature of person named in the Schedule *Date*

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

....
Signature of person named in the Schedule *Date*

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

....
Signature of person named in the Schedule *Date*

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

....
Signature of person named in the Schedule *Date*

Name:	**Date of birth:**
Profession:	**Nationality:**
Qualifications:	
Professional Registration Number:	
Name of Employer (firm):	
Current position:	**Years with firm:**
Employment Record:	
Experience Record Pertinent to Required service:	

Certification:

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

....
Signature of person named in the Schedule *Date*

I. AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(***This is not an invitation for amendments, deviations or alternatives,*** *but should the Tenderer desire to make any departures from the Provisions of this Contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, unless form (a), has been completed to the satisfaction of the Employer*). *The Tenderer is referred to Tender Data paragraph F.2.12, where it is clearly stated that no Alternative Offers will be accepted.*

I / We herewith propose the amendments, as set out in the table below:

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

Notes: (1) Amendments to the General and Special Conditions of Contract are not acceptable;

(2) The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his Tender.

J. 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.

	Name and address of proposed Subcontractor	**Nature and extent of Work / Service**	**Previous experience with Subcontractor.**
1.			
2.			
3.			
4.			
5.			

Signed ..... Date .....

Name ..... Position .....

Tenderer .....

K. 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.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

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

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

Signed ..... Date .....

Name ..... Position .....

Tenderer .....

Proof of ownership and/or rental agreement should form part of the tender document.

L. COPY OF WORKMEN'S COMPENSATION REGISTRATION CERTIFICATE (OR PROOF OF PAYMENT OF CONTRIBUTIONS IN TERMS OF THE COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT NO. 130 OF 1993)

[Certified Copy of the Certificate or Proof of Payment thereof obtained from the Workmen's Compensation Commissioner to be inserted here]

M. COMPANY PROFILE, INCLUDING TRACK RECORD

[Abbreviated company profile, giving history, status, activities, staff and track record of the tendering entity, to be inserted here. In case of a Joint Venture, a separate profile for each partner must be submitted]

N. CONSTRUCTION INDUSTRIES DEVELOPMENT BOARD (CIDB) REGISTRATION

[Certified copy of the Tenderer's CIDB registration indicating the Contractor grading designation, to be inserted here. For a Joint Venture, each partner's CIDB certificate is to be included, as applicable]

O. TAX COMPLIANCE STATUS

IMPORTANT NOTES:

1. The Central Supplier Database and tax compliance status PIN are approved methods that will be used to verify tax compliance as SARS does not issue tax clearance certificate anymore but has made an online provision available via eFiling for bidders to print their own tax clearance certificates which can be submitted with this bid.

2. Tax Clearance submitted by bidders will be verified on eFiling and/or Central Supplier database.

3. Bidders must provide a tax compliance status PIN and Central Supplier Database Number to access their records and verify tax compliance status.

APPLICATION FORM FOR TAX CLEARANCE CERTIFICATE

(In respect of Tender see note at bottom)

1. NAME OF TAXPAYER/TENDERER:……..
2. TRADE NAME: ……..……
3. IDENTIFICATION No. (if applicable):…….
4. COMPANY/CLOSE CORPORATION REG No:……
5. INCOME TAX REFERENCE No:……
6. VAT REGISTRATION No:……..
7. PAYE EMPLOYERS REG No. (if applicable) :……

NB: Copy of the Tender request must be attached to this application.

CONTACT PERSON REQUIRING TAX CLEARANCE CERTIFICATE:

SIGNATURE: .....

NAME : .....

TELEPHONE NUMBER : CODE: ..... NUMBER: .....

ADDRESS : .....

.....

DATE : 20...../...../.....

Please note that the Commissioner for the South African Revenue Service (SARS) will not exercise his discretionary powers in favour of any person with regard to any interest, penalties and/or additional tax leviable due to the late or underpayment of taxes, duties or levies or the rendition of returns by any person.

NAME OF PERSON RESPONSIBLE FOR CONTRACT: .....

(ST 5.1) March 1999

NB: This is a pro forma application form that has to be submitted to SARS to enable them to issue the required Tax Clearance Certificate. The original and valid Tax Clearance Certificate furnished by the Receiver of Revenue must be submitted with the Tender (to be attached to the next page).

TAX CLEARANCE CERTIFICATE

[Valid Original Tax Clearance Certificate obtained from SARS to be inserted here after or CSD Summary Report]

P. TENDERER'S FINANCIAL STANDING

In terms of Clause F.2.18.1 of the Contract-specific Tender Data the Tenderer shall provide information about his commercial position, which includes information necessary for the Employer to evaluate the Tenderer's financial standing.

To that end the Tenderer must provide with his tender a bank rating, certified by his banker, to the effect that he will be able to successfully complete the contract at the tendered amount within the specified time for completion.

However, should the Tenderer be unable to provide a bank rating with his tender, he shall state the reasons as to why he is unable to do so, and in addition provide the following details of his banker and bank account that he intends to use for project:

Name of account holder: ……

Name of Bank: …….. Branch: ……..

Account number: …… Type of account: ……..

Telephone number: ……. Facsimile number: ……..

Name of contact person (at bank): ……

Failure to provide either the required bank details or a certified bank rating with his tender, will lead to the conclusion that the Tenderer does not have the necessary financial resources at his disposal to complete the contract successfully within the specified time for completion.

The Employer undertakes to treat the information thus obtained as confidential, strictly for the use of evaluation of the tender submitted by the Tenderer.

SIGNATURE: …….. DATE: ……
(of person authorised to sign on behalf of the Tenderer)

P1 FINANCIAL INFORMATION OF TENDERER

This information sheet has to be filled in by the financier of the Tenderer, duly signed and stamped on behalf of the financial institution he represents.

Tenderer / Tender Details

Tender Description: ……

Contract Period: ……..

Name of Tenderer: ……..

Bank Account Number: ……..

Tender Amount: ……

State amount of Demand Guarantee: R……

Attach Letter of Intent from Financial Institution

Financial Institution

Name of Commercial Bank: ……

Branch: ……

Name of Bank Manager: ……...

Telephone Number: ……...

We acting on behalf of the above Commercial Bank confirm that

…… (Tenderer)

has operated an account with us for the last …….. years.

We have been requested to provide a bank rating based in relation to the financial capability of the Tenderer, taking into account directives set out in the following two tables.

FINANCIAL CAPABILITY

Maximum value of contract that the Tenderer is considered capable of	Value on which Bank Rating must be used
Up to R300 000	R24 000
R1 000 000	R78 000
R3 000 000	R240 000
R5 000 000	R480 000
R10 000 000	R900 000
R30 000 000	R2 400 000
R100 000 000	R7 800 000

BANK RATING

Bank Code	Description of Bank Code
A	Undoubted for the amount of enquiry
B	Good for the amount of enquiry
C	Good for the amount quoted if strictly in the way of business
D	Fair trade risk for amount of enquiry
E	Figures considered too high
F	Financial position unknown
G	Occasional dishonours
H	Frequent dishonours

The value on which our Bank Rating of the Tenderer is based is R…….

In words …….. only)

The Bank Rating is code: …….

…… …… ……
Signature: Manager Financial Institution Print Name Date

RUBBER STAMP OF INSTITUTION

Q: SBD FORMS REQUIRED TO BE COMPLETED

- **SBD 1 – INVITATION TO BID (REVISED 2022)**
- **SBD 3.2 – NON-FIRM PRICES WITH ESCALATION**
- **SBD 4 – BIDDERS DISCLOSURE**
- **SBD 6.1 – PREFERENCE POINT CLAIM FORM**

PART A
INVITATION TO BID

SBD 1

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE AGRICULTURE AND RURAL DEVELOPMENT					
BID NUMBER:	ACDP 23/16	CLOSING DATE: 29 JANUARY 2024		CLOSING TIME:	11H00
DESCRIPTION	A 3-Year Framework Agreement for Drilling, Testing and Equipping of Boreholes				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*					
67/69 BICCARD STREET DEPARTMENT					
DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT					
POLOKWANE					
0699					

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		TECHNICAL ENQUIRIES MAY BE DIRECTED TO:	
CONTACT PERSON	VS Ndlozi	CONTACT PERSON	MJ Gouws
TELEPHONE NUMBER	015 294 3564	TELEPHONE NUMBER	(015) 294 3539
FACSIMILE NUMBER		FACSIMILE NUMBER	
E-MAIL ADDRESS	ndloziv@agric.limpopo.gov.za	E-MAIL ADDRESS	gouwsmj@agric.limpopo.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

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER 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 SBD 1

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, 2017, 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: ……..

SBD 3.2

PRICING SCHEDULE – NON-FIRM PRICES (PURCHASES)

NOTE: PRICE ADJUSTMENTS WILL BE ALLOWED AT THE PERIODS AND TIMES SPECIFIED IN THE BIDDING DOCUMENTS.

IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of Bidder……Bid number……
Closing Time 11:00 …… Closing date……

OFFER TO BE VALID FOR 120 DAYS FROM THE CLOSING DATE OF BID.

ITEM NO.	QUANTITY	DESCRIPTION	BID PRICE IN RSA CURRENCY **(ALL APPLICABLE TAXES INCLUDED)

- Required by: ……
- At: ……
- Brand and model ……
-
- Country of origin ……
- Does the offer comply with the specification(s)? *YES/NO
- If not to specification, indicate deviation(s) ……
- Period required for delivery ……
- Delivery: *Firm/not firm

** “all applicable taxes” includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

*Delete if not applicable

SBD 3.2

PRICE ADJUSTMENTS

A NON-FIRM PRICES SUBJECT TO ESCALATION

1. IN CASES OF PERIOD CONTRACTS, NON FIRM PRICES WILL BE ADJUSTED (LOADED) WITH THE ASSESSED CONTRACT PRICE ADJUSTMENTS IMPLICIT IN NON FIRM PRICES WHEN CALCULATING THE COMPARATIVE PRICES

2. IN THIS CATEGORY PRICE ESCALATIONS WILL ONLY BE CONSIDERED IN TERMS OF THE FOLLOWING FORMULA:

$$Pa = (1-V)Pt\left(D1\frac{R1t}{R1o} + D2\frac{R2t}{R2o} + D3\frac{R3t}{R3o} + D4\frac{R4t}{R4o} \right) + VPt$$

Where:

Pa	=	The new escalated price to be calculated.
(1-V)Pt	=	85% of the original bid price. **Note that Pt must always be the original bid price and not an escalated price.**
D1, D2..	=	Each factor of the bid price eg. labour, transport, clothing, footwear, etc. The total of the various factors D1, D2…etc. must add up to 100%.
R1t, R2t……	=	Index figure obtained from new index (depends on the number of factors used).
R1o, R2o	=	Index figure at time of bidding.
VPt	=	15% of the original bid price. This portion of the bid price remains firm i.e. it is not subject to any price escalations.

3. The following index/indices must be used to calculate your bid price:

Index……. Dated……. Index……. Dated……. Index……. Dated…….

Index……. Dated……. Index……. Dated……. Index……. Dated…….

4. FURNISH A BREAKDOWN OF YOUR PRICE IN TERMS OF ABOVE-MENTIONED FORMULA. THE TOTAL OF THE VARIOUS FACTORS MUST ADD UP TO 100%.

FACTOR (D1, D2 etc. eg. Labour, transport etc.)	PERCENTAGE OF BID PRICE

SBD 3.2

B PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS

1. Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RTE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

2. Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE

FAILURE TO COMPLETE THE ABOVE WILL RESULT IN NO PRICE INCREASE ON A NON- FIRM PRICE

……
Signature of Bidder

……
Date

SBD4

BIDDER'S DISCLOSURE

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**

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:

……
……

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.

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 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

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.

SBD 6.1

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

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

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

1. GENERAL CONDITIONS

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

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

1.2 To be completed by the organ of state

(*delete whichever is not applicable for this tender*).

a) The applicable preference point system for this tender is the 90/10 preference point system.

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

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

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

(a) Price; and

(b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

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

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

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

2. DEFINITIONS

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

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

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

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

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

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right) \text{ or } \qquad Ps = 90\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

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 or 90 points is allocated for price on the following basis:

80/20 **or** **90/10**

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right) \text{ or } \qquad Ps = 90\left(1 + \frac{Pt - P\,max}{Pmax}\right)$$

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 table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

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

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

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

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

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

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

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Black People ownership>51%	7			
Women ownership>51%	1			
People with Disability ownership>51%	1			
Youth ownership>51%	1			
Total	10			

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm……

4.4. Company registration number: ……..

4.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

i) The information furnished is true and correct;

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

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

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

(a) disqualify the person from the tendering process;

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

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

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

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

……
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: ……

DATE: ……

ADDRESS: ……

……

……

……

R. EXECUTION PROGRAMME / PROGRAM OF WORKS

The Tenderer shall detail below or 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 his Tender.

The Execution Programme must be based on the completion time as specified in the Contract Data. The activities identified and filled in below, are specifically to be carried forward to Schedule T, the contractor's Method Statement.

PLEASE NOTE: the cash flow projections from the Contractor (to be submitted before commencement of the execution of the Contract) must be in accordance with this execution plan in order to ensure proper Cash flow management by the Department and to minimise delayed payments.

PROGRAMME										
ACTIVITY	**MONTHS**									

S. DETAILED METHOD STATEMENT

[The adjudication of the responsiveness of a bid also relies on the extent to which a tenderer can prove an understanding of the scope of works. The tenderer should describe below the methods and procedures he will employ to successfully complete the various activities as identified for the foregoing Schedule S, the Execution Programme]

ACTIVITY	DESCRIPTION
……	……
……	……
……	……
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……	……
……	……

[Add more pages as required]

T: CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 4(4) of the OHSA 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction Work if the Employer is satisfied that the Contractor has the necessary competencies and resources to carry out the Work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHSA 1993 Construction Regulations 2014.

To that effect a person duly authorised by the Tenderer must complete and sign the declaration hereafter in detail.

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHSA 1993 Construction Regulations 2014.

2. I hereby declare that my Company has the competence and the necessary resources to safely carry out the construction Work under this Contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.

3. I propose to achieve compliance with the Regulations by one of the following:

   (a) From my own competent resources as detailed in 4(a) hereafter: ..... ***Yes / No**

   (b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter: ..... ***Yes / No**

   (c) From outside sources by appointment of competent specialist Subcontractors as detailed in 4(c) hereafter: ..... ***Yes / No**

   (***** = *delete whatever is not applicable*)

4. Details of resources I propose:

   (Note: Competent resources shall include safety personnel such as a construction supervisor and Construction Safety Officer as defined in Regulation 6, and Competent Persons as defined in Regulations 7, 8, 10, 11, 12, 14, 15, 18, 21(1), 22, 26 and 27, as applicable to this Contract)

(a) Details of the competent and qualified key persons from my Company's own resources, who will form part of the Contract team:

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

(b) Details of training of persons from my Company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:

(i) By whom will training be provided? .....

(ii) When will training be undertaken? .....

(iii) List the positions to be filled by persons to be trained or hired: .....

.....

.....

.....

(c) Details of competent resources to be appointed as Subcontractors if Competent Persons cannot be supplied from own Company:

Name of proposed Subcontractor: .....

Qualifications or details of competency of the Subcontractor: .....

.....

.....

.....

5. I hereby undertake, if my Tender is accepted, to provide, before commencement of the Works under the Contract, a suitable and sufficiently Documented Health and Safety Plan in accordance with Regulation 5(1) of the Construction Regulations, which plan shall be subject to approval by the Employer.

6. I confirm that copies of my Company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on Site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, the Engineer, visitors, and Officials and Inspectors of the Department of Labour.

7. I hereby confirm that adequate provision has been made in my Tendered rates and prices in the Schedule of Quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, and that I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations (Regulation 30) for failure on the Contractor's part to comply with the Provisions of the Act and the Regulations.

8. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014, and accept that my Tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE: ..... DATE: .....….....
(of person authorised to sign on behalf of the Tenderer)

U: CONTRACTOR'S SAFETY PLAN

[The Contractor shall submit the Contractor's Health and Safety Plan as required in terms of Regulation 5 of the Occupational Health and Safety Act 1993 Construction Regulations 2014, and referred to in T2.1, before commencement of the Works.]

V. PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993, CONSTRUCTION REGULATIONS 2003

[This form must be completed and forwarded, prior to commencement of Work on Site, by all Contractors that qualify in terms of Regulation 3 of the Construction Regulations 2003, to the Office of the Department of Labour]

1. (a) Name and postal address of Contractor:……..
   .....
   (b) Name of Contractor's contact person: .....
   Telephone number: .....
2. Contractor's Workman's compensation registration number: .....
3. (a) Name and postal address of Client: .....
   .....
   .....
   (b) Name of Client's contact person or Agent:.....
   Telephone number .....
4. (a) Name and postal address of designer(s) for the Project: .....
   .....
   (b) Name of Designer's contact person: .....
   Telephone number .....
5. Name of Contractor's Construction Supervisor on Site appointed in terms of Regulation 6(1): ..... Telephone number: .....
6. Name/s of Contractor's sub-ordinate supervisors on Site appointed in terms of Regulation 6(2).
   …… .....
7. Exact physical address of the construction Site or Site Office: .....
   .....
8. Nature of the construction Work: .....
   …….. .....
9. Expected Commencement Date: .....
10. Expected Completion Date: .....
11. Estimated maximum number of persons on the construction Site: .....
12. Planned number of Subcontractors on the construction Site accountable to Contractor: .....
13. Name(s) of Subcontractors already chosen: .....
    .....
    .....
    ……..
    ……..

SIGNED BY:

CONTRACTOR: .....……..... DATE: .....

CLIENT: .....……. DATE: .....

W. MONTHLY LABOUR REPORT

MONTHLY LABOUR REPORT FOR CERTIFICATE OF PAYMENT NO. ……

JOBS CREATED……..

AS PER BUSINESS PLAN

A	B	C	D	E	F	G	H	I	J
Category	Number of persons employed in category	Rate (R/d)	Local P-days	Non-local P-Days	Total P-days (D+E)	Amount expended on labour (C x F)	P-days by women	P-days by youth	P-days by disabled
Clerical									
Managerial									
Supervisory									
Skilled									
Semi-skilled									
Unskilled									
All operations									

ACTUAL TO DATE

A	B	C	D	E	F	G	H	I	J
Category	Number of persons employed in category	Rate (R/d)	Local P-days	Non-local P-Days	Total P-days (D+E)	Amount expended on labour (C x F)	P-days by women	P-days by youth	P-days by disabled
Clerical									
Managerial									
Supervisory									
Skilled									
Semi-skilled									
Unskilled									
All operations									

SUMMARY

Planned person-days target
Tendered construction period (months):
Overall person-days target per month:
Months represented by this report:
Person-day target for this month:
Achieved person-days to date:
Person-days ahead/behind target:

X: BIDDER'S DETAILED EXPERIENCE – REFERENCE SHEET

BIDDER'S DETAILED EXPERIENCE – REFERENCE SHEET

The following are to be completed by the Client and Principal Agent/ Consultant and is to be supported in each case by a letter of award and the works completion certificate. Both client and Pricipal Agent must stamp the documents, failure to obtain both stamp will result in no allocation of points.

Project Name and scope of work:

Scope of work : ……..

Contract duration: ……

Actual Contract Duration: ……

Name of Institution/company /place where contract was undertaken/ Client	Principal Agent/ Consultant	Value of contract	Contract Duration *(in days, weeks, months, years)*	Actual Contract Duration (in days, weeks, months, years)

To be filled by Principal Agent

Description/Perfomance	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Excellent (5)
Quality of office administration					
Quality of Site Management					
Competence Foreman					
Co-operation during contract					
Quality of workmanship					
Quality of materials					
Programme management					
Rectification of condemned work					
Tidiness of site					
Adequacy of equipment					
Adequacy of labour force					
Procurement of material					
Labour relations					

Any other additional remarks considered necessary to assist in evaluation of the contractor?

……..

……..

Principal Agent/consultant Firm……

Telephone ……

Principal Agent/consultant Signature ……..

Date ……

STAMP

BIDDER'S DETAILED EXPERIENCE – REFERENCE SHEET

The following are to be completed by the Client and Principal Agent/ Consultant and is to be supported in each case by a letter of award and the works completion certificate. Both client and Pricipal Agent must stamp the documents, failure to obtain both stamp will result in no allocation of points.

Project Name and scope of work:

Scope of work : ……..

Contract duration: ……

Actual Contract Duration: ……

Name of Institution/company /place where contract was undertaken/ Client	Principal Agent/ Consultant	Value of contract	Contract Duration *(in days, weeks, months, years)*	Actual Contract Duration (in days, weeks, months, years)

To be filled by Principal Agent

Description/Perfomance	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Excellent (5)
Quality of office administration					
Quality of Site Management					
Competence Foreman					
Co-operation during contract					
Quality of workmanship					
Quality of materials					
Programme management					
Rectification of condemned work					
Tidiness of site					
Adequacy of equipment					
Adequacy of labour force					
Procurement of material					
Labour relations					

Any other additional remarks considered necessary to assist in evaluation of the contractor?

……..

……..

Principal Agent/consultant Firm…….

Telephone ……

Principal Agent/consultant Signature ……..

Date ……

STAMP

BIDDER'S DETAILED EXPERIENCE – REFERENCE SHEET

The following are to be completed by the Client and Principal Agent/ Consultant and is to be supported in each case by a letter of award and the works completion certificate. Both client and Pricipal Agent must stamp the documents, failure to obtain both stamp will result in no allocation of points.

Project Name and scope of work:

Scope of work : ……..

Contract duration: ……

Actual Contract Duration: ……

Name of Institution/company /place where contract was undertaken/ Client	Principal Agent/ Consultant	Value of contract	Contract Duration *(in days, weeks, months, years)*	Actual Contract Duration (in days, weeks, months, years)

To be filled by Principal Agent

Description/Perfomance	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Excellent (5)
Quality of office administration					
Quality of Site Management					
Competence Foreman					
Co-operation during contract					
Quality of workmanship					
Quality of materials					
Programme management					
Rectification of condemned work					
Tidiness of site					
Adequacy of equipment					
Adequacy of labour force					
Procurement of material					
Labour relations					

Any other additional remarks considered necessary to assist in evaluation of the contractor?

……..

……..

Principal Agent/consultant Firm……

Telephone ……

Principal Agent/consultant Signature ……..

Date ……

STAMP

BIDDER'S DETAILED EXPERIENCE – REFERENCE SHEET

The following are to be completed by the Client and Principal Agent/ Consultant and is to be supported in each case by a letter of award and the works completion certificate. Both client and Pricipal Agent must stamp the documents, failure to obtain both stamp will result in no allocation of points.

Project Name and scope of work:

Scope of work : ……..

Contract duration: ……

Actual Contract Duration: ……

Name of Institution/company /place where contract was undertaken/ Client	Principal Agent/ Consultant	Value of contract	Contract Duration *(in days, weeks, months, years)*	Actual Contract Duration (in days, weeks, months, years)

To be filled by Principal Agent

Description/Perfomance	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Excellent (5)
Quality of office administration					
Quality of Site Management					
Competence Foreman					
Co-operation during contract					
Quality of workmanship					
Quality of materials					
Programme management					
Rectification of condemned work					
Tidiness of site					
Adequacy of equipment					
Adequacy of labour force					
Procurement of material					
Labour relations					

Any other additional remarks considered necessary to assist in evaluation of the contractor?

……..

……..

Principal Agent/consultant Firm……

Telephone ……

Principal Agent/consultant Signature ……..

Date ……

STAMP

BIDDER'S DETAILED EXPERIENCE – REFERENCE SHEET

The following are to be completed by the Client and Principal Agent/ Consultant and is to be supported in each case by a letter of award and the works completion certificate. Both client and Pricipal Agent must stamp the documents, failure to obtain both stamp will result in no allocation of points.

Project Name and scope of work:

Scope of work : ……..

Contract duration: ……

Actual Contract Duration: ……

Name of Institution/company /place where contract was undertaken/ Client	Principal Agent/ Consultant	Value of contract	Contract Duration *(in days, weeks, months, years)*	Actual Contract Duration (in days, weeks, months, years)

To be filled by Principal Agent

Description/Perfomance	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Excellent (5)
Quality of office administration					
Quality of Site Management					
Competence Foreman					
Co-operation during contract					
Quality of workmanship					
Quality of materials					
Programme management					
Rectification of condemned work					
Tidiness of site					
Adequacy of equipment					
Adequacy of labour force					
Procurement of material					
Labour relations					

Any other additional remarks considered necessary to assist in evaluation of the contractor?

……..

……..

Principal Agent/consultant Firm……

Telephone ……

Principal Agent/consultant Signature ……..

Date ……

STAMP

THE CONTRACT

PART C1: AGREEMENTS AND CONTRACT DATA

PART C2: PRICING DATA

PART C3: SCOPE OF WORK

PART C4: SITE INFORMATION

LIMPOPO DEPARTMENT OF AGRICULTURE & RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

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C1.2: CONTRACT DATA

C1.2.1: CONDITIONS OF CONTRACT

C1.2.2: PART A: CONTRACT DATA PROVIDED BY THE EMPLOYER

PART B: CONTRACT DATA PROVIDED BY THE CONTRACTOR

C1.3: FORM OF GUARANTEE

C1.4: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT (No 85 OF 1993)

LIMPOPO DEPARTMENT OF AGRICULTURE & RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

C1.1 Form of Offer and Acceptance

Offer

The Employer, identified in the Acceptance Signature block, has solicited Offers to enter into a Contract for the procurement of:

Contract No ***ACDP 23/16: A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT***

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)

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 Block: Tenderer
Signature . . . . . Date . . . . .
Name . . . . .
Capacity . . . . .
Name of organization. . . . .
Address of organization . . . . .
. . . . .
Signature of witness . . . . . Date . . . . .
Name of witness . . . . .

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 Parts C1 to C4 above.

Deviations from and amendments to the Documents listed in the Tender Data and any addenda thereto as listed in the Tender Schedules as well as any changes to the Terms of the Offer agreed by the Tenderer and the Employer during this process of Offer and Acceptance, are contained in the Schedule of Deviations attached to and Forming part of this Agreement. No amendments to or deviations from said Documents are valid unless contained in this schedule.

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) for delivery of any Bonds, Guarantees, proof of Insurance and any other Documentation to be provided in terms of the Conditions of Contract Identified in the Contract Data. Failure to fulfil any of these Obligations in accordance with those terms shall constitute a repudiation of this Agreement.

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

Signature Block: Employer

Signature . . . . . Date . . . . . .

Name . . . . . .

Capacity . . . . . .

for the Employer Limpopo Department of Agriculture and Rural Development

Signature of witness . . . . . Date . . . . . .

Name of witness . . . . . .

Schedule of Deviations

1 Subject . . . . . .

Details . . . . . .

. . . . . .

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2 Subject . . . . . .

Details . . . . . .

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3 Subject . . . . . .

Details . . . . . .

. . . . . .

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4 Subject . . . . . .

Details . . . . . .

. . . . . .

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. . . . . .

5 Subject . . . . . .

Details . . . . . .

. . . . . .

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. . . . . .

By the duly Authorised Representatives signing this Agreement, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the Documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of Offer and Acceptance.

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

For the Tenderer:

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____
(Name and address of organisation)

Name &
Signature of
Witness _____ Date _____

For the Employer:

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____
(Name and address of organisation)

LIMPOPO DEPARTMENT OF AGRICULTURE & RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

C1.2 CONTRACT DATA

Section 1.01 The General Conditions of Contract for Construction Works (2010) published by the South African Institution of Civil Engineering, is applicable to this Contract. Copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805 5947).

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

Each item of Data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works to which it mainly applies.

LIMPOPO DEPARTMENT OF AGRICULTURE & RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

C1.2.1: CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

2. AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT / DATA PROVIDED BY THE EMPLOYER

3. TRANSFER OF RIGHTS

C1.2.1 CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works - 1st Edition 2010", issued by the South African Institution of Civil Engineering (Short title: **"General Conditions of Contract 2010**") and can be obtained from:

SAICE
Waterfall Park
Howick Gardens
Vorna Valley Half way House
Becker Street
MIDRAND
1685
Gauteng Province
Tel: (011) 805-5947/8
Fax: (011) 805-5971.

It is agreed that the only variations from the General Conditions of Contract 2010 are those set out hereafter under "Special Conditions of Contract".

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2010 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or sub clause in the General Conditions of Conditions 2010, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

2. FOR CONTRACT ABOVE R3M (THREE MILLION RAND), THE FOLLOWING SPECIAL CONDITIONS APPLY

(a) (i) All bidders from outside the province must enter into a Consortium or Joint Venture with local SMMEs or suppliers.

(ii) Preference must be given to local bidders entering into Joint Ventures with local SMME's or suppliers.

(iii) The members of consortium or Joint venture, formed in response to preferential procurement conditions, must share in the control and management of such consortium.

(iv) The percentage of the contract value managed or executed by the local partner must not be less than 40% of the project value.

(v) All white owned bidders must enter into join venture with black owned local contractor and percentage of management and control for equity owned by black must not be less than 25% in the venture arrangement.

(b) The AO/AA may, after consulting the departmental or public entities demand management unit, in the bid documentation, exempt bidders from complying with the provisions of clause (a), if there are no SMME's or suppliers in Limpopo with the skills or knowledge required to execute the project.

(c) In the case of construction works, applicable to the construction industry;

(d) (i) The Consortium or Joint Venture that benefits from the preference system, must within 30 days of receiving notice of the contract, must organize themselves into legal entity or provide with a working agreement between members of the Joint venture or consortium. Successful suppliers, both from in and outside the province, must upon implementation of the project, establish fully fledged office, branch or plant in the province.

The department reserves the right to retain a percentage of contract value to ensure that the above condition is complied with.

(ii) The retained fee must be paid to the supplier or service provider on successfully completing the contract and after having complied with the special conditions.

(iii) Where the supplier or service provider fails to successfully complete the contract or comply with any condition, such supplier or service provider will forfeit the retained percentage.

(iv) Notwithstanding the forfeiture of the retained percentage of the contract value, if the failure to comply with conditions in clause (i) amounts to breach of the contract, the department or public entity may invoke any remedy available to it in law.

(v) A performance guarantee of 10% is applicable to all contracts above R2 000 000.00 and must be obtained from either commercial bank or insurance company prior to award of bids. The performance security shall be dominated in the currency of the contract and shall be in the form of a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in South Africa. The accounting officer reserves the right to cancel the award of the bid when the bidder fails to present the required security as stipulated in the special conditions.

(e) In all labour intensive projects, at least 70% of the labourers must be employed from the local community where the project will be executed.

C1.2.2 PART A: DATA PROVIDED BY THE EMPLOYER

The following Contract Specific Data are applicable to this Contract.

REFERENCE	CONTRACT SPECIFIC DATA BY THE EMPLOYER
Clause 1.1.1.13	The defects liability period is **12 months.**
Clause 1.1.1.14	The Works shall be completed within the agreed time frame excluding special non-working days and the year-end break
Clause 1.1.1.15	**Name of Employer:** Limpopo Department of Agriculture & Rural Development, Polokwane
Clause 1.1.1.26	The pricing strategy is **re-measurement Contract**.

Clause 1.2.1.2 **Address of Employer:**

Physical:	Postal:
Limpopo Department of Agriculture and Rural Development 67/69 Biccard Street Polokwane 0699	Limpopo Department of Agriculture and Rural Development P Bag X9487 Polokwane 0700
E-Mail:	
Telephone No: (015) 294 3000	Fax No: (015) 294 4535

Clause 1.1.1.16 **Name of Engineer:** **District Engineer (Capricorn; Mopani; Sekhukhune; Vhembe; Waterberg)**

Clause 1.2.1.2 **Address of Engineer:** **Limpopo Department of Agriculture & Rural Development**

District Office (Capricorn; Mopani; Sekhukhune; Vhembe; Waterberg)

Clause 1.3.5	*Replace the second paragraph of Clause 1.3.5 with the following:* "Documents submitted by the Contractor may be used by the Engineer and the Employer for no other purpose than the following: (a) evaluating designs; (b) preparing operation and maintenance manuals; (c) completing, operating, maintaining, modifying, adjusting, repairing and/or extending the Works, plant and equipment."
Clause 3.1.3	The Engineer shall obtain the specific approval of the Employer before executing any of his functions or duties according the following Clauses in the General Conditions of Contract: Clause 6.3 for any expenditure in excess of the Tender Sum plus 10% Contingencies.
Clause 4.1.2	The Contractor is responsible for the preparing detail designs, line diagrams, shop drawings and operation and maintenance manuals of: (a) Temporary works, (b) Electrical plant and equipment to be built into the Works, (c) Mechanical plant and equipment to be built into the Works, (d) Irrigation system and equipment to be installed; and (e) All other ancillary works as required for the project.
Clause 4.4.3	*Add to clause 4.4.3:* All subcontractors shall be registered with the CIDB and have respective minimum CIDB contractor grading of 4ME for mechanical engineering works, and of 4EB or 4EP for Electrical Works.
Clause 4.12.2	*Add to Clause 4.12.2:* "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."
Clause 4.12.3	*Add to Clause 4.12.2:* "The Contractor's Site Agent shall be on Site at all times when work is being performed."
Clause 5.3.1	The documentation required before commencement with Works execution are: Health and Safety Plan (Refer to Clause 4.3) Initial programme (Refer to Clause 5.6) Security (Refer to Clause 6.2) Insurance (Refer to Clause 8.6)
Clause 5.3.2	The time to submit the documentation required before commencement with Works execution is **14 days**.
Clause 5.4.2	The access and possession of the site shall not be exclusive to the Contractor but shall be shared with various other activities such as farming, Cattle ranching operations, Soil conservation works and Civil and Building Construction. 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
Clause 5.8.1	The non-working days are **Sundays**.

Clause 5.8.2	Special non-working days are Public Holidays, and 23 days during the annual year end break.
Clause 5.9.3	Adequate notice is defined as **28 days**.
Clause 5.9.6	*Add to Clause 5.9.6:* "Notwithstanding the requirements above, the Contractor shall provide written notice to the Engineer of any outstanding requirements in terms of Clause 5.9.3 within 3 days of the Contractor becoming aware of any possible delay to Practical Completion and/or proven additional costs that might be incurred due to the Engineer not complying with the provisions of Clause 5.9.3."
Clause 5.9.7.1	*Add Clause 5.9.7.1:* "Within **14 days** of site handover, the Contractor is required to prepare and submit for approval by the Engineer, in triplicate, the following Documents: a) Detail designs, general arrangement drawings and shop drawings of all mechanical plant and equipment to be built into the permanent Works, showing all details, including interfaces with existing and proposed new structures; b) Detail designs, line diagrams, and shop drawings of all electrical plant and equipment, showing all details, including interfaces with existing and proposed new structures; and c) Method statements and design information of temporary works. Within 14 days of a request by the Engineer, the Contractor is required to prepare and submit for approval by the Engineer, in triplicate, any further relevant document that the Engineer may require.""
Clause 5.9.7.2	*Add Clause 5.9.7.2:* "At least **14 days** before the programmed date of Practical Completion, the Contractor is required to submit for approval by the Engineer, in triplicate, the following Documents: a) Operation and maintenance manuals of all electrical and mechanical plant and equipment built into the Works; b) As-built shop drawings and line diagrams of all and mechanical plant and equipment built into the Works. The Works shall not be considered completed unless all Documents have been submitted to the Engineer."
Clause 5.9.7.3	*Add Clause 5.9.7.3:* "Within **14 days** of receipt of a Document from the Contractor, the Engineer shall either return one copy thereof to the Contractor with his approval endorsed thereon, or he shall notify the Contractor giving reasons for his disapproval thereof. Failure by the Engineer to signify his approval or disapproval of a Document within 14 days of receipt of such Document, such Document shall be deemed to be approved. Any Document disapproved by the Engineer shall be forthwith modified to meet the requirements of the Engineer and shall be resubmitted. Documents approved by the Engineer, shall not be departed from in any way except with written consent of the Engineer. Approval of Documents by the Engineer shall in no way relieve the Contractor of any of his responsibilities."

Add Clause 5.12.5:

"**Extension of Time for Abnormal Rainfall (Option 1)**

Extensions of time in respect of clause 42 in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:

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

Where:

V	=	Extension of time in calendar days in respect of 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 in the relevant calendar month , as derived from existing rainfall records, as stated in the Site Information, on which a rainfall of 20 mm or more has been recorded for the calendar month.
Rw	=	Actual average rainfall in mm recorded for the calendar month under consideration.
Rn	=	Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.
X	=	20, unless otherwise provided in the project specifications.
Y	=	10, unless otherwise provided in the project specifications.

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

The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall.

Extensions of time for part of a month shall be calculated using pro rata values of Nn and Rn.

This formula does not take account flood damage which could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.

The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the average in the number of days during which rainfall exceeds 10 mm. The factor (Rw-Rn) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed 10 mm but wet conditions prevented or disrupted work.

For the purpose of applying the formula, accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.

Clause 5.13.1 The penalty for failing to complete the works is 0.05% of the Total Tender Sum per Calendar Day.

Clause 5.16.3 The latent defect period is **5 years**.

Clause 5.17	*Add Clause 5.17:* **"Reporting** The Contractor shall provide a monthly progress report for the Works showing, as a minimum, the following information to a format acceptable by the Employer:
Clause 5.17.1	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.
Clause 5.17.2	A detailed inventory of Plant kept on Site, full particulars given for each day of the month. Distinction shall be made between owned and hired Plant as well as Plant in working order and Plant out of order. Such inventory shall be submitted by the seventh day of the month following the month to be reported.
Clause 5.17.3	A Health and Safety report, including detailed report on complacence with regulations and of any safety incidents and "near misses".
Clause 5.17.4	Progress of each portion of the Works.
Clause 5.17.5	All other relevant information."
Clause 6.5.1.2.3	The percentage allowance to cover overhead charges is 15%
Clause 6.2.3	*Replace Clause 6.2.3 with the following:* "If the Contractor has selected a performance guarantee as security, such performance guarantee shall be issued by a registered Commercial Bank or Insurance Company registered in terms of the Short-term Insurance Act (Act 53 of 1998). The Contractor shall ensure that such performance guarantee remains valid and enforceable until the Certificate of Completion is issued. The performance guarantee shall specify an expiry date not less than **84 days** after the Due Completion Date, and if the Contractor has not become entitled to receive the Certificate of Completion of the Works by the date **28 days** prior to the expiry date of the performance guarantee, the Contractor shall extend the validity of the performance guarantee until such time that the Works have been completed."

Clause 6.8.2 Contract Price Adjustment will be allowed for this Contract.

The tendered rates will be adjusted annually as follows:

- All rates which are based on current market prices with a tendered mark-up will remain unchanged for the duration of the contract.
- All other rates will be adjusted annually as follows:
- The rates will be adjusted annually by a calculated factor, every 12 calendar months, starting 12 months from the end of the month in which the tender was awarded.
- The formula is as follows

$$(1-x)\left[\frac{aLt}{Lo}+\frac{bPt}{Po}+\frac{cMt}{Mo}+\frac{dFt}{Fo}-1\right]$$

Where:

X = Fixed 10% (0,10) of the original bid price. Are portion of the bid price remains firm, it is not subject to any price escalations.

a = Factor of the bid price for Labour

b = Factor of the bid price for Contractors Equipment

c = Factor of the bid price for Material

d = Factor of the bid price for Fuel

The total of the various factors “a”, “b”, “c”, “d” must add up to 100%

“Lt", “Pt” , “Mt” & “Ft” = Index figure obtained from a Statistic South Africa and published by SAFCEC from time to time **(As defined in C1.2.3 – Clause 6.8.2)**

“Lo”, "Po” “Mo”, “Fo” = Index figures at time of bidding

The following index/indices must be used to calculate your bid price: (As per C1.2.3 Contract data: THE INDICES WILL BE BASED DATE ON AT TIME OF TENDER - CLAUSE 6.8.2)

The base month used for the calculation will be 30 days before the closing date of the bid.

FACTORS (“a”, “b”, “c” & “d”.)	PERCENTAGE OF BID PRICE
a	
b	
c	
d	
TOTAL	1

Clause 6.8.3 Price adjustments for variations in the costs of special materials **are allowed**.

Clause 6.10.1.5 The percentage advance on materials not yet built into the Permanent Works is **80%**

Clause 6.11.1.3 Replace the wording:” greater *than 15 percent”* with *“greater than 20 percent”.*

Clause 7.2.2	*Add Clauses 7.2.2 to 7.2.7:* "The Engineer shall be entitled at all times to have access to any premises where work is being carried out or where plant or equipment is being manufactured, for the purpose of inspecting and observing the carrying out of tests on such plant and equipment. If plant or equipment is being manufactures on other premises, the Contractor shall obtain permission for the Engineer to carry out such inspection and observations on those premises.
Clause 7.2.3	The Contractor shall carry out such off-site tests he considered necessary or as the Engineer instructs before delivering to the site the plant or equipment to which the off-site tests relate. Whenever the Contractor is ready to carry out any off-site tests on plant or equipment, he shall notify the Engineer at least **7 days** in advance of the place and the time that he intends to carry out such test. The Contractor shall carry out every test at the time and place so notified.
Clause 7.2.4	As soon as the plant or any appropriate part thereof is, in the opinion of the Contractor, substantially complete and ready for testing, the Contractor shall propose a programme for demonstrations and testing of plant and equipment, commencing no sooner than **7 days** after notifying the Engineer. The Contractor is to ensure that every component is operating satisfactorily and the total plant shall be operated for at least one week by the Contractor during which time he shall also train the operators in the correct running and maintenance of the plant. The Contractor shall provide all labour, materials, fuels, storage, apparatus, facilities, and instruments necessary to carry out such demonstrations or tests effectively. If the Engineer does not attend any demonstration or test, the Contractor shall carry out such demonstration or test in the absence of the Engineer and certified copies of the test results shall be deemed to be a correct record thereof.
Clause 7.2.5	The Contractor shall provide the Engineer with three certified copies of all test results.
Clause 7.2.6	If, as a result of the inspections, demonstrations or tests, the Engineer decides that any plant or equipment is defective or otherwise not in accordance with the Contract, the Engineer shall notify the Contractor thereof within **3 working day** that such plant or equipment is rejected, stating the Engineer's objections with reasons. The Contractor shall make good any such defect or ensure that such plant or equipment fully complies with the Contract. Rejected plant and/or equipment shall again be demonstrated or tested under the same terms and conditions. Any cost incurred due to repeating any demonstration and/or testing of plant or equipment shall be recovered from the Contractor."
Clause 7.2.7	The contract will not be deemed to have been completed, and a completion certificate shall not be issued until the Engineer is fully satisfied that every component of the plant is operating satisfactorily.
Clause 7.5.3	Adequate notice is defined as **3 working days**.

Clause 6.10.3	The limit of retention money is **10%** of the Tender offer, excluding VAT and limited to 5% of the Contract amount, excluding Contract Price Adjustment, Contingencies and VAT. A Retention Money Guarantee will **not** be permitted.
Clause 8.6.1.1.2	The value of Plant and Materials supplied by the Employer to be included in the insurance sum is **R 0.00**
Clause 8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is **R 5 000 000.00**
Clause 8.6.1.2	A Coupon Policy for Special Risks Insurance issued by the South African Special Risks Insurance Association **is** required.
Clause 8.6.1.3	The limit of indemnity for liability insurance is **R 5 000 000.00** for any single liability claim. Liability insurance shall include spread of fire risk**.**
Clause 8.6.1.5	No additional insurances are required.
Clause 10.5.1	This Contract does not allow for dispute resolution by a standing Adjudication Board.
Clause 10.5.3	The number of Adjudication Board Members to be appointed is three.
Clause 10.7.1	The determination of disputes shall be by arbitration.
Clause 11.1	*Add Clause 11.1:* **Payment for the labour-intensive component of the works** Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the scope of work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in Contract or in delict.
Clause 11.2	*Add Clause 11.2:* **Applicable labour laws** The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No R63 of 25 January 2002, as reproduced below, shall apply to work which are undertaken by unskilled or semi-skilled workers.

Introduction

(a) This document contains the Standard Terms and Conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and Conditions do NOT apply to persons employed in the supervision and management of a SPWP.

(b) In this document –
- (I) "Department" means any department of State, implementing Agent or Contractor;
- (ii) "Employer" means any Municipality, implementing Agency or Contractor that hires workers to work in elementary occupations on a SPWP;
- (iii) "worker" means any person working in an elementary occupation on a SPWP.;
- (iv) "elementary occupation" means any occupation involving unskilled or semi-skilled work;
- (v) "Management" means any person employed by a Municipality or implementing Agency to administer or execute an SPWP.;
- (vi) "task" means a fixed quantity of work;
- (vii) "task-based work" means work in which a worker is paid a fixed rate for performing a task;
- (viii) "task-rated worker" means a worker paid on the basis of the number of tasks completed;
- (ix) "time-rated worker" means a worker paid on the basis of the length of time worked.

Terms of Work

(a) Workers on a SPWP are employed on a temporary basis.

(b) A worker may NOT be employed for longer than 24 months in any five year cycle on a SPWP.

(c) Employment on a SPWP does not qualify as employment as a contributor for the purpose of the Unemployment Insurance Act 30 of 1966.

Normal Hours of Work

(a) An Employer may not set tasks or hours of work that require a worker to work–
- (i) more than forty-five hours in any week
- (ii) on more than six days in any week; and
- (iii) for more than nine hours on any day.

(b) An Employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.

(c) A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

Meal Breaks

(a) A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

(b) An Employer and worker may agree on longer meal breaks.

(c) A worker may not work during a meal break. However, an Employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An Employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

(d) A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

Special Conditions for Security Guards

(a) A security guard may work up to 55 hours per week and up to eleven hours per day.

(b) A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

Daily Rest Period

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

Weekly Rest Period

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

Work on Sundays and Public Holidays

(a) A worker may only work on a Sunday or Public holiday to perform emergency or security work.
(b) Work on Sundays is paid at the ordinary rate of pay.
(c) A task-rated worker who works on a public holiday must be paid –
  (i) the worker's daily task rate, if the worker works for less than four hours;
  (ii) double the worker's daily task rate, if the worker works for more than four hours.
(d) A time-rated worker who works on a public holiday must be paid –
  (i) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;
  (ii) double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

Sick Leave

(a) Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.
(b) A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a Contract.
(c) A worker may accumulate a maximum of twelve days' sick leave in a year.
(d) Accumulated sick-leave may not be transferred from one Contract to another Contract.
(e) An Employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
(f) An Employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
(g) An Employer must pay a worker sick pay on the worker's usual payday.
(h) Before paying sick-pay, an Employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
  (i) absent from work for more than two consecutive days; or
  (ii) absent from work on more than two occasions in any eight-week period.
(i) A medical certificate must be issued and signed by a Medical Practitioner, a qualified Nurse or a Clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
(j) A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

Maternity Leave

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

Family responsibility leave

Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances –
(a) when the employee's child is born;
(b) when the employee's child is sick;
(c) in the event of a death of –
  (i) the employee's spouse or life partner;
  (ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

Statement of Conditions

(a) An Employer must give a worker a statement containing the following details at the start of employment –
  (i) the Employer's name and address and the name of the SPWP;
  (ii) the tasks or job that the worker is to perform; and
  (iii) the period for which the worker is hired or, if this is not certain, the expected duration of the Contract;
  (iv) the worker's rate of pay and how this is to be calculated;
  (v) the training that the worker will receive during the SPWP.

(b) An Employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

(c) An Employer must supply each worker with a copy of these Conditions of employment.

Keeping Records

(a) Every Employer must keep a written record of at least the following –

  (i) the worker's name and position;

  (ii) in the case of a task-rated worker, the number of tasks completed by the worker;

  (iii) in the case of a time-rated worker, the time worked by the worker;

  (iv) payments made to each worker.

(b) The Employer must keep this record for a period of at least three years after the completion of the SPWP.

Payment

(a) An Employer must pay all wages at least monthly in cash or by cheque or into a bank account.

(b) A task-rated worker will only be paid for tasks that have been completed.

(c) An Employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the Contractor having submitted an invoice to the Employer.

(d) A time-rated worker will be paid at the end of each month.

(e) Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

(f) Payment in cash or by cheque must take place –
  (i) at the workplace or at a place agreed to by the worker;
  (ii) during the worker's working hours or within fifteen minutes of the start or finish of work;
  (iii) in a sealed envelope which becomes the property of the worker.

(g) An Employer must give a worker the following information in writing –
  (i) the period for which payment is made;
  (ii) the numbers of tasks completed or hours worked;
  (iii) the worker's earnings;
  (iv) any money deducted from the payment;
  (v) the actual amount paid to the worker.

(h) If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it

(i) If a worker's employment is terminated, the Employer must pay all monies owing to that worker within one month of the termination of employment.

Deductions

(a) An Employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

(b) An Employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

(c) An Employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

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

Health and Safety

(a) Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

(b) A worker must –

(i) work in a way that does not endanger his/her health and safety or that of any other person;

(ii) obey any health and safety instruction;

(iii) obey all health and safety rules of the SPWP;

(iv) use any personal protective equipment or clothing issued by the Employer;

(e) report any accident, near-miss incident or dangerous behaviour by another person to their Employer or manager.

Compensation for Injuries and Diseases

(a) It is the responsibility of the Employers (other than a Contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

(b) A worker must report any work-related injury or occupational disease to their Employer or manager.

(c) The Employer must report the accident or disease to the Compensation Commissioner.

(d) An Employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The Employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

Termination

(a) The Employer may terminate the employment of a worker for good cause after following a fair procedure.

(b) A worker will not receive severance pay on termination.

(c) A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the Employer in advance to allow the Employer to find a replacement.

(d) A worker who is absent for more than three consecutive days without informing the Employer of an intention to return to work will have terminated the Contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

(e) A worker who does not attend required training events, without good reason, will have terminated the Contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

Certificate of Service

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

(i) the worker's full name;

(ii) the name and address of the Employer;

(iii) the SPWP on which the worker worked;

(iv) the work performed by the worker;

(v) any training received by the worker as part of the SPWP;

(vi) the period for which the worker worked on the SPWP;

(vii) any other information agreed on by the Employer and worker.

Reporting

The Contractor shall report the breakdown of each payment certificate into the broad categories of:

a) Overheads,
b) Supervision,
c) Materials,
d) Plant, and
e) Labour.

The Contractor shall further report for each payment certificate the person-days of employment as set out in the Pro Forma: Monthly Labour Report.

In the calculation of person-days, a day shall be taken as 8 hours and no time over and above 8 hours per day shall be used to contribute to the number of person-days reported.

Source of Labour

The Contractor shall source his labour from the local area through the services of an appropriate Councillor or Community Liaison Officer or another appointed person who has contact with a labour pool in the area.

4. TRANSFER OF RIGHTS

The successful tenderer should complete and submit a Transfer of Rights Form to claim for materials on site with every progress payment for the project. No payment for materials on site would be granted if this Document is not submitted with the progress payment being considered.

TRANSFER OF RIGHTS

TRANSFER OF RIGHTS AND INDEMNITY (To be completed during construction by successful Tenderer only)

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

Contract No: …….. For (Contract title) ……

……

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

…….. of (name of Contractor) ……

duly authorised hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favour of (name of Employer) …….. insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutum possessorium.*

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

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

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

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

Description of Item	Unit	Quantity	Rate	Amount	Supplier
Total Value of Materials and goods					

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

Witnessed by: …….. Date: ……
NOTE: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 49.1.5 of the General Conditions of Contract 2010.

C1.2.2: PART B: DATA PROVIDED BY THE CONTRACTOR

Each item of Data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works to which it mainly applies.

<table>
<tr><th>Clause</th><th colspan="2">Data</th></tr>
<tr><td>1.1.1.9</td><td colspan="2">The Contractor is:

[Enter the Legal name of the Contractor]

……..</td></tr>
<tr><td>1.2.1.2</td><td colspan="2">The address of the Contractor is::

Telephone: ..... Facsimile: .....

E-mail : .....

Address (Postal) : ..... Address (Physical) : .....

....

....

....</td></tr>
<tr><td>6.2.1</td><td colspan="2">The security to be provided by the Contractor shall be one of the following:</td></tr>
<tr><td></td><td>Type of Security:
Value Added tax is excluded from the Contract Sum and the value of the Works for calculating the percentages.</td><td>Contractor’s choice:
Indicate “Yes” or “No”</td></tr>
<tr><td></td><td>Retention of 10% of the value of the Works</td><td></td></tr>
<tr><td></td><td>Cash Deposit of 10% of the Contract Sum plus retention of 5% of the value of the Works</td><td></td></tr>
<tr><td></td><td>Performance Guarantee of 10% of the Contract Sum plus retention of 5% of the value of the Works</td><td></td></tr>
<tr><td>6.8.3</td><td colspan="2">The variation in cost of special materials is :
Type of Material Unit Base Rate or Price

....

....

....
Contractor to indicate the type, unit and rate of special material to be listed. When called upon to do so, the Contractor shall substantiate the above rates or prices with acceptable documentary evidence. Contractor to provide any other Special Materials if deemed necessary</td></tr>
</table>

C1.3 FORM OF GUARANTEE - PRO FORMA

Contract No.
WHEREAS **The Limpopo Department of Agriculture & Rural Development** (hereinafter referred to as the Employer") entered into, a Contract with:

. . . . . .

(Hereinafter called "the Contactor") on the . . . . . day of . . . . . 20. . . . . .

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

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

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

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

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

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

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

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

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

   . . . . . .

   . . . . . Rand (in words);

   R. . . . . (in figures)

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

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

   . . . . . .

   . . . . . .

   . . . . . .

. . . . . .

IN WITNESS WHEREOF this Guarantee has been executed by us at . . . . . .

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

Signature . . . . . .

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

Address . . . . . .

. . . . . .

. . . . . .

As witnesses:

1 . . . . . .

2 . . . . . .

C1.4: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT NO 85 OF 1993

THIS AGREEMENT is made between **The Limpopo Department of Agriculture & Rural Development**

(hereinafter called the EMPLOYER of the one part, herein represented by:

....

in his capacity as: ..... ;

AND: ....

(hereinafter called the CONTRACTOR) of the other part, herein represented by .....

....

in his capacity as: .....

duly authorised to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatory of the EMPLOYER in consequence of an Agreement between the CONTRACTOR and the EMPLOYER in respect of

CONTRACT NO: ACDP 23/16: A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHSA Amendment Act No 181/1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. **The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.**

2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.

3. The CONTRACTOR hereby accepts Sole Liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the EMPLOYER and the Employer's CONSULTING ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the Contract.

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

5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant

to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at ..…….……...……..…….. for and on behalf of the CONTRACTOR

on this the …… day of ……..……..…… 20…….

SIGNATURE: .....

NAME AND SURNAME: .....

CAPACITY: .....

WITNESSES: 1. .....

2. .....

Thus signed at …… for and on behalf of the EMPLOYER on this

the …….. day of ……..…… 20…….

SIGNATURE: .....

NAME AND SURNAME: .....

CAPACITY: .....

WITNESSES: 1. .....

2. .....

PART C2: PRICING DATA

C2.1: PRICING INSTRUCTIONS

C2.2: BILL OF QUANTITIES

LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

C2.1 Pricing Instructions

1. The General Conditions of Contract, the Special Conditions of Contract (if any), the Specifications (including Project specifications), and the Drawings are to be read in conjunction with the Schedule of Quantities.

2. a. The Schedule comprises items covering the Contractor's profit and costs of general liabilities and of the construction of temporary and permanent works.
   b. The Tenderer is at liberty to insert a rate of his own choosing for each item in the Schedule, and his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional works carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates inserted in the Schedule by the Contractor.
   c. Clause 8 of each Standardized Specification and the measurement and payment clause of each particular specification, read together with the relevant clauses of the Project Specification, set out what ancillary or associated activities are included in the rate for the operations specified.

3. Descriptions in the Schedule of Quantities are abbreviated and the schedule has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities. Should any requirement of the measurement and payment clause of the applicable Standardized Specification, or the Project Specification, conflict with the terms of the Schedule of Quantities or, when relevant, Civil Engineering Quantities, the requirement of the Project Specification, as applicable, shall prevail.

4. Unless otherwise stated, items are measured in accordance with the Drawings, and no allowance has been made for waste.

5. The prices and rates to be inserted in the Schedule of Quantities are to be full inclusive prices to the Employer for the work described under the several items. Such prices shall cover all costs and expenses that may be required in and for the construction 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.

6. 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 no price is entered will be considered to be covered by the other prices or rates in the schedule.

7. The Tenderer must price each item in the Schedule of Quantities in BLACK INK.

8. All quantities in the Schedule of Quantities are provisional quantities and will be subjected to final remeasurement of actual work done.

9. Ordering materials: The quantities of work or material stated in the Schedule of Quantities shall not be regarded as constituting authorization to the contractor to order material.

10. Units of measurement: The units of measurement described in the Schedule of Quantities are metric units. Abbreviations used in the schedule of Quantities are as follows:

%	=	percent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kilolitre
km	=	kilometre
km-pass	=	kilometre-pass
kPa	=	kilopascal
kW	=	kilowatt
l	=	litre
m	=	metre
mm	=	millimetre
m^2	=	square metre
m^2-pass	=	square metre-pass
m^3	=	cubic metre
m^3-km	=	cubic metre-kilometre
MN	=	meganewton
MN.m	=	meganewton-metre
MPa	=	megapascal
No.	=	number
Prov sum	=	Provisional sum
PC sum	=	Prime Cost sum
R/only	=	Rate only
sum	=	lump sum
t	=	ton (1000 kg)
W/day	=	Work day

All rates and sums of money quoted in the Schedule of Quantities shall be in the Rand.

The Standard System of Measurement of Civil Engineering Quantities for South Africa, and South West Africa published by the South African Institute of Civil Engineers.

C2.2 BILL OF QUANTITIES

SCHEDULE A PRELIMINARY & GENERAL

SCHEDULE B EARTHWORKS

SCHEDULE C STEEL PIPES AND FITTINGS

SCHEDULE D HDPE PIPES AND FITTINGS

SCHEDULE E PVC PIPES AND FITTINGS

SCHEDULE F DRIP IRRIGATION

SCHEDULE G SPRINKLER IRRIGATION

SCHEDULE H FILTERS & AIRVALVES

SCHEDULE I PUMPS, MOTORS, CONTROLS & CABLES

SCHEDULE J LDPE PIPES AND FITTINGS

SCHEDULE K VALVES & METERS

SCHEDULE L SHADENET

SCHEDULE M TUNNELS & RESERVOIRS

SCHEDULE N CENTRE PIVOT IRRIGATION

SCHEDULE P BUILDING

SCHEDULE R ELECTRICAL AND PLUMBING

SCHEDULE S POWER GENERATION EQUIPMENT

SUMMARY OF SCHEDULE OF QUANTITIES AND CALCULATION OF TENDER AMOUNT

LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT: IRRIGATION TERM CONTRACT

SUMMARY OF SECTIONS

SECTION A : PRELIMINARY AND GENERAL	
SECTION B: EARTHWORKS	
SECTION C : STEEL PIPES AND FITTINGS	
SECTION D : HDPE PIPES AND FITTINGS	
SECTION E : PVC PIPES AND FITTINGS	
SECTION F : DRIP IRRIGATION	
SECTION G : SPRINKLER IRRIGATION	
SECTION H : FILTERS & AIRVALVES	
SECTION I : PUMPS & MOTORS,CONTROLS & CABLES	
SECTION J : LDPE PIPES AND FITTINGS	
SECTION K : VALVES & METERS	
SECTION L : SHADENET	
SECTION M : TUNNELS & RESEVOIRS	
SECTION N: CENTRE PIVOTS IRRIGATION	
SECTION P : BUILDING	
SECTION R : ELECTRICALS AND PLUMBING	
SECTION S: POWER GENERATION EQUIPMENT	
SUB TOTAL	
ADD 15% CONTINGENCIES	
SUB TOTAL	
ADD 15% VAT	
GRAND TOTAL, CARRIED TO FORM OF TENDER	

No.	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 A	**SECTION A: PRELIMINARY & GENERAL**				
		Note: Contractor to Hire at least 10 LOCAL personnel/labour at not less than R200/day labour rate for a 6 months Contract Period with Sub Total Task Order Amount of R3 000 000,00 before VAT and Contingencies				
		As per the nature and requirement on each project site: the above Note/assumption will be used to determine and adjust offered contract P&G amounts				
A,1		**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS** (Not to exceed 5% of the Task Order Sub-Total Before Contingencies and VAT)				
A,1,1		Works Insurance	Sum	1		
A,1,2		Securities	Sum	1		
A,1,3		Setting out of Works	Sum	1		
A,1,4		Protection of Works	Sum	1		
A,1,5		Management of Contract	Sum	1		
A,1,6		Meetings and reporting	Sum	1		
A,1,7		Main Notice Board	Sum	1		
A,1,8		Construction and safety notices boards	Sum	1		
A,1,9		Water, Electricity and Communication provision	Sum	1		
A,1,10		Office facility, 12m², Temporal facility Wooden wendy house or mobile container	Sum	1		
A,1,11		Storage facility, 16m² temporal facility	Sum	1		
A,1,12		Staff housing	Sum	1		
A,1,13		Ablution facilities	Sum	1		
		HEALTH AND SAFETY				
		General:				
A,1,14		Preparation of Contractor's site specific Health and Safety Plan.	Sum	1		
A,1,15		Submission of the Health and Safety File.	Sum	1		
A,1,16		Provision of full time Health and Safety Officer for the entire construction period.	Month	6		
A,1,17		Induction training of personnel activity	Sum	1		
A,1,18		Provision of first aid boxes on site	No	2		
A,1,19		SANS approved weld mesh type temporary barrier fencing 1,8m high covered with a net fixed to and including 100mm diameter gum poles set securely min 300mm deep in ground at max 3m spacing including excavation, backfilling, etc	m	1		
A,1,20		Extra over mesh fence for pedestrian gate size 1.8 x 1,8m high.	No	1		
A,1,21		Provision for Personal Protective Equipment and Protective Clothing:				
A,1,22		Reflective vests.	No	15		
A,1,23		Hard hats.	No	15		
A,1,24		Protective foot wear.	No	15		
A,1,25		Ear Plugs.	No	15		
A,1,26		Dust Masks.	No	15		
A,1,27		Working suite - jacket and pans	No	15		
		Costs of Medical Certificates and Medical Surveillance:				
A,1,28		Entry medical fitness examinations per employee	No	10		
A,1,29		Respiritory prevention kit allocation and routine screening	No	10		
A,1,30		Exit Examinations per employee	No	10		
		Dust Suppression:				
A,1,31		Dust suppression by water spraying construction site, with 10 000L Tanker	Day	1		
A		**Carried forward**				

No.	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A		**Brought forward**				
		Costs of Medical Certificates and Medical Surveillance:				
A,1,28		Entry medical fitness examinations per employee	No	10		
A,1,29		Respiritory prevention kit allocation and routine screening	No	10		
A,1,30		Exit Examinations per employee	No	10		
		Dust Suppression:				
A,1,31		Dust suppression by water spraying construction site, with 10 000L Tanker	Day	1		
		Covid-19 Compliance Measures				
A,1,32		The Contractor is required to price for Covid 19 compliance and the pricing thereof shall be deemed to include all the mandatory requirements.	Sum	1		
A,2		**TIME RELATED ITEMS**				
A,2,1		Claim Monthly as per Task Order Sub-Total Amount before Contingencies and VAT, Max of 5%	Prov Sum	1	3 000 000	3 000 000,00
A,2,2		Claim for Time Related Preliminary and General	%	3 000 000		
A,2,3		Provision and Payment of CLO	Prov Sum	1	40 000	40 000,00
A,2,4		Profit over/Mark-up	%	40 000		
A,3	**SANS 1200A**	**DAYWORKS**				
	8,7	Daywork Labour				
A.3.1		Contractor's Representative	hour	1		
A.3.2		Surveyor	hour	1		
A.3.3		Irrigation engineer	hour	1		
A.3.4		Plumber	hour	1		
A.3.5		Boilermaker	hour	1		
A.3.6		Bricklayer	hour	1		
A.3.7		Plasterer	hour	1		
A.3.8		Welder with API 1104 Certificate	hour	1		
A.3.9		Electrician	hour	1		
A.3.10		Semi-skilled labourer	hour	1		
A.3.11		Labourer	hour	1		
A,4	**8,7**	**Plant hire : Work Rates on Site**				
A.4.1		Crane 20 t - 35 t capacity	hour	1		
A.4.2		Tractor 60 kW - 90 kW	hour	1		
A.4.3		TLB 60 kW - 70 kW	hour	1		
A.4.4		Motor graders 150 kW - 160 kW	hour	1		
A.4.5		Motor graders 150 kW - 160 kW	hour	1		
A.4.6		Wheel excavators 0,4 - 1,25m³ bucket size	hour	1		
A.4.7		Water tankers 4 000 - 20 000 litre	hour	1		
A.4.8		Drilling rig up to 200 metres	hour	1		
A.4.9		Borehole Testing equipment up 10 litres/s	hour	1		
A.4.10		Dumpers 0,5m³ (Hydraulic tip)	hour	1		
A.4.11		Mono pump with 80mm DN outlet (diesel driven) 2.2 - 7.5 kW	hour	1		
A.4.12		Arc-welding unit (300 A)	hour	1		
A.4.13		10 kVA (petrol) 220V Generator	hour	1		
A.4.14		30 kVA (diesel) 380V - 3ph Generator	hour	1		
A		**Carried forward**				

No.	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A		**Brought forward**				
A,5		**TRAINING AND OTHER MARKUPS**				
		SUMS STATED PROVISIONALLY BY ENGINEER (Employer)				
A,5,1		**SABI ACCREDITED TRAINING**				
A,5,1,1		Provision of M1 - Basic principles and installation of irrigation systems by an SABI accredited training service provider / institute (25 People)	Sum	1	150 000	150 000,00
A,5,1,2		Provision of M2 - Irrigation Scheduling and management of irrigation systems an SABI accredited training service provider / institute (5 People)	Sum	1	60 000	60 000,00
A,5,1,3		Provision of refresher training on the irrigation equipment installed. Training to be done by the Supplier of an SABI accredited training service provider / institue	Sum	1	40 000	40 000,00
A,5,1,4		Training allowance for direct payments to targeted labour in terms of formal training days	Sum	1	30 000	30 000,00
A,5,1,5		Transport & accommodation of workers for training where it is not possible to undertake the training in close proximity to the site	Sum	1	20 000	20 000,00
A,5,1,6		Extra over A,5,1,1 to A,5,1,5 above for the administration payment of training, allowances transport and venue arrangements	%	300 000		
A,5,2		**Mark up on other specialists services**				
A,5,2,1		Geohydrological services	PC sum	100 000	1	100 000,00
		Mark up on above	%	100 000		
A,5,2,2		Electrical and mechanical engineering services	PC sum	100 000	1	100 000,00
		Mark up on above	%	100 000		
A,5,2,3		Geotechnical services	PC sum	100 000	1	100 000,00
		Mark up on above	%	100 000		
A,5,2,4		Agricultural Engineering (Anciliry works)	PC sum	100 000	1	100 000,00
		Mark up on above	%	100 000		
A,5,2,5		Provision of Operation and maintenance manual for Irrigation Development Works	PC sum	20 000	1	20 000,00
		Mark up on above	%	20 000		
		TOTAL SECTION "A" CARRIED FORWARD TO SUMMARY				

No.	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION B: EARTHWORKS				
B.1		**SITE CLEARANCE**				
B.1.1		Clear and grub site including vegetation, trees and tree stumps of girth up to 1m	m^2	1		
B.1.2		Clear and grub vegetation on the pipeline path, 2m wide clearing	m	1		
B.1.3		De-bushing of virgin land with congested high dense bush/trees	ha	1		
B.1.4		De-bushing of virgin land with scattered bush/trees	ha	1		
		c) Remove Topsoil				
B.1.5		Strip to 150 mm deep x 1 m wide on single pipe and 2 m wide on double on pipeline centre line, stockpile and prevent dust	m^2	2000		
		Dams De-Silting				
B.1.6		Removal of silt in dam basin including free haul of $6m^3$/1km and dumping on approved site as per Engineers instruction.	m^3	100		
		Keeping excavations free of water:				
B.1.7		Keeping excavations free from mud and storm water	Sum	1		
B.1.8		Handling and Keeping excavations free from subterranean sources.	Sum	1		
B.2	**SANS 1200D**	**EXCAVATION**				
B.2.1		Excavations in all materials for trenches to a depth less than1000 mm for removal of unsuitable material and dispose of material for 600mm wide trenches	m	1		
B.2.2		Excavations in all materials for trenches to a depth less than 1000 mm for removal of unsuitable material and dispose of material for 800mm wide trenches	m	1		
B.2.3		Excavations in all materials for trenches to a depth less than 1500 mm for removal of unsuitable material and dispose of material for 600mm wide trenches	m	1		
B.2.4		Excavations in all materials for trenches to a depth less 1500 mm for removal of unsuitable material and dispose of material for 800mm wide trenches	m	1		
B.2.5		Excavations in all materials for trenches to a depth over 1500 mm for removal of unsuitable material and dispose of material for 600mm wide trenches	m	1		
B.2.6		Excavations in all materials for trenches to a depth over 1500 mm for removal of unsuitable material and dispose of material for 800mm wide trenches	m	1		
B.2.7		Extra-over Item above				
B.2.8		a) Intermediate excavations	m^3	1		
B.2.9		b) Hard excavations	m^3	1		
B.2.10		c) Boulder excavation, Class A	m^3	1		
B.2.11		d) Boulder excavation, Class B	m^3	1		
		BEDDING (PIPES)				
		Provision of bedding from trench excavation:				
B.2.12		a) Selected granular material	m^3	1		
B.2.13		b) Selected fill material	m^3	1		
		Supply only of bedding by importation				
B		**Carried forward**				

B		**Brought forward**				
		From other necessary excavations (Provisional)				
B.2.14		a) Selected granular material	m³	1		
B.2.15		b) Selected fill material	m³	1		
		Dealing with Services that intersect a trench to complete works:				
B.2.16		1) Stock fences	No	1		
B.2.17		2) Water Pipes	No	1		
B.2.18		3) Gravel Roads	No	1		
B.2.19		4) Power cables	No	1		
		Finishing				
		Reinstate road surfaces complete with all courses:				
B.2.20		d) Gravel road surfaces	m²	1		
B.2.21		e) Paved road surfaces	m²	1		
B.3		**Soil Preparation**				
B.3.1		Plough land earmarked for irrigation to a depth of 300 mm	ha	1		
B.3.2		Disk land earmarked for irrigation	ha	1		
B.3.3		Rip the land earmarked for irrigaion to a depth of 600 mm, One way	ha	1		
B.3.4		Rip the land earmarked for irrigaion to a depth of 600 mm, 2nd Cross Ripping at 45deg	ha	1		
B.3.5		Vegetable crops ridges making with less than 0,5m wide width and 0,5m height in the field	ha	1		
B.3.6		Citrus ochard ridges amking with over 1m wide width and 1m height in the field	ha	1		
B.3.7		Extra over above for operations under Shadenets and Tunnels	ha	1		
		TOTAL SECTION "B" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION C : STEEL PIPES AND FITTINGS				
C.1		Supply, deliver,install and test the following steel pipes, fittings and specials complete with gaskets, bolts, nuts and washers. Conforming to SABS 719, SABS 62-1989 and BS534. All steel pipes and fittings to have a wall thickness of 4.5mm and galvanized according to specification SABS 1461 and SABS ISO 14713. All flanges Table D				
C.1.1		**Barrel Nipple**				
C.1.1.1		8 mm	no	1		
C.1.1.2		10 mm	no	1		
C.1.1.3		15 mm	no	1		
C.1.1.4		20 mm	no	1		
C.1.1.5		25 mm	no	1		
C.1.1.6		32 mm	no	1		
C.1.1.7		40 mm	no	1		
C.1.1.8		50 mm	no	1		
C.1.1.9		65 mm	no	1		
C.1.1.10		80 mm	no	1		
C.1.1.11		100 mm	no	1		
C.1.1.12		150 mm	no	1		
C.1.2		**Nipple Galvanised Hexagonal**				
C.1.2.1		8 mm	no	1		
C.1.2.2		10 mm	no	1		
C.1.2.3		15 mm	no	1		
C.1.2.4		20 mm	no	1		
C.1.2.5		25 mm	no	1		
C.1.2.6		32 mm	no	1		
C.1.2.7		40 mm	no	1		
C.1.2.8		50 mm	no	1		
C.1.2.9		65 mm	no	1		
C.1.2.10		80 mm	no	1		
C.1.2.11		100 mm	no	1		
C.1.2.12		150 mm	no	1		
C.1.3		**Elbow Galvanised Female/Female 90^0**				
C.1.3.1		8 mm	no	1		
C.1.3.2		10 mm	no	1		
C.1.3.3		15 mm	no	1		
C.1.3.4		20 mm	no	1		
C.1.3.5		25 mm	no	1		
C.1.3.6		32 mm	no	1		
C.1.3.7		40 mm	no	1		
C.1.3.8		50 mm	no	1		
C.1.3.9		65 mm	no	1		
C.1.3.10		80 mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.3.11		100 mm	no	1		
C.1.3.12		150 mm	no	1		
C.1.4		**Elbow Galvanised Male/Female 90^0**				
C.1.4.1		8 mm	no	1		
C.1.4.2		10 mm	no	1		
C.1.4.3		15 mm	no	1		
C.1.4.4		20 mm	no	1		
C.1.4.5		25 mm	no	1		
C.1.4.6		32 mm	no	1		
C.1.4.7		40 mm	no	1		
C.1.4.8		50 mm	no	1		
C.1.4.9		65 mm	no	1		
C.1.4.10		80 mm	no	1		
C.1.4.11		100 mm	no	1		
C.1.4.12		150 mm	no	1		
C.1.5		**Elbow Galvanised Gemale/Female 45**				
C.1.5.1		8 mm	no	1		
C.1.5.2		10 mm	no	1		
C.1.5.3		15 mm	no	1		
C.1.5.4		20 mm	no	1		
C.1.5.5		25 mm	no	1		
C.1.5.6		32 mm	no	1		
C.1.5.7		40 mm	no	1		
C.1.5.8		50 mm	no	1		
C.1.5.9		65 mm	no	1		
C.1.5.10		80 mm	no	1		
C.1.5.11		100 mm	no	1		
C.1.5.12		150 mm	no	1		
C.1.6		**Coupling galvanised swage**				
C.1.6.1		8 mm	no	1		
C.1.6.2		10 mm	no	1		
C.1.6.3		15 mm	no	1		
C.1.6.4		20 mm	no	1		
C.1.6.5		25 mm	no	1		
C.1.6.6		32 mm	no	1		
C.1.6.7		40 mm	no	1		
C.1.6.8		50 mm	no	1		
C.1.6.9		65 mm	no	1		
C.1.6.10		80 mm	no	1		
C.1.6.11		100 mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.6.12		150 mm	no	1		
C.1.7		**Crosses galvanised**				
C.1.7.1		8 mm	no	1		
C.1.7.2		10 mm	no	1		
C.1.7.3		15 mm	no	1		
C.1.7.4		20 mm	no	1		
C.1.7.5		25 mm	no	1		
C.1.7.6		32 mm	no	1		
C.1.7.7		40 mm	no	1		
C.1.7.8		50 mm	no	1		
C.1.7.9		65 mm	no	1		
C.1.7.10		80 mm	no	1		
C.1.7.11		100 mm	no	1		
C.1.7.12		150 mm	no	1		
C.1.8		**Backnut galvanised**				
C.1.8.1		8 mm	no	1		
C.1.8.2		10 mm	no	1		
C.1.8.3		15 mm	no	1		
C.1.8.4		20 mm	no	1		
C.1.8.5		25 mm	no	1		
C.1.8.6		32 mm	no	1		
C.1.8.7		40 mm	no	1		
C.1.8.8		50 mm	no	1		
C.1.8.9		65 mm	no	1		
C.1.8.10		80 mm	no	1		
C.1.8.11		100 mm	no	1		
C.1.8.12		150 mm	no	1		
C.1.9		**Union galvanised conical**				
C.1.9.1		8 mm	no	1		
C.1.9.2		10 mm	no	1		
C.1.9.3		15 mm	no	1		
C.1.9.4		20 mm	no	1		
C.1.9.5		25 mm	no	1		
C.1.9.6		32 mm	no	1		
C.1.9.7		40 mm	no	1		
C.1.9.8		50 mm	no	1		
C.1.9.9		65 mm	no	1		
C.1.9.10		80 mm	no	1		
C.1.9.11		100 mm	no	1		
C.1.9.12		150 mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.10		**Union galvanised conical**				
C.1.10.1		8 mm	no	1		
C.1.10.2		10 mm	no	1		
C.1.10.3		15 mm	no	1		
C.1.10.4		20 mm	no	1		
C.1.10.5		25 mm	no	1		
C.1.10.6		32 mm	no	1		
C.1.10.7		40 mm	no	1		
C.1.10.8		50 mm	no	1		
C.1.10.9		65 mm	no	1		
C.1.10.10		80 mm	no	1		
C.1.10.11		100 mm	no	1		
C.1.10.12		150 mm	no	1		
C.1.11		**Coupling Galvanised Johnson**				
C.1.11.1		8 mm	no	1		
C.1.11.2		10 mm	no	1		
C.1.11.3		15 mm	no	1		
C.1.11.4		20 mm	no	1		
C.1.11.5		25 mm	no	1		
C.1.11.6		32 mm	no	1		
C.1.11.7		40 mm	no	1		
C.1.11.8		50 mm	no	1		
C.1.11.9		65 mm	no	1		
C.1.11.10		80 mm	no	1		
C.1.11.11		100 mm	no	1		
C.1.11.12		150 mm	no	1		
C.1.12		**Nipple Galvanised Longscrew**				
C.1.12.1		8 mm	no	1		
C.1.12.2		10 mm	no	1		
C.1.12.3		15 mm	no	1		
C.1.12.4		20 mm	no	1		
C.1.12.5		25 mm	no	1		
C.1.12.6		32 mm	no	1		
C.1.12.7		40 mm	no	1		
C.1.12.8		50 mm	no	1		
C.1.12.9		65 mm	no	1		
C.1.12.10		80 mm	no	1		
C.1.12.11		100 mm	no	1		
C.1.12.12		150 mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.13		**Adaptor Galvanised Swage**				
C.1.13.1		8 mm	no	1		
C.1.13.2		10 mm	no	1		
C.1.13.3		15 mm	no	1		
C.1.13.4		20 mm	no	1		
C.1.13.5		25 mm	no	1		
C.1.13.6		32 mm	no	1		
C.1.13.7		40 mm	no	1		
C.1.13.8		50 mm	no	1		
C.1.13.9		65 mm	no	1		
C.1.13.10		80 mm	no	1		
C.1.13.11		100 mm	no	1		
C.1.13.12		150 mm	no	1		
C.1.14		**Plug Galvanised Hollow**				
C.1.14.1		8 mm	no	1		
C.1.14.2		10 mm	no	1		
C.1.14.3		15 mm	no	1		
C.1.14.4		20 mm	no	1		
C.1.14.5		25 mm	no	1		
C.1.14.6		32 mm	no	1		
C.1.14.7		40 mm	no	1		
C.1.14.8		50 mm	no	1		
C.1.14.9		65 mm	no	1		
C.1.14.10		80 mm	no	1		
C.1.14.11		100 mm	no	1		
C.1.14.12		150 mm	no	1		
C.1.15		**Socket Galvanised**				
C.1.15.1		8 mm	no	1		
C.1.15.2		10 mm	no	1		
C.1.15.3		15 mm	no	1		
C.1.15.4		20 mm	no	1		
C.1.15.5		25 mm	no	1		
C.1.15.6		32 mm	no	1		
C.1.15.7		40 mm	no	1		
C.1.15.8		50 mm	no	1		
C.1.15.9		65 mm	no	1		
C.1.15.10		80 mm	no	1		
C.1.15.11		100 mm	no	1		
C.1.15.12		150 mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.16		**Endcap Galvanised**				
C.1.16.1		8 mm	no	1		
C.1.16.2		10 mm	no	1		
C.1.16.3		15 mm	no	1		
C.1.16.4		20 mm	no	1		
C.1.16.5		25 mm	no	1		
C.1.16.6		32 mm	no	1		
C.1.16.7		40 mm	no	1		
C.1.16.8		50 mm	no	1		
C.1.16.9		65 mm	no	1		
C.1.16.10		80 mm	no	1		
C.1.16.11		100 mm	no	1		
C.1.16.12		150 mm	no	1		
C.1.17		**Holderbat Galvanised**				
C.1.17.1		8 mm	no	1		
C.1.17.2		10 mm	no	1		
C.1.17.3		15 mm	no	1		
C.1.17.4		20 mm	no	1		
C.1.17.5		25 mm	no	1		
C.1.17.6		32 mm	no	1		
C.1.17.7		40 mm	no	1		
C.1.17.8		50 mm	no	1		
C.1.17.9		65 mm	no	1		
C.1.17.10		80 mm	no	1		
C.1.17.11		100 mm	no	1		
C.1.17.12		150 mm	no	1		
C.1.18		**Socket Galvanised Sprinkler**				
C.1.18.1		8 mm	no	1		
C.1.18.2		10 mm	no	1		
C.1.18.3		15 mm	no	1		
C.1.18.4		20 mm	no	1		
C.1.18.5		25 mm	no	1		
C.1.18.6		32 mm	no	1		
C.1.18.7		40 mm	no	1		
C.1.18.8		50 mm	no	1		
C.1.18.9		65 mm	no	1		
C.1.18.10		80 mm	no	1		
C.1.18.11		100 mm	no	1		
C.1.18.12		150 mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.19		**Tee Galvanised**				
C.1.19.1		8 mm	no	1		
C.1.19.2		10 mm	no	1		
C.1.19.3		15 mm	no	1		
C.1.19.4		20 mm	no	1		
C.1.19.5		25 mm	no	1		
C.1.19.6		32 mm	no	1		
C.1.19.7		40 mm	no	1		
C.1.19.8		50 mm	no	1		
C.1.19.9		65 mm	no	1		
C.1.19.10		80 mm	no	1		
C.1.19.11		100 mm	no	1		
C.1.19.12		150 mm	no	1		
C.1.20		**Socket Steel**				
C.1.20.1		8 mm	no	1		
C.1.20.2		10 mm	no	1		
C.1.20.3		15 mm	no	1		
C.1.20.4		20 mm	no	1		
C.1.20.5		25 mm	no	1		
C.1.20.6		32 mm	no	1		
C.1.20.7		40 mm	no	1		
C.1.20.8		50 mm	no	1		
C.1.20.9		65 mm	no	1		
C.1.20.10		80 mm	no	1		
C.1.20.11		100 mm	no	1		
C.1.20.12		150 mm	no	1		
C.1.21		**Socket Galvanised Reducing**				
C.1.21.1		15x08mm	no	1		
C.1.21.2		15x10mm	no	1		
C.1.21.3		20x15mm	no	1		
C.1.21.4		25x15mm	no	1		
C.1.21.5		25x20mm	no	1		
C.1.21.6		32x15mm	no	1		
C.1.21.7		32x20mm	no	1		
C.1.21.8		32x25mm	no	1		
C.1.21.9		40x15mm	no	1		
C.1.21.10		40x20mm	no	1		
C.1.21.11		40x25mm	no	1		
C.1.21.12		40x32mm	no	1		
C.1.21.13		50x15mm	no	1		
C.1.21.14		50x20mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.21.15		50x25mm	no	1		
C.1.21.16		50x32mm	no	1		
C.1.21.17		50x40mm	no	1		
C.1.21.18		65x25mm	no	1		
C.1.21.19		65x32mm	no	1		
C.1.21.20		65x40mm	no	1		
C.1.21.21		65x50mm	no	1		
C.1.21.22		80x40mm	no	1		
C.1.22		**Tee Galvanised Reducing**				
C.1.22.1		15x08mm	no	1		
C.1.22.2		15x10mm	no	1		
C.1.22.3		20x15mm	no	1		
C.1.22.4		25x15mm	no	1		
C.1.22.5		25x20mm	no	1		
C.1.22.6		32x15mm	no	1		
C.1.22.7		32x20mm	no	1		
C.1.22.8		32x25mm	no	1		
C.1.22.9		40x15mm	no	1		
C.1.22.10		40x20mm	no	1		
C.1.22.11		40x25mm	no	1		
C.1.22.12		40x32mm	no	1		
C.1.22.13		50x15mm	no	1		
C.1.22.14		50x20mm	no	1		
C.1.22.15		50x25mm	no	1		
C.1.22.16		50x32mm	no	1		
C.1.22.17		50x40mm	no	1		
C.1.22.18		65x25mm	no	1		
C.1.22.19		65x32mm	no	1		
C.1.22.20		65x40mm	no	1		
C.1.22.21		65x50mm	no	1		
C.1.22.22		80x40mm	no	1		
C.1.23		**Standpipe Galvanised**				
C.1.23.1		15mm x 150mm	no	1		
C.1.23.2		15mm x 200mm	no	1		
C.1.23.3		15mm x 300mm	no	1		
C.1.23.4		15mm x 400mm	no	1		
C.1.23.5		15mm x 450mm	no	1		
C.1.23.6		15mm x 500mm	no	1		
C.1.23.7		15mm x 600mm	no	1		
C.1.23.8		15mm x 750mm	no	1		
C.1.23.9		15mm x 900mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.23.10		15mm x 1000mm	no	1		
C.1.23.11		15mm x 1200mm	no	1		
C.1.23.12		20mm x 150mm	no	1		
C.1.23.13		20mm x 200mm	no	1		
C.1.23.14		20mm x 300mm	no	1		
C.1.23.15		20mm x 400mm	no	1		
C.1.23.16		20mm x 450mm	no	1		
C.1.23.17		20mm x 500mm	no	1		
C.1.23.18		20mm x 600mm	no	1		
C.1.23.19		20mm x 700mm	no	1		
C.1.23.20		20mm x 750mm	no	1		
C.1.23.21		20mm x 900mm	no	1		
C.1.23.22		20mm x 1000mm	no	1		
C.1.23.23		20mm x 1200mm	no	1		
C.1.23.24		25mm x 150mm	no	1		
C.1.23.25		25mm x 200mm	no	1		
C.1.23.26		25mm x 300mm	no	1		
C.1.23.27		25mm x 400mm	no	1		
C.1.23.28		25mm x 450mm	no	1		
C.1.23.29		25mm x 500mm	no	1		
C.1.23.30		25mm x 600mm	no	1		
C.1.23.31		25mm x 750mm	no	1		
C.1.23.32		25mm x 900mm	no	1		
C.1.23.33		25mm x 1000mm	no	1		
C.1.23.34		32mm x 150mm	no	1		
C.1.23.35		32mm x 200mm	no	1		
C.1.23.36		32mm x 300mm	no	1		
C.1.23.37		32mm x 400mm	no	1		
C.1.23.38		32mm x 450mm	no	1		
C.1.23.39		32mm x 500mm	no	1		
C.1.23.40		32mm x 600mm	no	1		
C.1.23.41		32mm x 750mm	no	1		
C.1.23.42		32mm x 900mm	no	1		
C.1.23.43		32mm x 1000mm	no	1		
C.1.23.44		40mm x 150mm	no	1		
C.1.23.45		40mm x 200mm	no	1		
C.1.23.46		40mm x 300mm	no	1		
C.1.23.47		40mm x 400mm	no	1		
C.1.23.48		40mm x 450mm	no	1		
C.1.23.49		40mm x 500mm	no	1		
C.1.23.50		40mm x 600mm	no	1		
C.1.23.51		40mm x 750mm	no	1		
C.1.23.52		40mm x 900mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.23.53		40mm x 1000mm	no	1		
C.1.23.54		50mm x 150mm	no	1		
C.1.23.55		50mm x 200mm	no	1		
C.1.23.56		50mm x 300mm	no	1		
C.1.23.57		50mm x 400mm	no	1		
C.1.23.58		50mm x 450mm	no	1		
C.1.23.59		50mm x 500mm	no	1		
C.1.23.60		50mm x 600mm	no	1		
C.1.23.61		50mm x 750mm	no	1		
C.1.23.62		50mm x 900mm	no	1		
C.1.23.63		50mm x 1000mm	no	1		
C.1.23.64		65mm x 150mm	no	1		
C.1.23.65		65mm x 200mm	no	1		
C.1.23.66		65mm x 300mm	no	1		
C.1.23.67		65mm x 400mm	no	1		
C.1.23.68		65mm x 450mm	no	1		
C.1.23.69		65mm x 500mm	no	1		
C.1.23.70		65mm x 600mm	no	1		
C.1.23.71		65mm x 750mm	no	1		
C.1.23.72		65mm x 900mm	no	1		
C.1.23.73		65mm x 1000mm	no	1		
C.1.23.74		80mm x 150mm	no	1		
C.1.23.75		80mm x 200mm	no	1		
C.1.23.76		80mm x 300mm	no	1		
C.1.23.77		80mm x 400mm	no	1		
C.1.23.78		80mm x 450mm	no	1		
C.1.23.79		80mm x 500mm	no	1		
C.1.23.80		80mm x 600mm	no	1		
C.1.23.81		80mm x 750mm	no	1		
C.1.23.82		80mm x 900mm	no	1		
C.1.23.83		80mm x 1000mm	no	1		
C.1.23.84		100mm x 150mm	no	1		
C.1.23.85		100mm x 200mm	no	1		
C.1.23.86		100mm x 300mm	no	1		
C.1.23.87		100mm x 400mm	no	1		
C.1.23.88		100mm x 450mm	no	1		
C.1.23.89		100mm x 500mm	no	1		
C.1.23.90		100mm x 600mm	no	1		
C.1.23.91		100mm x 750mm	no	1		
C.1.23.92		100mm x 900mm	no	1		
C.1.23.93		100mm x 1000mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.24		**Flange Screwed**				
C.1.24.1		15mm	no	1		
C.1.24.2		20mm	no	1		
C.1.24.3		25mm	no	1		
C.1.24.4		32mm	no	1		
C.1.24.5		40mm	no	1		
C.1.24.6		50mm	no	1		
C.1.24.7		65mm	no	1		
C.1.24.8		80mm	no	1		
C.1.24.9		100mm	no	1		
C.1.24.10		150mm	no	1		
C.1.25		**Flange Screwed On**				
C.1.25.1		15mm	no	1		
C.1.25.2		20mm	no	1		
C.1.25.3		25mm	no	1		
C.1.25.4		32mm	no	1		
C.1.25.5		40mm	no	1		
C.1.25.6		50mm	no	1		
C.1.25.7		65mm	no	1		
C.1.25.8		80mm	no	1		
C.1.25.9		100mm	no	1		
C.1.25.10		150mm	no	1		
C.1.26		**Flange Weld On**				
C.1.26.1		40mm	no	1		
C.1.26.2		50mm	no	1		
C.1.26.3		65mm	no	1		
C.1.26.4		80mm	no	1		
C.1.26.5		100mm	no	1		
C.1.26.6		125mm	no	1		
C.1.26.7		150mm	no	1		
C.1.26.8		200mm	no	1		
C.1.26.9		250mm	no	1		
C.1.27		**Flange Weld On (Table 1600/3)**				
C.1.27.1		50mm	no	1		
C.1.27.2		65mm	no	1		
C.1.27.3		80mm	no	1		
C.1.27.4		100mm	no	1		
C.1.27.5		125mm	no	1		
C.1.27.6		150mm	no	1		
C.1.27.7		200mm	no	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.27.8		250mm	no	1		
C.1.28		**Back Ring (Used With UPV Stubs)**				
C.1.28.1		50mm	no	1		
C.1.28.2		65mm	no	1		
C.1.28.3		80mm	no	1		
C.1.28.4		100mm	no	1		
C.1.28.5		125mm	no	1		
C.1.28.6		150mm	no	1		
C.1.28.7		200mm	no	1		
C.1.28.8		250mm	no	1		
C.1.29		**Insertion Ring Gasket**				
C.1.29.1		50mm	no	1		
C.1.29.2		65mm	no	1		
C.1.29.3		80mm	no	1		
C.1.29.4		100mm	no	1		
C.1.29.5		125mm	no	1		
C.1.29.6		150mm	no	1		
C.1.29.7		200mm	no	1		
C.1.29.8		250mm	no	1		
C.1.30		**Insertion Ring Full Face Gasket**				
C.1.30.1		50mm	no	1		
C.1.30.2		65mm	no	1		
C.1.30.3		80mm	no	1		
C.1.30.4		100mm	no	1		
C.1.30.5		125mm	no	1		
C.1.30.6		150mm	no	1		
C.1.30.7		200mm	no	1		
C.1.30.8		250mm	no	1		
C.1.31		**Galvanised steel pipe**				
C.1.31.1		15 mm	m	1		
C.1.31.2		20 mm	m	1		
C.1.31.3		25 mm	m	1		
C.1.31.4		32 mm	m	1		
C.1.31.5		40 mm	m	1		
C.1.31.6		50 mm	m	1		
C.1.31.7		65 mm	m	1		
C.1.31.8		80 mm	m	1		
C.1.31.9		100 mm	m	1		
C.1.31.10		150 mm	m	1		
C		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C		**Brought forward**				
C.1.32		**Galvanised steel quick coupling perrot pipe**				
C.1.32.1		50 mm	m	6		
C.1.32.2		70 mm	m	6		
C.1.32.3		89 mm	m	6		
C.1.32.4		108 mm	m	6		
C.1.32.5		159 mm	m	6		
		Galvanised steel Special fittings				
		Allow a sum for fabrication of special galvanised steel pipes	Prov sum	1	100000	R 100 000,00
		Profit over above	%	100000		
		TOTAL SECTION "C" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION D : HDPE PIPES AND FITTINGS				
D.1		Supply, deliver,install and test the following SABS approved HDPE pipes, fittings.				
D.1.1		**Coupling Compression**				
D.1.1.1		16mm	no	1		
D.1.1.2		20mm	no	1		
D.1.1.3		25mm	no	1		
D.1.1.4		32mm	no	1		
D.1.1.5		40mm	no	1		
D.1.1.6		50mm	no	1		
D.1.1.7		63mm	no	1		
D.1.1.8		75mm	no	1		
D.1.1.9		90mm	no	1		
D.1.2		**Endcap Compression**				
D.1.2.1		16mm	no	1		
D.1.2.2		20mm	no	1		
D.1.2.3		25mm	no	1		
D.1.2.4		32mm	no	1		
D.1.2.5		40mm	no	1		
D.1.2.6		50mm	no	1		
D.1.2.7		63mm	no	1		
D.1.2.8		75mm	no	1		
D.1.2.9		90mm	no	1		
D.1.3		**Tee Compression**				
D.1.3.1		16mm	no	1		
D.1.3.2		20mm	no	1		
D.1.3.3		25mm	no	1		
D.1.3.4		32mm	no	1		
D.1.3.5		40mm	no	1		
D.1.3.6		50mm	no	1		
D.1.3.7		63mm	no	1		
D.1.3.8		75mm	no	1		
D.1.3.9		90mm	no	1		
D.1.4		**Elbow Compression**				
D.1.4.1		16mm	no	1		
D.1.4.2		20mm	no	1		
D.1.4.3		25mm	no	1		
D.1.4.4		32mm	no	1		
D.1.4.5		40mm	no	1		
D.1.4.6		50mm	no	1		
D.1.4.7		63mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.4.8		75mm	no	1		
D.1.4.9		90mm	no	1		
D.1.5		**Male Adaptors**				
D.1.5.1		20mm x 15mm	no	1		
D.1.5.2		20mm x 20mm	no	1		
D.1.5.3		20mm x 25mm	no	1		
D.1.5.4		25mm x 15mm	no	1		
D.1.5.5		25mm x 20mm	no	1		
D.1.5.6		25mm x 25mm	no	1		
D.1.5.7		32mm x 15mm	no	1		
D.1.5.8		32mm x 20mm	no	1		
D.1.5.9		32mm x 25mm	no	1		
D.1.5.10		32mm x 32mm	no	1		
D.1.5.11		40mm x 25mm	no	1		
D.1.5.12		40mm x 32mm	no	1		
D.1.5.13		40mm x 40mm	no	1		
D.1.5.14		40mm x 50mm	no	1		
D.1.5.15		50mm x 25mm	no	1		
D.1.5.16		50mm x 32mm	no	1		
D.1.5.17		50mm x 40mm	no	1		
D.1.5.18		50mm x 50mm	no	1		
D.1.5.19		63mm x 40mm	no	1		
D.1.5.20		63mm x 50mm	no	1		
D.1.5.21		63mm x 65mm	no	1		
D.1.5.22		75mm x 50mm	no	1		
D.1.5.23		75mm x 65mm	no	1		
D.1.5.24		75mm x 80mm	no	1		
D.1.5.25		90mm x 50mm	no	1		
D.1.5.26		90mm x 65mm	no	1		
D.1.5.27		90mm x 80mm	no	1		
D.1.5.28		110mm x 80mm	no	1		
D.1.5.29		110mm x 100mm	no	1		
D.1.6		**Female Adaptors**				
D.1.6.1		20mm x 15mm	no	1		
D.1.6.2		20mm x 20mm	no	1		
D.1.6.3		20mm x 25mm	no	1		
D.1.6.4		25mm x 15mm	no	1		
D.1.6.5		25mm x 20mm	no	1		
D.1.6.6		25mm x 25mm	no	1		
D.1.6.7		32mm x 15mm	no	1		
D.1.6.8		32mm x 20mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.6.9		32mm x 25mm	no	1		
D.1.6.10		32mm x 32mm	no	1		
D.1.6.11		40mm x 25mm	no	1		
D.1.6.12		40mm x 32mm	no	1		
D.1.6.13		40mm x 40mm	no	1		
D.1.6.14		40mm x 50mm	no	1		
D.1.6.15		50mm x 25mm	no	1		
D.1.6.16		50mm x 32mm	no	1		
D.1.6.17		50mm x 40mm	no	1		
D.1.6.18		50mm x 50mm	no	1		
D.1.6.19		63mm x 40mm	no	1		
D.1.6.20		63mm x 50mm	no	1		
D.1.6.21		63mm x 65mm	no	1		
D.1.6.22		75mm x 50mm	no	1		
D.1.6.23		75mm x 65mm	no	1		
D.1.6.24		75mm x 80mm	no	1		
D.1.6.25		90mm x 50mm	no	1		
D.1.6.26		90mm x 65mm	no	1		
D.1.6.27		90mm x 80mm	no	1		
D.1.6.28		110mm x 80mm	no	1		
D.1.6.29		110mm x 100mm	no	1		
D.1.7		**Reducing Coupling**				
D.1.7.1		25mm x 20mm	no	1		
D.1.7.2		32mm x 20mm	no	1		
D.1.7.3		32mm x 25mm	no	1		
D.1.7.4		40mm x 25mm	no	1		
D.1.7.5		40mm x 32mm	no	1		
D.1.7.6		50mm x 25mm	no	1		
D.1.7.7		50mm x 32mm	no	1		
D.1.7.8		50mm x 40mm	no	1		
D.1.7.9		63mm x 32mm	no	1		
D.1.7.10		63mm x 40mm	no	1		
D.1.7.11		63mm x 50mm	no	1		
D.1.7.12		75mm x 50mm	no	1		
D.1.7.13		75mm x 63mm	no	1		
D.1.7.14		90mm x 63mm	no	1		
D.1.7.15		90mm x 75mm	no	1		
D.1.7.16		110mm x 90mm	no	1		
D.1.8		**Female/Male Elbow Adaptor**				
D.1.8.1		20mm x 15mm	no	1		
D.1.8.2		20mm x 20mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.8.3		20mm x 25mm	no	1		
D.1.8.4		25mm x 15mm	no	1		
D.1.8.5		25mm x 20mm	no	1		
D.1.8.6		25mm x 25mm	no	1		
D.1.8.7		32mm x 15mm	no	1		
D.1.8.8		32mm x 20mm	no	1		
D.1.8.9		32mm x 25mm	no	1		
D.1.8.10		32mm x 32mm	no	1		
D.1.8.11		40mm x 25mm	no	1		
D.1.8.12		40mm x 32mm	no	1		
D.1.8.13		40mm x 40mm	no	1		
D.1.8.14		40mm x 50mm	no	1		
D.1.8.15		50mm x 25mm	no	1		
D.1.8.16		50mm x 32mm	no	1		
D.1.8.17		50mm x 40mm	no	1		
D.1.8.18		50mm x 50mm	no	1		
D.1.8.19		63mm x 40mm	no	1		
D.1.8.20		63mm x 50mm	no	1		
D.1.8.21		63mm x 65mm	no	1		
D.1.8.22		75mm x 50mm	no	1		
D.1.8.23		75mm x 65mm	no	1		
D.1.8.24		75mm x 80mm	no	1		
D.1.8.25		90mm x 50mm	no	1		
D.1.8.26		90mm x 65mm	no	1		
D.1.8.27		90mm x 80mm	no	1		
D.1.8.28		110mm x 80mm	no	1		
D.1.8.29		110mm x 100mm	no	1		
D.1.9		**Female/ Male Tee Adaptor**				
D.1.9.1		20mm x 15mm	no	1		
D.1.9.2		20mm x 20mm	no	1		
D.1.9.3		20mm x 25mm	no	1		
D.1.9.4		25mm x 15mm	no	1		
D.1.9.5		25mm x 20mm	no	1		
D.1.9.6		25mm x 25mm	no	1		
D.1.9.7		32mm x 15mm	no	1		
D.1.9.8		32mm x 20mm	no	1		
D.1.9.9		32mm x 25mm	no	1		
D.1.9.10		32mm x 32mm	no	1		
D.1.9.11		40mm x 25mm	no	1		
D.1.9.12		40mm x 32mm	no	1		
D.1.9.13		40mm x 40mm	no	1		
D.1.9.14		40mm x 50mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.9.15		50mm x 25mm	no	1		
D.1.9.16		50mm x 32mm	no	1		
D.1.9.17		50mm x 40mm	no	1		
D.1.9.18		50mm x 50mm	no	1		
D.1.9.19		63mm x 40mm	no	1		
D.1.9.20		63mm x 50mm	no	1		
D.1.9.21		63mm x 65mm	no	1		
D.1.9.22		75mm x 50mm	no	1		
D.1.9.23		75mm x 65mm	no	1		
D.1.9.24		75mm x 80mm	no	1		
D.1.9.25		90mm x 50mm	no	1		
D.1.9.26		90mm x 65mm	no	1		
D.1.9.27		90mm x 80mm	no	1		
D.1.9.28		110mm x 80mm	no	1		
D.1.9.29		110mm x 100mm	no	1		
D.1.9.30		63mm x 50mm	no	1		
D.1.9.31		75mm x 63mm	no	1		
D.1.9.32		90mm x 63mm	no	1		
D.1.9.33		90mm x 75mm	no	1		
D.1.9.34		110mm x 90mm	no	1		
D.1.10		**Reducing Tee**				
D.1.10.1		25mm x 20mm	no	1		
D.1.10.2		32mm x 20mm	no	1		
D.1.10.3		32mm x 25mm	no	1		
D.1.10.4		40mm x 25mm	no	1		
D.1.10.5		40mm x 32mm	no	1		
D.1.10.6		50mm x 25mm	no	1		
D.1.10.7		50mm x 32mm	no	1		
D.1.10.8		50mm x 40mm	no	1		
D.1.10.9		63mm x 40mm	no	1		
D.1.10.10		63mm x 50mm	no	1		
D.1.10.11		75mm x 63mm	no	1		
D.1.10.12		90mm x 63mm	no	1		
D.1.10.13		90mm x 75mm	no	1		
D.1.10.14		110mm x 90mm	no	1		
D.1.11		**Equal Tee**				
D.1.11.1		16mm	no	1		
D.1.11.2		20mm	no	1		
D.1.11.3		25mm	no	1		
D.1.11.4		32mm	no	1		
D.1.11.5		40mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.11.6		50mm	no	1		
D.1.11.7		63mm	no	1		
D.1.11.8		75mm	no	1		
D.1.11.9		90mm	no	1		
D.1.11.10		110mm	no	1		
D.1.12		**Male/Female Elbow adaptor**				
D.1.12.1		20mm x 15mm	no	1		
D.1.12.2		20mm x 20mm	no	1		
D.1.12.3		25mm x 15mm	no	1		
D.1.12.4		25mm x 20mm	no	1		
D.1.12.5		25mm x 25mm	no	1		
D.1.12.6		32mm x 15mm	no	1		
D.1.12.7		32mm x 20mm	no	1		
D.1.12.8		32mm x 25mm	no	1		
D.1.12.9		32mm x 32mm	no	1		
D.1.12.10		40mm x 20mm	no	1		
D.1.12.11		40mm x 25mm	no	1		
D.1.12.12		40mm x 32mm	no	1		
D.1.12.13		40mm x 40mm	no	1		
D.1.12.14		50mm x 32mm	no	1		
D.1.12.15		50mm x 40mm	no	1		
D.1.12.16		50mm x 50mm	no	1		
D.1.12.17		63mm x 40mm	no	1		
D.1.12.18		63mm x 50mm	no	1		
D.1.12.19		63mm x 65mm	no	1		
D.1.12.20		75mm x 50mm	no	1		
D.1.12.21		75mm x 65mm	no	1		
D.1.13		**Clamp Saddles (6 BAR)**				
D.1.13.1		25mm x 15mm	no	1		
D.1.13.2		25mm x 20mm	no	1		
D.1.13.3		32mm x 15mm	no	1		
D.1.13.4		32mm x 20mm	no	1		
D.1.13.5		32mm x 25mm	no	1		
D.1.13.6		40mm x 15mm	no	1		
D.1.13.7		40mm x 20mm	no	1		
D.1.13.8		40mm x 25mm	no	1		
D.1.13.9		50mm x 15mm	no	1		
D.1.13.10		50mm x 20mm	no	1		
D.1.13.11		50mm x 25mm	no	1		
D.1.13.12		50mm x 32mm	no	1		
D.1.13.13		63mm x 15mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.13.14		63mm x 20mm	no	1		
D.1.13.15		63mm x 25mm	no	1		
D.1.13.16		63mm x 32mm	no	1		
D.1.13.17		63mm x 40mm	no	1		
D.1.13.18		75mm x 15mm	no	1		
D.1.13.19		75mm x 20mm	no	1		
D.1.13.20		75mm x 25mm	no	1		
D.1.13.21		75mm x 32mm	no	1		
D.1.13.22		75mm x 40mm	no	1		
D.1.13.23		75mm x 50mm	no	1		
D.1.13.24		90mm x 15mm	no	1		
D.1.13.25		90mm x 20mm	no	1		
D.1.13.26		90mm x 25mm	no	1		
D.1.13.27		90mm x 32mm	no	1		
D.1.13.28		90mm x 40mm	no	1		
D.1.13.29		90mm x 50mm	no	1		
D.1.13.30		110mm x 15mm	no	1		
D.1.13.31		110mm x 20mm	no	1		
D.1.13.32		110mm x 25mm	no	1		
D.1.13.33		110mm x 32mm	no	1		
D.1.13.34		110mm x 40mm	no	1		
D.1.13.35		110mm x 50mm	no	1		
D.1.13.36		110mm x 80mm	no	1		
D.1.13.37		125mm x 15mm	no	1		
D.1.13.38		125mm x 20mm	no	1		
D.1.13.39		125mm x 25mm	no	1		
D.1.13.40		125mm x 32mm	no	1		
D.1.13.41		125mm x 40mm	no	1		
D.1.13.42		125mm x 50mm	no	1		
D.1.13.43		125mm x 80mm	no	1		
D.1.13.44		160mm x 15mm	no	1		
D.1.13.45		160mm x 20mm	no	1		
D.1.13.46		160mm x 25mm	no	1		
D.1.13.47		160mm x 32mm	no	1		
D.1.13.48		160mm x 40mm	no	1		
D.1.13.49		160mm x 50mm	no	1		
D.1.13.50		160mm x 80mm	no	1		
D.1.13.51		160mm x 100mm	no	1		
D.1.14		**Reinforced Clamp Saddles (10 Bar)**				
D.1.14.1		25mm x 15mm	no	1		
D.1.14.2		25mm x 20mm	no	1		
D.1.14.3		32mm x 15mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.14.4		32mm x 20mm	no	1		
D.1.14.5		32mm x 25mm	no	1		
D.1.14.6		40mm x 15mm	no	1		
D.1.14.7		40mm x 20mm	no	1		
D.1.14.8		40mm x 25mm	no	1		
D.1.14.9		50mm x 15mm	no	1		
D.1.14.10		50mm x 20mm	no	1		
D.1.14.11		50mm x 25mm	no	1		
D.1.14.12		50mm x 32mm	no	1		
D.1.14.13		63mm x 15mm	no	1		
D.1.14.14		63mm x 20mm	no	1		
D.1.14.15		63mm x 25mm	no	1		
D.1.14.16		63mm x 32mm	no	1		
D.1.14.17		63mm x 40mm	no	1		
D.1.14.18		75mm x 15mm	no	1		
D.1.14.19		75mm x 20mm	no	1		
D.1.14.20		75mm x 25mm	no	1		
D.1.14.21		75mm x 32mm	no	1		
D.1.14.22		75mm x 40mm	no	1		
D.1.14.23		75mm x 50mm	no	1		
D.1.14.24		90mm x 15mm	no	1		
D.1.14.25		90mm x 20mm	no	1		
D.1.14.26		90mm x 25mm	no	1		
D.1.14.27		90mm x 32mm	no	1		
D.1.14.28		90mm x 40mm	no	1		
D.1.14.29		90mm x 50mm	no	1		
D.1.14.30		110mm x 15mm	no	1		
D.1.14.31		110mm x 20mm	no	1		
D.1.14.32		110mm x 25mm	no	1		
D.1.14.33		110mm x 32mm	no	1		
D.1.14.34		110mm x 40mm	no	1		
D.1.14.35		110mm x 50mm	no	1		
D.1.14.36		110mm x 80mm	no	1		
D.1.14.37		125mm x 15mm	no	1		
D.1.14.38		125mm x 20mm	no	1		
D.1.14.39		125mm x 25mm	no	1		
D.1.14.40		125mm x 32mm	no	1		
D.1.14.41		125mm x 40mm	no	1		
D.1.14.42		125mm x 50mm	no	1		
D.1.14.43		125mm x 80mm	no	1		
D.1.14.44		160mm x 15mm	no	1		
D.1.14.45		160mm x 20mm	no	1		
D.1.14.46		160mm x 25mm	no	1		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.14.47		160mm x 32mm	no	1		
D.1.14.48		160mm x 40mm	no	1		
D.1.14.49		160mm x 50mm	no	1		
D.1.14.50		160mm x 80mm	no	1		
D.1.14.51		160mm x 100mm	no	1		
D.1.14.52		200mm x 20mm	no	1		
D.1.14.53		200mm x 25mm	no	1		
D.1.14.54		200mm x 50mm	no	1		
D.1.14.55		200mm x 80mm	no	1		
D.1.14.56		250mm x 50mm	no	1		
D.1.14.57		250mm x 80mm	no	1		
D.1.14.58		315mm x 50mm	no	1		
D.1.14.59		315mm x 80mm	no	1		
D.1.15		**HDPE pipe complete with fittings (Class 6)**				
D.1.15.1		20mm	m	100		
D.1.15.2		25mm	m	100		
D.1.15.3		32mm	m	100		
D.1.15.4		40mm	m	100		
D.1.15.5		50mm	m	100		
D.1.15.6		63mm	m	100		
D.1.15.7		75mm	m	100		
D.1.15.8		90mm	m	100		
D.1.15.9		110mm	m	100		
D.1.16		**HDPE pipe complete with fittings (Class 10)**				
D.1.16.1		20mm	m	100		
D.1.16.2		25mm	m	100		
D.1.16.3		32mm	m	100		
D.1.16.4		40mm	m	100		
D.1.16.5		50mm	m	100		
D.1.16.6		63mm	m	100		
D.1.16.7		75mm	m	100		
D.1.16.8		90mm	m	100		
D.1.16.9		110mm	m	100		
D.1.17		**HDPE pipe complete with fittings (Class 12)**				
D.1.17.1		20mm	m	100		
D.1.17.2		25mm	m	100		
D.1.17.3		32mm	m	100		
D.1.17.4		40mm	m	100		
D.1.17.5		50mm	m	100		
D.1.17.6		63mm	m	100		
D		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D		**Brought forward**				
D.1.17.7		75mm	m	100		
D.1.17.8		90mm	m	100		
D.1.17.9		110mm	m	100		
D.1.18		**HDPE pipe complete with fittings (Class 16)**				
D.1.18.1		20mm	m	100		
D.1.18.2		25mm	m	100		
D.1.18.3		32mm	m	100		
D.1.18.4		40mm	m	100		
D.1.18.5		50mm	m	100		
D.1.18.6		63mm	m	100		
D.1.18.7		75mm	m	100		
D.1.18.8		90mm	m	100		
D.1.18.9		110mm	m	100		
D.1.19		**HDPE quick coupling pipe (Class 10)**				
D.1.19.1		50 mm	m	6		
D.1.19.2		63 mm	m	6		
D.1.19.3		75 mm	m	6		
D.1.19.4		90 mm	m	6		
D.1.19.5		110 mm	m	6		
D.1.20		**HDPE WELDED PIPES (Class 12 minimum)**				
D.1.20.1		150mm	m	6		
D.1.20.2		200mm	m	6		
D.1.20.3		250 mm	m	6		
D.1.20.4		300 mm	m	6		
D.1.20.5		Welding of HDPE joints, pipe circumference	m	1		
D.1.20.6		Allow a sum for fabrication of special HDPE pipes fabrication	Prov sum	1	60000	R 60 000,00
D.1.20.7		Profit over above	%	60000		
		TOTAL SECTION "D" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200C	**SECTION E : PVC PIPES AND FITTINGS**				
E.1		Supply, deliver,install and test the following SABS approved PVC pipes and fittings.				
E.1.1		**uPVC pipe complete with spigot, integral socket and rubber ring seal (Class 6)**				
E.1.1.1		50 mm	m	6		
E.1.1.2		63 mm	m	6		
E.1.1.3		75 mm	m	6		
E.1.1.4		90 mm	m	6		
E.1.1.5		110 mm	m	6		
E.1.1.6		125 mm	m	6		
E.1.1.7		140 mm	m	6		
E.1.1.8		160 mm	m	6		
E.1.1.9		200 mm	m	6		
E.1.1.10		250 mm	m	6		
E.1.1.11		315 mm	m	6		
E.1.2		**uPVC pipe complete with spigot, integral socket and rubber ring seal (Class 09)**				
E.1.2.1		50 mm	m	6		
E.1.2.2		63 mm	m	6		
E.1.2.3		75 mm	m	6		
E.1.2.4		90 mm	m	6		
E.1.2.5		110 mm	m	6		
E.1.2.6		125 mm	m	6		
E.1.2.7		140 mm	m	6		
E.1.2.8		160 mm	m	6		
E.1.2.9		200 mm	m	6		
E.1.2.10		250 mm	m	6		
E.1.2.11		315 mm	m	6		
E.1.3		**uPVC pipe complete with spigot, integral socket and rubber ring seal (Class 12)**				
E.1.3.1		50 mm	m	6		
E.1.3.2		63 mm	m	6		
E.1.3.3		75 mm	m	6		
E.1.3.4		90 mm	m	6		
E.1.3.5		110 mm	m	6		
E.1.3.6		125 mm	m	6		
E.1.3.7		140 mm	m	6		
E.1.3.8		160 mm	m	6		
E.1.3.9		200 mm	m	6		
E.1.3.10		250 mm	m	6		
E.1.3.11		315 mm	m	6		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E.1.4		**uPVC pipe complete with spigot, integral socket and rubber ring seal (Class 16)**				
E.1.4.1		50 mm	m	6		
E.1.4.2		63 mm	m	6		
E.1.4.3		75 mm	m	6		
E.1.4.4		90 mm	m	6		
E.1.4.5		110 mm	m	6		
E.1.4.6		125 mm	m	6		
E.1.4.7		140 mm	m	6		
E.1.4.8		160 mm	m	6		
E.1.4.9		200 mm	m	6		
E.1.4.10		250 mm	m	6		
E.1.4.11		315 mm	m	6		
E.1.5		**uPVC pipe complete with spigot, integral socket and rubber ring seal (Class 20)**				
E.1.5.1		50 mm	m	6		
E.1.5.2		63 mm	m	6		
E.1.5.3		75 mm	m	6		
E.1.5.4		90 mm	m	6		
E.1.5.5		110 mm	m	6		
E.1.5.6		125 mm	m	6		
E.1.5.7		140 mm	m	6		
E.1.5.8		160 mm	m	6		
E.1.5.9		200 mm	m	6		
E.1.5.10		250 mm	m	6		
E.1.5.11		315 mm	m	6		
E2.1.1		**mPVC pipe complete with spigot, integral socket and rubber ring seal (Class 6)**				
E2.1.1.1		50 mm	m	6		
E2.1.1.2		63 mm	m	6		
E2.1.1.3		75 mm	m	6		
E2.1.1.4		90 mm	m	6		
E2.1.1.5		110 mm	m	6		
E2.1.1.6		125 mm	m	6		
E2.1.1.7		140 mm	m	6		
E2.1.1.8		160 mm	m	6		
E2.1.1.9		200 mm	m	6		
E2.1.1.10		250 mm	m	6		
E2.1.1.11		315 mm	m	6		
E2.1.2		**mPVC pipe complete with spigot, integral socket and rubber ring seal (Class 09)**				
E2.1.2.1		50 mm	m	6		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E2.1.2.2		63 mm	m	6		
E2.1.2.3		75 mm	m	6		
E2.1.2.4		90 mm	m	6		
E2.1.2.5		110 mm	m	6		
E2.1.2.6		125 mm	m	6		
E2.1.2.7		140 mm	m	6		
E2.1.2.8		160 mm	m	6		
E2.1.2.9		200 mm	m	6		
E2.1.2.10		250 mm	m	6		
E2.1.2.11		315 mm	m	6		
E2.1.3		**mPVC pipe complete with spigot, integral socket and rubber ring seal (Class 12)**				
E2.1.3.1		50 mm	m	6		
E2.1.3.2		63 mm	m	6		
E2.1.3.3		75 mm	m	6		
E2.1.3.4		90 mm	m	6		
E2.1.3.5		110 mm	m	6		
E2.1.3.6		125 mm	m	6		
E2.1.3.7		140 mm	m	6		
E2.1.3.8		160 mm	m	6		
E2.1.3.9		200 mm	m	6		
E2.1.3.10		250 mm	m	6		
E2.1.3.11		315 mm	m	6		
E2.1.4		**mPVC pipe complete with spigot, integral socket and rubber ring seal (Class 16)**				
E2.1.4.1		50 mm	m	6		
E2.1.4.2		63 mm	m	6		
E2.1.4.3		75 mm	m	6		
E2.1.4.4		90 mm	m	6		
E2.1.4.5		110 mm	m	6		
E2.1.4.6		125 mm	m	6		
E2.1.4.7		140 mm	m	6		
E2.1.4.8		160 mm	m	6		
E2.1.4.9		200 mm	m	6		
E2.1.4.10		250 mm	m	6		
E2.1.4.11		315 mm	m	6		
E2.1.5		**mPVC pipe complete with spigot, integral socket and rubber ring seal (Class 20)**				
E2.1.5.1		50 mm	m	6		
E2.1.5.2		63 mm	m	6		
E2.1.5.3		75 mm	m	6		
E2.1.5.4		90 mm	m	6		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E2.1.5.5		110 mm	m	6		
E2.1.5.6		125 mm	m	6		
E2.1.5.7		140 mm	m	6		
E2.1.5.8		160 mm	m	6		
E2.1.5.9		200 mm	m	6		
E2.1.5.10		250 mm	m	6		
E2.1.5.11		315 mm	m	6		
E.1.6		**COUPLINGS DOUBLE & REPAIR**				
E.1.6.1		50 mm	no	1		
E.1.6.2		63 mm	no	1		
E.1.6.3		75 mm	no	1		
E.1.6.4		90 mm	no	1		
E.1.6.5		110 mm	no	1		
E.1.6.6		125 mm	no	1		
E.1.6.7		140 mm	no	1		
E.1.6.8		160 mm	no	1		
E.1.6.9		200 mm	no	1		
E.1.6.10		250 mm	no	1		
E.1.6.11		315 mm	no	1		
E.1.7		**Pipe seal to female thread elbow**				
E.1.7.1		50 mm x 2 inch	no	1		
E.1.7.2		63 mm x 2 inch	no	1		
E.1.7.3		75 mm x 2 inch	no	1		
E.1.7.4		75 mm x 3 inch	no	1		
E.1.7.5		90 mm x 3 inch	no	1		
E.1.7.6		110 mm x 3 inch	no	1		
E.1.7.7		110 mm x 4 inch	no	1		
E.1.7.8		125 mm x 3 inch	no	1		
E.1.7.9		125 mm x 4 inch	no	1		
E.1.7.10		140 mm x 3 inch	no	1		
E.1.7.11		140 mm x 4 inch	no	1		
E.1.7.12		160 mm x 3 inch	no	1		
E.1.7.13		160 mm x 4 inch	no	1		
E.1.7.14		200 mm x 3 inch	no	1		
E.1.7.15		200 mm x 4 inch	no	1		
E.1.8		**FLANGE ADAPTORS EPOXY COATED ALUMINIUM (TABLE D)**				
E.1.8.1		50mm	no	1		
E.1.8.2		63mm	no	1		
E.1.8.3		75mm	no	1		
E.1.8.4		90mm	no	1		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E.1.8.5		110mm	no	1		
E.1.8.6		125mm	no	1		
E.1.8.7		140mm	no	1		
E.1.8.8		160mm	no	1		
E.1.8.9		200mm	no	1		
E.1.8.10		250mm	no	1		
E.1.8.11		315mm	no	1		
E.1.9		**FLANGE ADAPTORS CAST IRON BITUMEN COATED (TABLE D)**				
E.1.9.1		50mm	no	1		
E.1.9.2		63mm	no	1		
E.1.9.3		75mm	no	1		
E.1.9.4		90mm	no	1		
E.1.9.5		110mm	no	1		
E.1.9.6		125mm	no	1		
E.1.9.7		140mm	no	1		
E.1.9.8		160mm	no	1		
E.1.9.9		200mm	no	1		
E.1.9.10		250mm	no	1		
E.1.9.11		315mm	no	1		
E.1.10		**BENDS EPOXY COATED ALUMINIUM (64-45)**				
E.1.10.1		50mm	no	1		
E.1.10.2		63mm	no	1		
E.1.10.3		75mm	no	1		
E.1.10.4		90mm	no	1		
E.1.10.5		110mm	no	1		
E.1.10.6		125mm	no	1		
E.1.10.7		140mm	no	1		
E.1.10.8		160mm	no	1		
E.1.10.9		200mm	no	1		
E.1.10.10		250mm	no	1		
E.1.11		**BENDS CAST IRON BITUMEN COATED (11,5-90)**				
E.1.11.1		50mm	no	1		
E.1.11.2		63mm	no	1		
E.1.11.3		75mm	no	1		
E.1.11.4		90mm	no	1		
E.1.11.5		110mm	no	1		
E.1.11.6		125mm	no	1		
E.1.11.7		140mm	no	1		
E.1.11.8		160mm	no	1		
E.1.11.9		200mm	no	1		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E.1.11.10		250mm	no	1		
E.1.12		**COUPLING EPOXY COATED ALUMINIUM (9 BAR)**				
E.1.12.1		50mm	no	1		
E.1.12.2		63mm	no	1		
E.1.12.3		75mm	no	1		
E.1.12.4		90mm	no	1		
E.1.12.5		110mm	no	1		
E.1.12.6		125mm	no	1		
E.1.12.7		140mm	no	1		
E.1.12.8		160mm	no	1		
E.1.12.9		200mm	no	1		
E.1.12.10		250mm	no	1		
E.1.13		**COUPLING CAST IRON BITUMEN COATED (16 BAR)**				
E.1.13.1		50mm	no	1		
E.1.13.2		63mm	no	1		
E.1.13.3		75mm	no	1		
E.1.13.4		90mm	no	1		
E.1.13.5		110mm	no	1		
E.1.13.6		125mm	no	1		
E.1.13.7		140mm	no	1		
E.1.13.8		160mm	no	1		
E.1.13.9		200mm	no	1		
E.1.13.10		250mm	no	1		
E.1.14		**ADAPTOR B.S.P MALE &FEMALE**				
E.1.14.1		50mm x 2"				
E.1.14.2		63mm x 2"				
E.1.14.3		75mm x 2"				
E.1.14.4		75mm x 3"				
E.1.14.5		90mm x 3"				
E.1.14.6		90mm x 4"				
E.1.14.7		110mm x 3"				
E.1.14.8		110mm x 4"				
E.1.14.9		125mm x 4"				
E.1.14.10		125mm x 5"				
E.1.14.11		140mm x 4"				
E.1.14.12		140mm x 5"				
E.1.14.13		140mm x 6"				
E.1.14.14		160mm x 6"				
E.1.14.15		160mm x 6"				
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E.1.15		**END CAPS**				
E.1.15.1		50mm	no	1		
E.1.15.2		63mm	no	1		
E.1.15.3		75mm	no	1		
E.1.15.4		90mm	no	1		
E.1.15.5		110mm	no	1		
E.1.15.6		125mm	no	1		
E.1.15.7		140mm	no	1		
E.1.15.8		160mm	no	1		
E.1.15.9		200mm	no	1		
E.1.15.10		250mm	no	1		
E.1.15.11		315mm	no	1		
E.1.16		**EQUAL TEES**				
E.1.16.1		50mm	no	1		
E.1.16.2		63mm	no	1		
E.1.16.3		75mm	no	1		
E.1.16.4		90mm	no	1		
E.1.16.5		110mm	no	1		
E.1.16.6		125mm	no	1		
E.1.16.7		140mm	no	1		
E.1.16.8		160mm	no	1		
E.1.16.9		200mm	no	1		
E.1.16.10		250mm	no	1		
E.1.16.11		315mm	no	1		
E.1.17		**BENDS - 22 & 11.25 DEGREES**				
E.1.17.1		50mm	no	1		
E.1.17.2		63mm	no	1		
E.1.17.3		75mm	no	1		
E.1.17.4		90mm	no	1		
E.1.17.5		110mm	no	1		
E.1.17.6		125mm	no	1		
E.1.17.7		140mm	no	1		
E.1.17.8		160mm	no	1		
E.1.17.9		200mm	no	1		
E.1.17.10		250mm	no	1		
E.1.17.11		315mm	no	1		
E.1.18		**BENDS - 90 & 45 DEGREES**				
E.1.18.1		50mm	no	1		
E.1.18.2		63mm	no	1		
E.1.18.3		75mm	no	1		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E.1.18.4		90mm	no	1		
E.1.18.5		110mm	no	1		
E.1.18.6		125mm	no	1		
E.1.18.7		140mm	no	1		
E.1.18.8		160mm	no	1		
E.1.18.9		200mm	no	1		
E.1.18.10		250mm	no	1		
E.1.18.11		315mm	no	1		
E.1.19		**Male/Female Reducer class 9**				
E.1.19.1		50mm x 40mm	no	1		
E.1.19.2		63mm x 40mm	no	1		
E.1.19.3		63mm x 50mm	no	1		
E.1.19.4		75mm x 50mm	no	1		
E.1.19.5		75mm x 63mm	no	1		
E.1.19.6		90mm x 63mm	no	1		
E.1.19.7		90mm x 75mm	no	1		
E.1.19.8		110mm x 75mm	no	1		
E.1.19.9		110mm x 90mm	no	1		
E.1.19.10		125mm x 90mm	no	1		
E.1.19.11		125mm x 110mm	no	1		
E.1.19.12		140mm x 110mm	no	1		
E.1.19.13		140mm x 125mm	no	1		
E.1.19.14		160mm x 110mm	no	1		
E.1.19.15		160mm x 125mm	no	1		
E.1.19.16		160mm x 140mm	no	1		
E.1.19.17		200mm x 160mm	no	1		
E.1.19.18		250mm x 200mm	no	1		
E.1.20		**Reducing Cross**				
E.1.20.1		50mm x 40mm	no	1		
E.1.20.2		63mm x 40mm	no	1		
E.1.20.3		63mm x 50mm	no	1		
E.1.20.4		75mm x 50mm	no	1		
E.1.20.5		75mm x 63mm	no	1		
E.1.20.6		90mm x 63mm	no	1		
E.1.20.7		90mm x 75mm	no	1		
E.1.20.8		110mm x 75mm	no	1		
E.1.20.9		110mm x 90mm	no	1		
E.1.20.10		125mm x 90mm	no	1		
E.1.20.11		125mm x 110mm	no	1		
E.1.20.12		140mm x 110mm	no	1		
E.1.20.13		140mm x 125mm	no	1		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E.1.20.14		160mm x 110mm	no	1		
E.1.20.15		160mm x 125mm	no	1		
E.1.20.16		160mm x 140mm	no	1		
E.1.20.17		200mm x 160mm	no	1		
E.1.20.18		250mm x 200mm	no	1		
E.1.21		**Reducing Tee**				
E.1.21.1		50mm x 40mm	no	1		
E.1.21.2		63mm x 40mm	no	1		
E.1.21.3		63mm x 50mm	no	1		
E.1.21.4		75mm x 50mm	no	1		
E.1.21.5		75mm x 63mm	no	1		
E.1.21.6		90mm x 63mm	no	1		
E.1.21.7		90mm x 75mm	no	1		
E.1.21.8		110mm x 75mm	no	1		
E.1.21.9		110mm x 90mm	no	1		
E.1.21.10		125mm x 90mm	no	1		
E.1.21.11		125mm x 110mm	no	1		
E.1.21.12		140mm x 110mm	no	1		
E.1.21.13		140mm x 125mm	no	1		
E.1.21.14		160mm x 110mm	no	1		
E.1.21.15		160mm x 125mm	no	1		
E.1.21.16		160mm x 140mm	no	1		
E.1.21.17		200mm x 160mm	no	1		
E.1.21.18		250mm x 200mm	no	1		
E.1.22		**FLANGED ON BRANCH TEE (Table D)**				
E.1.22.1		50mm	no	1		
E.1.22.2		63mm	no	1		
E.1.22.3		75mm	no	1		
E.1.22.4		90mm	no	1		
E.1.22.5		110mm	no	1		
E.1.22.6		125mm	no	1		
E.1.22.7		140mm	no	1		
E.1.22.8		160mm	no	1		
E.1.22.9		200mm	no	1		
E.1.22.10		250mm	no	1		
E.1.22.11		315mm	no	1		
E.1.23		**ADAPTOR PVC-AC**				
E.1.23.1		50mm	no	1		
E.1.23.2		63mm	no	1		
E.1.23.3		75mm	no	1		
E		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
E		**Brought forward**				
E.1.23.4		90mm	no	1		
E.1.23.5		110mm	no	1		
E.1.23.6		125mm	no	1		
E.1.23.7		140mm	no	1		
E.1.23.8		160mm	no	1		
E.1.23.9		200mm	no	1		
E.1.23.10		250mm	no	1		
E.1.23.11		315mm	no	1		
E.1.24		**ADAPTOR FLANGED (Table D)**				
E.1.24.1		50mm	no	1		
E.1.24.2		63mm	no	1		
E.1.24.3		75mm	no	1		
E.1.24.4		90mm	no	1		
E.1.24.5		110mm	no	1		
E.1.24.6		125mm	no	1		
E.1.24.7		140mm	no	1		
E.1.24.8		160mm	no	1		
E.1.24.9		200mm	no	1		
E.1.24.10		250mm	no	1		
E.1.24.11		315mm	no	1		
		TOTAL SECTION "E" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION F : DRIP IRRIGATION				
F.1		Supply, deliver,install and test the following inline drippers and dripperlines complete with fittings.				
F.1.1		**Pressure compensating Inline Drippers (PC) 1-3.5 bar**				
F.1.1.1		17mm x 1.0 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.2		17mm x 1.2 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.3		17mm x 1.6 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.4		17mm x 2.1 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.5		17mm x 3.5 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.6		17mm x 1.0 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.7		17mm x 1.2 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.8		17mm x 1.6 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.9		17mm x 2.1 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.10		17mm x 3.5 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.11		17mm x 1.0 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.12		17mm x 1.2 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.13		17mm x 1.6 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.14		17mm x 2.1 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.15		17mm x 3.5 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.16		17mm x 1.0 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.17		17mm x 1.2 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.18		17mm x 1.6 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.19		17mm x 2.1 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.20		17mm x 3.5 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.21		17mm x 1.0 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.22		17mm x 1.2 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.23		17mm x 1.6 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.24		17mm x 2.1 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.25		17mm x 3.5 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.26		17mm x 1.0 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.27		17mm x 1.2 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.28		17mm x 1.6 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.29		17mm x 2.1 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.1.30		17mm x 3.5 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.31		17mm x 1.0 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.32		17mm x 1.2 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.33		17mm x 1.6 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.34		17mm x 2.1 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.35		17mm x 3.5 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.36		17mm x 1.0 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.37		17mm x 1.2 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.38		17mm x 1.6 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.39		17mm x 2.1 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.40		17mm x 3.5 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.41		17mm x 1.0 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.42		17mm x 1.2 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.43		17mm x 1.6 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.44		17mm x 2.1 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.45		17mm x 3.5 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.46		17mm x 1.0 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.47		17mm x 1.2 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.48		17mm x 1.6 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.49		17mm x 2.1 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.50		17mm x 3.5 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.51		17mm x 1.0 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.52		17mm x 1.2 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.53		17mm x 1.6 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.54		17mm x 2.1 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.55		17mm x 3.5 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.56		17mm x 1.0 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.57		17mm x 1.2 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.58		17mm x 1.6 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.59		17mm x 2.1 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.60		17mm x 3.5 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.61		17mm x 1.0 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.1.62		17mm x 1.2 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.63		17mm x 1.6 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.64		17mm x 2.1 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.65		17mm x 3.5 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.66		17mm x 1.0 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.67		17mm x 1.2 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.68		17mm x 1.6 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.69		17mm x 2.1 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.70		17mm x 3.5 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.71		17mm x 1.0 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.72		17mm x 1.2 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.73		17mm x 1.6 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.74		17mm x 2.1 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.75		17mm x 3.5 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.76		17mm x 1.0 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.77		17mm x 1.2 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.78		17mm x 1.6 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.79		17mm x 2.1 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.80		17mm x 3.5 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.81		17mm x 1.0 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.82		17mm x 1.2 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.83		17mm x 1.6 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.84		17mm x 2.1 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.85		17mm x 3.5 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.86		17mm x 1.0 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.87		17mm x 1.2 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.88		17mm x 1.6 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.89		17mm x 2.1 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.90		17mm x 3.5 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.91		16mm x 0.7 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.92		16mm x 0.9 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.93		16mm x 1.2 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.1.94		16mm x 1.6 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.95		16mm x 2.1 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.96		16mm x 3.4 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.97		16mm x 0.7 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.98		16mm x 0.9 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.99		16mm x 1.2 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.100		16mm x 1.6 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.101		16mm x 2.1 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.102		16mm x 3.4 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.103		16mm x 0.7 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.104		16mm x 0.9 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.105		16mm x 1.2 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.106		16mm x 1.6 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.107		16mm x 2.1 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.108		16mm x 3.4 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.109		16mm x 0.7 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.110		16mm x 0.9 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.111		16mm x 1.2 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.112		16mm x 1.6 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.113		16mm x 2.1 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.114		16mm x 3.4 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.1.115		16mm x 0.7 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.116		16mm x 0.9 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.117		16mm x 1.2 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.118		16mm x 1.6 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.119		16mm x 2.1 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.120		16mm x 3.4 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.121		16mm x 0.7 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.122		16mm x 0.9 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.123		16mm x 1.2 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.124		16mm x 1.6 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.125		16mm x 2.1 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.1.126		16mm x 3.4 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.127		16mm x 0.7 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.128		16mm x 0.9 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.129		16mm x 1.2 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.130		16mm x 1.6 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.131		16mm x 2.1 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.132		16mm x 3.4 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.133		16mm x 0.7 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.134		16mm x 0.9 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.135		16mm x 1.2 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.136		16mm x 1.6 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.137		16mm x 2.1 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.138		16mm x 3.4 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.1.139		16mm x 0.7 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.140		16mm x 0.9 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.141		16mm x 1.2 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.142		16mm x 1.6 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.143		16mm x 2.1 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.144		16mm x 3.4 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.145		16mm x 0.7 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.146		16mm x 0.9 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.147		16mm x 1.2 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.148		16mm x 1.6 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.149		16mm x 2.1 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.150		16mm x 3.4 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.151		16mm x 0.7 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.152		16mm x 0.9 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.153		16mm x 1.2 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.154		16mm x 1.6 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.155		16mm x 2.1 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.156		16mm x 3.4 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.157		16mm x 0.7 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.1.158		16mm x 0.9 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.159		16mm x 1.2 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.160		16mm x 1.6 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.161		16mm x 2.1 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.162		16mm x 3.4 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.1.163		16mm x 0.7 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.164		16mm x 0.9 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.165		16mm x 1.2 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.166		16mm x 1.6 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.167		16mm x 2.1 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.168		16mm x 3.4 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.169		16mm x 0.7 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.170		16mm x 0.9 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.171		16mm x 1.2 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.172		16mm x 1.6 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.173		16mm x 2.1 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.174		16mm x 3.4 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.175		16mm x 0.7 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.176		16mm x 0.9 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.177		16mm x 1.2 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.178		16mm x 1.6 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.179		16mm x 2.1 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.180		16mm x 3.4 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.181		16mm x 0.7 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.182		16mm x 0.9 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.183		16mm x 1.2 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.184		16mm x 1.6 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.185		16mm x 2.1 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.186		16mm x 3.4 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.1.187		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.188		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.189		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.1.190		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.191		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.192		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.193		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.194		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.195		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.196		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.197		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.198		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.199		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.200		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.201		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.202		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.203		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.204		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.205		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.206		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.207		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.208		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.209		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.210		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.211		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.212		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.213		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.214		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.215		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.216		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.1.217		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.218		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.219		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.220		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.221		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.1.222		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.223		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.224		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.225		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.226		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.227		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.228		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.229		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.230		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.231		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.232		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.233		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.234		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.235		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.236		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.237		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.238		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.239		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.240		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.241		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.242		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.243		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.244		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.245		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.1.246		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2		**Non - Pressure compensating inline drippers (NPC) 1-3.5 bar**				
F.1.2.1		12mm x 0.8 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.2		12mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.3		12mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.4		12mm x 2.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.5		12mm x 4.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.6		12mm x 0.8 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.7		12mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.8		12mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.9		12mm x 2.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.10		12mm x 4.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.11		12mm x 0.8 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.12		12mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.13		12mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.14		12mm x 2.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.15		12mm x 4.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.16		12mm x 0.8 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.17		12mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.18		12mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.19		12mm x 2.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.20		12mm x 4.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.21		12mm x 0.8 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.22		12mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.23		12mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.24		12mm x 2.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.25		12mm x 4.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.26		12mm x 0.8 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.27		12mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.28		12mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.29		12mm x 2.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.30		12mm x 4.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.31		12mm x 0.8 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.32		12mm x 1.2 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.33		12mm x 1.6 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.34		12mm x 2.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.35		12mm x 4.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.36		12mm x 0.8 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.37		12mm x 1.2 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.38		12mm x 1.6 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.39		12mm x 2.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.40		12mm x 4.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.41		12mm x 0.8 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.42		12mm x 1.2 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.43		12mm x 1.6 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.44		12mm x 2.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.45		12mm x 4.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.46		12mm x 0.8 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.47		12mm x 1.2 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.48		12mm x 1.6 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.49		12mm x 2.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.50		12mm x 4.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.51		12mm x 0.8 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.52		12mm x 1.2 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.53		12mm x 1.6 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.54		12mm x 2.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.55		12mm x 4.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.56		12mm x 0.8 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.57		12mm x 1.2 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.58		12mm x 1.6 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.59		12mm x 2.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.60		12mm x 4.0 l/h x dripper spacing x 0.6 mm wall thickness	m	1		
F.1.2.61		17mm x 1.0 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.62		17mm x 1.2 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.63		17mm x 1.6 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.64		17mm x 2.1 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.65		17mm x 3.5 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.66		17mm x 1.0 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.67		17mm x 1.2 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.68		17mm x 1.6 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.69		17mm x 2.1 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.70		17mm x 3.5 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.71		17mm x 1.0 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.72		17mm x 1.2 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.73		17mm x 1.6 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.74		17mm x 2.1 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.75		17mm x 3.5 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.76		17mm x 1.0 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.77		17mm x 1.2 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.78		17mm x 1.6 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.79		17mm x 2.1 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.80		17mm x 3.5 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.81		17mm x 1.0 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.82		17mm x 1.2 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.83		17mm x 1.6 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.84		17mm x 2.1 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.85		17mm x 3.5 l/h x 0.75 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.86		17mm x 1.0 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.87		17mm x 1.2 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.88		17mm x 1.6 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.89		17mm x 2.1 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.90		17mm x 3.5 l/h x 1.0 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.91		17mm x 1.0 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.92		17mm x 1.2 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.93		17mm x 1.6 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.94		17mm x 2.1 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.95		17mm x 3.5 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.96		17mm x 1.0 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.97		17mm x 1.2 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.98		17mm x 1.6 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.99		17mm x 2.1 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.100		17mm x 3.5 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.101		17mm x 1.0 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.102		17mm x 1.2 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.103		17mm x 1.6 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.104		17mm x 2.1 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.105		17mm x 3.5 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.106		17mm x 1.0 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.107		17mm x 1.2 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.108		17mm x 1.6 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.109		17mm x 2.1 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.110		17mm x 3.5 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.111		17mm x 1.0 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.112		17mm x 1.2 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.113		17mm x 1.6 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.114		17mm x 2.1 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.115		17mm x 3.5 l/h x 0.75 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.116		17mm x 1.0 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.117		17mm x 1.2 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.118		17mm x 1.6 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.119		17mm x 2.1 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.120		17mm x 3.5 l/h x 1.0 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.121		17mm x 1.0 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.122		17mm x 1.2 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.123		17mm x 1.6 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.124		17mm x 2.1 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.125		17mm x 3.5 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.126		17mm x 1.0 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.127		17mm x 1.2 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.128		17mm x 1.6 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.129		17mm x 2.1 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.130		17mm x 3.5 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.131		17mm x 1.0 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.132		17mm x 1.2 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.133		17mm x 1.6 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.134		17mm x 2.1 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.135		17mm x 3.5 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.136		17mm x 1.0 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.137		17mm x 1.2 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.138		17mm x 1.6 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.139		17mm x 2.1 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.140		17mm x 3.5 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.141		17mm x 1.0 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.142		17mm x 1.2 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.143		17mm x 1.6 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.144		17mm x 2.1 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.145		17mm x 3.5 l/h x 0.75 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.146		17mm x 1.0 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.147		17mm x 1.2 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.148		17mm x 1.6 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.149		17mm x 2.1 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.150		17mm x 3.5 l/h x 1.0 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.151		16mm x 0.7 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.152		16mm x 0.9 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.153		16mm x 1.2 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.154		16mm x 1.6 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.155		16mm x 2.1 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.156		16mm x 3.4 l/h x 0.3 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.157		16mm x 0.7 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.158		16mm x 0.9 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.159		16mm x 1.2 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.160		16mm x 1.6 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.161		16mm x 2.1 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.162		16mm x 3.4 l/h x 0.4 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.163		16mm x 0.7 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.164		16mm x 0.9 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.165		16mm x 1.2 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.166		16mm x 1.6 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.167		16mm x 2.1 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.168		16mm x 3.4 l/h x 0.5 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.169		16mm x 0.7 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.170		16mm x 0.9 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.171		16mm x 1.2 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.172		16mm x 1.6 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.173		16mm x 2.1 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.174		16mm x 3.4 l/h x 0.6 meter dripper spacing x 0,6 mm wall thickness	m	1		
F.1.2.175		16mm x 0.7 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.176		16mm x 0.9 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.177		16mm x 1.2 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.178		16mm x 1.6 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.179		16mm x 2.1 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.180		16mm x 3.4 l/h x 0.3 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.181		16mm x 0.7 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.182		16mm x 0.9 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.183		16mm x 1.2 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.184		16mm x 1.6 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.185		16mm x 2.1 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.186		16mm x 3.4 l/h x 0.4 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.187		16mm x 0.7 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.188		16mm x 0.9 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.189		16mm x 1.2 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.190		16mm x 1.6 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.191		16mm x 2.1 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.192		16mm x 3.4 l/h x 0.5 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.193		16mm x 0.7 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.194		16mm x 0.9 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.195		16mm x 1.2 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.196		16mm x 1.6 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.197		16mm x 2.1 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.198		16mm x 3.4 l/h x 0.6 meter dripper spacing x 0,4 mm wall thickness	m	1		
F.1.2.199		16mm x 0.7 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.200		16mm x 0.9 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.201		16mm x 1.2 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.202		16mm x 1.6 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.203		16mm x 2.1 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.204		16mm x 3.4 l/h x 0.3 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.205		16mm x 0.7 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.206		16mm x 0.9 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.207		16mm x 1.2 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.208		16mm x 1.6 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.209		16mm x 2.1 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.210		16mm x 3.4 l/h x 0.4 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.211		16mm x 0.7 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.212		16mm x 0.9 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.213		16mm x 1.2 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.214		16mm x 1.6 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.215		16mm x 2.1 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.216		16mm x 3.4 l/h x 0.5 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.217		16mm x 0.7 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.218		16mm x 0.9 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.219		16mm x 1.2 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.220		16mm x 1.6 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.221		16mm x 2.1 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.222		16mm x 3.4 l/h x 0.6 meter dripper spacing x 0,9 mm wall thickness	m	1		
F.1.2.223		16mm x 0.7 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.224		16mm x 0.9 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.225		16mm x 1.2 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.226		16mm x 1.6 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.227		16mm x 2.1 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.228		16mm x 3.4 l/h x 0.3 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.229		16mm x 0.7 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.230		16mm x 0.9 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.231		16mm x 1.2 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.232		16mm x 1.6 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.233		16mm x 2.1 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.234		16mm x 3.4 l/h x 0.4 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.235		16mm x 0.7 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.236		16mm x 0.9 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.237		16mm x 1.2 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.238		16mm x 1.6 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.239		16mm x 2.1 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.240		16mm x 3.4 l/h x 0.5 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.241		16mm x 0.7 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.242		16mm x 0.9 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.243		16mm x 1.2 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.244		16mm x 1.6 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.245		16mm x 2.1 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.246		16mm x 3.4 l/h x 0.6 meter dripper spacing x 1,2 mm wall thickness	m	1		
F.1.2.247		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.248		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.249		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.250		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.251		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.252		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.253		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.254		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.255		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.256		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.257		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.258		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.259		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.260		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.261		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.262		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.263		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.264		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.265		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.266		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.267		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.268		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.269		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.270		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.271		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.272		20mm x 1.0 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.273		20mm x 1.2 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.274		20mm x 1.6 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.275		20mm x 2.1 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.276		20mm x 3.5 l/h x dripper spacing x 1.2 mm wall thickness	m	1		
F.1.2.277		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.278		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.279		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.280		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.281		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.282		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.283		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.284		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.285		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.286		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.287		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.288		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.289		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.290		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.291		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.292		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.293		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.2.294		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.295		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.296		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.297		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.298		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.299		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.300		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.301		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.302		20mm x 1.0 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.303		20mm x 1.2 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.304		20mm x 1.6 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.305		20mm x 2.1 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.2.306		20mm x 3.5 l/h x dripper spacing x 0.9 mm wall thickness	m	1		
F.1.3		**INSERT FITTINGS**				
F.1.3.1		12mm short coupling	no	1		
F.1.3.2		16mm short coupling	no	1		
F.1.3.3		Reducing short coupling	no	1		
F.1.3.4		12mm long coupling	no	1		
F.1.3.5		16mm long coupling	no	1		
F.1.3.6		17mm long coupling	no	1		
F.1.3.7		17mm long coupling	no	1		
F.1.3.8		20mm long coupling	no	1		
F.1.3.9		16/12mm long reducing	no	1		
F.1.3.10		17/16mm long reducing	no	1		
F.1.3.11		20/16mm long reducing	no	1		
F.1.3.12		20/17mm long reducing	no	1		
F.1.3.13		12mm elbow long insert	no	1		
F.1.3.14		16mm elbow long insert	no	1		
F.1.3.15		20mm elbow long insert	no	1		
F.1.3.16		17mm elbow long insert	no	1		
F.1.3.17		12x12x12 long insert T	no	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.1.3.18		16x16x16 long insert T	no	1		
F.1.3.19		17x17x17 long insert T	no	1		
F.1.3.20		20x20x20 long insert T	no	1		
F.1.3.21		16x12x16 reducing T	no	1		
F.1.3.22		Dripline LPD Barb 17mm	no	1		
F.1.3.23		Dripline LPD Barb 16mm	no	1		
F.1.3.24		Barb Connector 17mm x ½" Male	no	1		
F.1.3.25		Barb Connector 16mm x ½" Male	no	1		
F.1.3.26		Dripline Flush VLV Barb20 W/Snap Clip	no	1		
F.1.3.27		Dripline Flush VLV Barb17 W/Snap Clip	no	1		
F.1.3.28		Dripline Flush VLV Barb16 W/Snap Clip	no	1		
F.1.3.29		Multi Outlet 3/4" x 6 x 12mm 6 way	no	1		
F.1.3.30		Multi Outlet 1" x 6 x 16mm 6 way	no	1		
F.1.3.31		Combination saddle + nut 32mm poly pipe or bigger	no	1		
F.1.3.32		Stopper - 12/16/17mm	no	1		
F.1.3.33		Stopper figure 8 20mm	no	1		
F.1.3.34		2 way angle barb connector - 16 X 3/4 MALE	no	1		
F.1.4		**BLIND PIPE (LDPE)**				
F.1.4.1		12 mm	m	1		
F.1.4.2		16 mm	m	1		
F.1.4.3		17 mm	m	1		
F.1.4.4		20 mm	m	1		
F.2		**Supply, deliver,install and test the following online drippers complete with fittings.**				
F.2.1		**Pressure compensating and Non Drain online drippers**				
F.2.1		1.0 l/h (seal 0.2 bar, fully open 0.6 - 3.5 bar)	no	1		
F.2.2		2.2 l/h (seal 0.2 bar, fully open 0.6 - 3.5 bar)	no	1		
F.2.3		3.8 l/h (seal 0.2 bar, fully open 0.6 - 3.5 bar)	no	1		
F.2.4		8.0 l/h (seal 0.2 bar, fully open 0.6 - 3.5 bar)	no	1		
F.2.5		3.1 l/h (seal 0.4 bar, fully open 1.1 - 3.5 bar)	no	1		
F.2.6		5.3 l/h (seal 0.2 bar, fully open 1.0 - 3.5 bar) - Pressure range 10 - 35m	no	1		
F		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
F		**Brought forward**				
F.2.7		11 l/h (seal 0.4 bar, fully open 1.1 - 3.5 bar)	no	1		
F.2.2		**Non Pressure compensating Button Dripper**				
F.2.2.1		2 l/h				
F.2.2.2		4 l/h				
F.2.2.3		8 l/h				
F.2.3		**BUTTON DRIPPER ACCESSORIES (3x5 mm tube)**				
F.2.3.1		Single Threaded outlet adaptor	no	1		
F.2.3.2		2-way threaded branch adaptor	no	1		
F.2.3.3		2-way barbed branch adaptor	no	1		
F.2.3.4		4-way threaded branch adaptor	no	1		
F.2.3.5		4-way barbed branch adaptor	no	1		
F.2.3.6		Barb adaptor for multi outlet	no	1		
F.2.3.7		Connector JDW 3x5mm (used with 5mm Odx 3mm ID flex tube)	no	1		
F.2.3.8		Dripeg - flow equalizer or dripper (30 degree diagonal labyrinth)	no	1		
F.2.3.9		Snapeg (30 degree diagonal external grip)	no	1		
F.2.3.10		Flextubing 5mm OD x 3mm ID	m	100		
F.2.3.11		Flextubing 5mm OD x 3mm ID	m	500		
F.2.3.12		Manifold 4-way complete with 400mm tube and peg	no	1		
F.2.3.13		Manifold 4-way complete with 600mm tube and peg	no	1		
F.2.3.14		Manifold 2-way complete with 400mm tube and peg	no	1		
F.2.3.15		Manifold 2-way complete with 600mm tube and peg	no	1		
		TOTAL SECTION "F" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION G : SPRINKLER IRRIGATION				
G.1		**Supply, deliver,install and test the following sprinklers and complete with fittings.**				
G.1.1		**Pressure compensating Swivel Sprinklers (1-4 bar)**				
G.1.1.1		20 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.2		25 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.3		30 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.4		35 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.5		40 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.6		45 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.7		50 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.8		55 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.9		60 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.10		65 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.11		70 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.12		75 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.13		80 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.14		85 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.15		90 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.16		95 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.17		100 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.18		105 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.19		110 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.20		20 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.21		25 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.22		30 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.23		35 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.24		40 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.25		45 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.26		50 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.27		55 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.28		60 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.29		65 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.30		70 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no			
G.1.1.31		75 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.32		80 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.33		85 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.34		90 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.35		95 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.36		100 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.37		105 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.38		110 l/h long range swivel Sprinkler head,4-8 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.39		20 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.40		25 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.41		30 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.42		35 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.43		40 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.44		45 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.45		50 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.46		55 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.47		60 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.48		65 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.49		70 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.50		75 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.51		80 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.52		85 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.53		90 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.54		95 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.55		100 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.56		105 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.57		110 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,90 cm micro tube length with stake	no	1		
G.1.1.58		20 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.59		25 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.60		30 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.61		35 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.62		40 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.63		45 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.64		50 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.65		55 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.66		60 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.67		65 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.68		70 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.69		75 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.70		80 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.71		85 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.72		90 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.73		95 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.74		100 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.75		105 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.76		110 l/h swivel Sprinkler upside down head,4-8 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.77		20 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.78		25 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.79		30 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.80		35 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.81		40 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.82		45 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.83		50 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.84		55 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.85		60 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.86		65 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.87		70 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.88		75 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.89		80 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.90		85 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.91		90 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.92		95 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.93		100 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.94		105 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.95		110 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.96		115 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.97		120 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.98		125 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.99		130 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.100		135 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.101		140 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.102		145 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.103		150 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.104		155 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.105		160 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.106		165 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.107		170 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.108		175 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.109		180 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.110		185 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.111		190 l/h long range swivel Sprinkler head with deflector,1-2 meter wetting diameter,60 cm micro tube length with stake	no	1		
G.1.1.112		170 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.113		190 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.114		210 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.115		230 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.116		250 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.117		270 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.118		290 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.119		310 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.120		330 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.121		350 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.122		370 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.123		390 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.124		410 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.125		430 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.126		450 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.127		470 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.128		490 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.129		510 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.130		530 l/h swivel Sprinkler ,8-14 meter wetting diameter,120 cm micro tube length with stake	no	1		
G.1.1.131		210 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.132		230 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.133		250 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.134		270 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.135		290 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.136		310 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.137		330 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.138		350 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.139		370 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.140		390 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.141		410 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.142		430 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.143		450 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.144		470 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.145		490 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.146		510 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.147		530 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.148		550 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.149		570 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.150		590 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.151		610 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.152		630 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.153		650 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.154		670 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.155		690 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.156		710 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.157		730 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.158		750 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.159		770 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.160		790 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.161		810 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.162		830 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.163		850 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.164		870 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.165		890 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.166		210 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.167		230 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.168		250 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.169		270 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.170		290 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.171		310 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.172		330 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.173		350 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.174		370 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.175		390 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.176		410 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.177		430 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.178		450 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.179		470 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.180		490 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.181		510 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.182		530 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.183		550 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.184		570 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.185		590 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.186		610 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.187		630 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.188		650 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.189		670 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.190		690 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.191		710 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.192		730 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.193		750 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.194		770 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.195		790 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.196		810 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.197		830 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.198		850 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.199		870 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.200		890 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging and insect protection	no	1		
G.1.1.201		210 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.202		230 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.203		250 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.204		270 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.205		290 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.206		310 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.207		330 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.208		350 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.209		370 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.210		390 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.211		410 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.212		430 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.213		450 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.214		470 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.215		490 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.216		510 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.217		530 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.218		550 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.219		570 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.220		590 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.221		610 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.222		630 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.223		650 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.224		670 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.225		690 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.226		710 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.227		730 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.228		750 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.229		770 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.230		790 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.231		810 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.232		830 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.233		850 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.234		870 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.235		890 l/h Pop-up impact Sprinkler ,12-20 meter wetting diameter, high trajectory (≥ 24 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.236		210 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.237		230 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.238		250 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.239		270 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.240		290 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.241		310 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.242		330 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.243		350 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.244		370 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.245		390 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.246		410 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.247		430 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.248		450 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.249		470 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.250		490 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.251		510 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.252		530 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.253		550 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.254		570 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.255		590 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.256		610 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.257		630 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.258		650 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.259		670 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.260		690 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.1.261		710 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.262		730 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.263		750 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.264		770 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.265		790 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.266		810 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.267		830 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.268		850 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.269		870 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.1.270		890 l/h Pop-up impact Sprinkler ,12-18 meter wetting diameter, low trajectory (< 15 degrees) complete with anti clogging ,anti drain and insect protection	no	1		
G.1.2		**Pressure compensating Impact Sprinklers (1-4 bar)**				
G.1.2.1		320 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.2		350 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.3		380 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.4		410 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.5		440 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.6		470 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.7		500 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.8		530 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.9		560 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.2.10		590 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.11		620 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.12		650 l/h single nozzle plastic impact Sprinkler ,15-20 meter wetting diameter, low trajectory (≤ 15 degrees) complete with UV-protected materials	no	1		
G.1.2.13		920 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.14		950 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.15		980 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.16		1010 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.17		1040 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.18		1070 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.19		1100 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.20		1130 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.21		1160 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.22		1190 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.23		1220 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.24		1250 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.25		1280 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.26		1310 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.27		1340 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.28		1370 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.2.29		1400 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.30		1430 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.31		1460 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.32		1490 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.33		1520 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
		1550 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.34		1580 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.35		1610 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.36		1640 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.37		1670 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.38		1700 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.39		1730 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.40		1760 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.41		1790 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.42		1820 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.43		1850 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.44		1880 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.45		1910 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.46		1940 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.47		1970 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.2.48		2000 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.49		2030 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.50		2060 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.51		2090 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.52		2120 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.53		2150 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.54		2180 l/h front and rear nozzle plastic impact Sprinkler ,20-30 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.55		1990 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.56		2040 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.57		2090 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.58		2140 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.59		2190 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.60		2240 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.61		2290 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.62		2340 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.63		2390 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.64		2440 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.65		2490 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.66		2540 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.67		2590 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.68		2640 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.69		2690 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.70		2740 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
G		**Brought forward**				
G.1.2.71		2790 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.72		2840 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.73		2890 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.74		2940 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.75		2990 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.76		3040 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.77		3090 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.78		3140 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.79		3190 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.80		3240 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.2.81		3290 l/h front and rear nozzle plastic impact Sprinkler ,30-40 meter wetting diameter, high trajectory (≈ 24 degrees) complete with UV-protected materials	no	1		
G.1.3		**PVC riser pipe threaded both sides**				
G.1.3.1		300 mm x 15 mm	no	1		
G.1.3.2		600 mm x 15 mm	no	1		
G.1.3.3		900 mm x 15 mm	no	1		
G.1.3.4		1200 mm x 15 mm	no	1		
G.1.3.5		300 mm x 20 mm	no	1		
G.1.3.6		600 mm x 20 mm	no	1		
G.1.3.7		900 mm x 20 mm	no	1		
G.1.3.8		1200 mm x 20 mm	no	1		
		TOTAL SECTION "G" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION H : FILTERS & AIRVALVES				
H.1		**Supply, deliver,install and test the following screen filters and fittings.**				
H.1.1		**Plastic manual screen filters complete with polyester screen**				
H.1.1.1		20mm 500 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.2		20mm 300 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.3		20mm 200 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.4		20mm 150 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.5		20mm 100 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.6		25mm 500 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.7		25mm 300 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.8		25mm 200 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.9		25mm 150 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.1.10		25mm 100 micron screen 1.5m³/h complete with drain valve	no	1		
H.1.2		**Plastic manual screen filters complete with stainless screen**				
H.1.2.1		20 mm, 1.5 m³/h 500 micron screen filter complete with drain valve	no	1		
H.1.2.2		25 mm, 3 m³/h 300 micron screen filter complete with drain valve	no	1		
H.1.2.3		40 mm, 10 m³/h 200 micron screen filter complete with drain valve	no	1		
H.1.2.4		50 mm, 20 m³/h 130 micron screen filter complete with drain valve	no	1		
H.1.2.5		80 mm, 30 m³/h 100 micron screen filter complete with drain valve	no	1		
H.1.2.6		80 mm Universal Flange, 30 m³/h 500 micron moulded screen filter complete with drain valve	no	1		
H.1.2.7		80 mm Universal Flange, 30 m³/h 300 micron moulded screen filter complete with drain valve	no	1		
H.1.2.8		80 mm Universal Flange, 30 m³/h 200 micron moulded screen filter complete with drain valve	no	1		
H.1.2.9		80 mm Universal Flange, 30 m³/h 130 micron moulded screen filter complete with drain valve	no	1		
H.1.2.10		80 mm Universal Flange, 30 m³/h 100 micron moulded screen filter complete with drain valve	no	1		
H		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
H		**Brought forward**				
H.1.3		**Steel manual screen filters complete with stainless screen**				
H.1.3.1		50 mm threaded, 20 m³/h 130 micron screen filter complete with drain valve	no	1		
H.1.3.2		80 mm Universal Flange, 50 m³/h 500 micron screen filter complete with drain valve	no	1		
H.1.3.3		80 mm Universal Flange, 50 m³/h 300 micron screen filter complete with drain valve	no	1		
H.1.3.4		80 mm Universal Flange, 50 m³/h 200 micron screen filter complete with drain valve	no	1		
H.1.3.5		80 mm Universal Flange, 50 m³/h 130 micron screen filter complete with drain valve	no	1		
H.1.3.6		80 mm Universal Flange, 50 m³/h 100 micron screen filter complete with drain valve	no	1		
H.1.3.7		100 mm Universal Flange, 80 m³/h 500 micron screen filter complete with drain valve	no	1		
H.1.3.8		100 mm Universal Flange, 80 m³/h 300 micron screen filter complete with drain valve	no	1		
H.1.3.9		100 mm Universal Flange, 80 m³/h 200 micron screen filter complete with drain valve	no	1		
H.1.3.10		100 mm Universal Flange, 80 m³/h 130 micron screen filter complete with drain valve	no	1		
H.1.3.11		100 mm Universal Flange, 80 m³/h 100 micron screen filter complete with drain valve	no	1		
H.1.3.12		160 mm Universal Flange, 160 m³/h 500 micron screen filter complete with drain valve	no	1		
H.1.3.13		160 mm Universal Flange, 160 m³/h 300 micron screen filter complete with drain valve	no	1		
H.1.3.14		160 mm Universal Flange, 160 m³/h 200 micron screen filter complete with drain valve	no	1		
H.1.3.15		160 mm Universal Flange, 160 m³/h 130 micron screen filter complete with drain valve	no	1		
H.1.3.16		160 mm Universal Flange, 160 m³/h 100 micron screen filter complete with drain valve	no	1		
H.1.3.17		200 mm Universal Flange, 300 m³/h 500 micron screen filter complete with drain valve	no	1		
H.1.3.18		200 mm Universal Flange, 300 m³/h 300 micron screen filter complete with drain valve	no	1		
H.1.3.19		200 mm Universal Flange, 300 m³/h 200 micron screen filter complete with drain valve	no	1		
H.1.3.20		200 mm Universal Flange, 300 m³/h 130 micron screen filter complete with drain valve	no	1		
H.1.3.21		200 mm Universal Flange, 300 m³/h 100 micron screen filter complete with drain valve	no	1		
H		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
H		**Brought forward**				
H.1.4		**Steel automatic screen filters complete with stainless screen**				
H.1.4.1		50 mm threaded, 20 m³/h 130 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.2		80 mm Universal Flange, 50 m³/h 500 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.3		80 mm Universal Flange, 50 m³/h 300 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.4		80 mm Universal Flange, 50 m³/h 200 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.5		80 mm Universal Flange, 50 m³/h 130 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.6		80 mm Universal Flange, 50 m³/h 100 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.7		100 mm Universal Flange, 80 m³/h 500 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.8		100 mm Universal Flange, 80 m³/h 300 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.9		100 mm Universal Flange, 80 m³/h 200 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.10		100 mm Universal Flange, 80 m³/h 130 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.11		100 mm Universal Flange, 80 m³/h 100 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.12		160 mm Universal Flange, 160 m³/h 500 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.13		160 mm Universal Flange, 160 m³/h 300 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.14		160 mm Universal Flange, 160 m³/h 200 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.15		160 mm Universal Flange, 160 m³/h 130 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.16		160 mm Universal Flange, 160 m³/h 100 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.17		200 mm Universal Flange, 300 m³/h 500 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.18		200 mm Universal Flange, 300 m³/h 300 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.19		200 mm Universal Flange, 300 m³/h 200 micron screen filter complete with drain valve	no	1		
H.1.4.20		200 mm Universal Flange, 300 m³/h 130 micron screen filter complete with backwash valve and controller	no	1		
H.1.4.21		200 mm Universal Flange, 300 m³/h 100 micron screen filter complete with backwash valve and controller	no	1		
H		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
H		**Brought forward**				
H.1.5		**Plastic automatic screen filters complete with stainless screen**	no	1		
H.1.5.1		50 mm threaded, 20 m³/h 130 micron screen filter complete with backwash valve and controller	no	1		
H.1.5.2		80 mm Universal Flange, 50 m³/h 500 micron screen filter complete with backwash valve and controller	no	1		
H.1.5.3		80 mm Universal Flange, 50 m³/h 300 micron screen filter complete with backwash valve and controller	no	1		
H.1.5.4		80 mm Universal Flange, 50 m³/h 200 micron screen filter complete with backwash valve and controller	no	1		
H.1.5.5		80 mm Universal Flange, 50 m³/h 130 micron screen filter complete with backwash valve and controller	no	1		
H.1.5.6		80 mm Universal Flange, 50 m³/h 100 micron screen filter complete with backwash valve and controller	no	1		
H.1.5.7		100 mm Universal Flange, 80 m³/h 500 micron screen filter complete with backwash valve and controller	no	1		
H.1.5.8		100 mm Universal Flange, 80 m³/h 300 micron screen filter complete with backwash valve and controller	no	1		
H.2		**Supply, deliver,install and test the following disc filters and fittings.**				
H.2.1		**Plastic manual disc filters complete with discs**				
H.2.1.1		20mm 500 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.2		20mm 300 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.3		20mm 200 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.4		20mm 150 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.5		20mm 100 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.6		25mm 500 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.7		25mm 300 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.8		25mm 200 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.9		25mm 150 micron disc 1.5m³/h complete with drain valve	no	1		
H.2.1.10		25mm 100 micron disc 1.5m³/h complete with drain valve	no	1		
H		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
H		**Brought forward**				
H.2.2		**Plastic manual disc filters complete with disc**				
H.2.2.1		20 mm, 1.5 m³/h 500 micron disc filter complete with drain valve	no	1		
H.2.2.2		25 mm, 3 m³/h 300 micron disc filter complete with drain valve	no	1		
H.2.2.3		40 mm, 10 m³/h 200 micron disc filter complete with drain valve	no	1		
H.2.2.4		50 mm, 20 m³/h 130 micron disc filter complete with drain valve	no	1		
H.2.2.5		80 mm, 30 m³/h 100 micron disc filter complete with drain valve	no	1		
H.2.2.6		80 mm Universal Flange, 30 m³/h 500 micron moulded disc filter complete with drain valve	no	1		
H.2.2.7		80 mm Universal Flange, 30 m³/h 300 micron moulded disc filter complete with drain valve	no	1		
H.2.2.8		80 mm Universal Flange, 30 m³/h 200 micron moulded disc filter complete with drain valve	no	1		
H.2.2.9		80 mm Universal Flange, 30 m³/h 130 micron moulded disc filter complete with drain valve	no	1		
H.2.2.10		80 mm Universal Flange, 30 m³/h 100 micron moulded disc filter complete with drain valve	no	1		
H.2.3		**Steel manual disc filters complete with discs**				
H.2.3.1		50 mm threaded, 20 m³/h 130 micron disc filter complete with drain valve	no	1		
H.2.3.2		80 mm Universal Flange, 50 m³/h 500 micron disc filter complete with drain valve	no	1		
H.2.3.3		80 mm Universal Flange, 50 m³/h 300 micron disc filter complete with drain valve	no	1		
H.2.3.4		80 mm Universal Flange, 50 m³/h 200 micron disc filter complete with drain valve	no	1		
H.2.3.5		80 mm Universal Flange, 50 m³/h 130 micron disc filter complete with drain valve	no	1		
H.2.3.6		80 mm Universal Flange, 50 m³/h 100 micron disc filter complete with drain valve	no	1		
H.2.3.7		100 mm Universal Flange, 80 m³/h 500 micron disc filter complete with drain valve	no	1		
H.2.3.8		100 mm Universal Flange, 80 m³/h 300 micron disc filter complete with drain valve	no	1		
H.2.3.9		100 mm Universal Flange, 80 m³/h 200 micron disc filter complete with drain valve	no	1		
H.2.3.10		100 mm Universal Flange, 80 m³/h 130 micron disc filter complete with drain valve	no	1		
H.2.3.11		100 mm Universal Flange, 80 m³/h 100 micron disc filter complete with drain valve	no	1		
H		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
H		**Brought forward**				
H.2.3.12		160 mm Universal Flange, 160 m³/h 500 micron disc filter complete with drain valve	no	1		
H.2.3.13		160 mm Universal Flange, 160 m³/h 300 micron disc filter complete with drain valve	no	1		
H.2.3.14		160 mm Universal Flange, 160 m³/h 200 micron disc filter complete with drain valve	no	1		
H.2.3.15		160 mm Universal Flange, 160 m³/h 130 micron disc filter complete with drain valve	no	1		
H.2.3.16		160 mm Universal Flange, 160 m³/h 100 micron disc filter complete with drain valve	no	1		
H.2.3.17		200 mm Universal Flange, 300 m³/h 500 micron disc filter complete with drain valve	no	1		
H.2.3.18		200 mm Universal Flange, 300 m³/h 300 micron disc filter complete with drain valve	no	1		
H.2.3.19		200 mm Universal Flange, 300 m³/h 200 micron disc filter complete with drain valve	no	1		
H.2.3.20		200 mm Universal Flange, 300 m³/h 130 micron disc filter complete with drain valve	no	1		
H.2.3.21		200 mm Universal Flange, 300 m³/h 100 micron disc filter complete with drain valve	no	1		
H.2.4		**Steel automatic disc filters complete with discs**				
H.2.4.1		50 mm threaded, 20 m³/h 130 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.2		80 mm Universal Flange, 50 m³/h 500 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.3		80 mm Universal Flange, 50 m³/h 300 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.4		80 mm Universal Flange, 50 m³/h 200 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.5		80 mm Universal Flange, 50 m³/h 130 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.6		80 mm Universal Flange, 50 m³/h 100 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.7		100 mm Universal Flange, 80 m³/h 500 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.8		100 mm Universal Flange, 80 m³/h 300 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.9		100 mm Universal Flange, 80 m³/h 200 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.10		100 mm Universal Flange, 80 m³/h 130 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.11		100 mm Universal Flange, 80 m³/h 100 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.12		160 mm Universal Flange, 160 m³/h 500 micron disc filter complete with backwash valve and controller	no	1		
H		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
H		**Brought forward**				
H.2.4.13		160 mm Universal Flange, 160 m³/h 300 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.14		160 mm Universal Flange, 160 m³/h 200 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.15		160 mm Universal Flange, 160 m³/h 130 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.16		160 mm Universal Flange, 160 m³/h 100 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.17		200 mm Universal Flange, 300 m³/h 500 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.18		200 mm Universal Flange, 300 m³/h 300 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.19		200 mm Universal Flange, 300 m³/h 200 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.20		200 mm Universal Flange, 300 m³/h 130 micron disc filter complete with backwash valve and controller	no	1		
H.2.4.21		200 mm Universal Flange, 300 m³/h 100 micron disc filter complete with backwash valve and controller	no	1		
H.2.5		**Plastic automatic disc filters complete with discs**				
H.2.5.1		50 mm threaded, 20 m³/h 130 micron disc filter complete with backwash valve and controller	no	1		
H.2.5.2		80 mm Universal Flange, 50 m³/h 500 micron disc filter complete with backwash valve and controller	no	1		
H.2.5.3		80 mm Universal Flange, 50 m³/h 300 micron disc filter complete with backwash valve and controller	no	1		
H.2.5.4		80 mm Universal Flange, 50 m³/h 200 micron disc filter complete with backwash valve and controller	no	1		
H.2.5.5		80 mm Universal Flange, 50 m³/h 130 micron disc filter complete with backwash valve and controller	no	1		
H.2.5.6		80 mm Universal Flange, 50 m³/h 100 micron disc filter complete with backwash valve and controller	no	1		
H.2.5.7		100 mm Universal Flange, 80 m³/h 500 micron disc filter complete with backwash valve and controller	no	1		
H.2.5.8		100 mm Universal Flange, 80 m³/h 300 micron disc filter complete with backwash valve and controller	no	1		
H.2.6		**Automatic Modular disc filters complete with discs**				
H.2.6.1		3 x 50 mm Module, 20 m³/h 130 micron disc filter complete with cast iron inlet and outlet manifold , three way solenoid valves , cast iron drain manifold and backwash controller	no	1		
H.2.6.2		3 x 50 mm Module, 20 m³/h 80 micron disc filter complete with cast iron inlet and outlet manifold , three way solonoid valves , cast iron drain manifold and backwash controller	no	1		
H.2.6.3		4 x 50 mm Module, 30 m³/h 25 micron disc filter complete with cast iron inlet and outlet manifold , three way solenoid valves , cast iron drain manifold and backwash controller	no	1		
H		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
H		**Brought forward**				
H.2.6.4		3 x 80 mm Module, 50 m³/h 130 micron disc filter complete with cast iron inlet and outlet manifold , three way solenoid valves , cast iron drain manifold and backwash controller	no	1		
H.2.6.5		3 x 80 mm Module, 50 m³/h 80 micron disc filter complete with cast iron inlet and outlet manifold , three way solenoid valves , cast iron drain manifold and backwash controller	no	1		
H.2.6.6		4 x 80 mm Module, 60 m³/h 130 micron disc filter complete with cast iron inlet and outlet manifold , three way solonoid valves , cast iron drain manifold and backwash controller	no	1		
H.2.6.7		3 x 100 mm Module, 80 m³/h 130 micron disc filter complete with cast iron inlet and outlet manifold , three way solonoid valves , cast iron drain manifold and backwash controller	no	1		
H.2.6.8		3 x 100 mm Module, 80 m³/h 80 micron disc filter complete with cast iron inlet and outlet manifold , three way solonoid valves , cast iron drain manifold and backwash controller	no	1		
H.2.6.9		4 x 100 mm Module, 100 m³/h 55 micron disc filter complete with cast iron inlet and outlet manifold , three way solonoid valves , cast iron drain manifold and backwash controller	no	1		
H.3		**Supply, deliver,install and test the following air valves and fittings.**				
H.3.1		**Double purpose air valves**				
H.3.1.1		25mm	no	1		
H.3.1.2		32mm	no	1		
H.3.1.3		40mm	no	1		
H.3.1.4		50mm	no	1		
H.3.2		**Vacuum breakers**				
H.3.2.1		25mm	no	1		
H.3.2.2		32mm	no	1		
H.3.2.3		40mm	no	1		
H.3.2.4		50mm	no	1		
H.3.3		**Automatic air valves,**				
H.3.3.1		25mm	no	1		
H.3.3.2		32mm	no	1		
H.3.3.3		40mm	no	1		
H.3.3.4		50mm	no	1		
		TOTAL SECTION "H" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION I : PUMPS & MOTORS,CONTROLS & CABLES				
i.1		**Supply, deliver,install and test the following single phase submersible borehole pump and motor complete with lead out cable and flow inducer (cooling) sleeve. All parts to be stainless steel**				
i.1.1		**Single stage submersible pump & Motor (304 stainless steel)**				
i.1.1.1		0.25 kW	no	1		
i.1.1.2		0.37 kW	no	1		
i.1.1.3		0.55 kW	no	1		
i.1.1.4		0.75 kW	no	1		
i.1.1.5		1.1 kW	no	1		
i.1.1.6		1.5 kW	no	1		
i.1.1.7		2.2 kW	no	1		
i.1.2		**Multistage submersible pump & Motor (304 Stainless steel)**				
i.1.2.1		0.25 kW	no	1		
i.1.2.2		0.37 kW	no	1		
i.1.2.3		0.55 kW	no	1		
i.1.2.4		0.75 kW	no	1		
i.1.2.5		1.1 kW	no	1		
i.1.2.6		1.5 kW	no	1		
i.1.2.7		2.2 kW	no	1		
i.1.3		**Single stage submersible pump & Motor (316 stainless steel)**				
i.1.3.1		0.25 kW	no	1		
i.1.3.2		0.37 kW	no	1		
i.1.3.3		0.55 kW	no	1		
i.1.3.4		0.75 kW	no	1		
i.1.3.5		1.1 kW	no	1		
i.1.3.6		1.5 kW				
i.1.3.7		2.2 kW				
i.1.4		**Multistage submersible pump & Motor (316 Stainless steel)**				
i.1.4.1		0.25 kW	no	1		
i.1.4.2		0.37 kW	no	1		
i.1.4.3		0.55 kW	no	1		
i.1.4.4		0.75 kW	no	1		
i.1.4.5		1.1 kW	no	1		
i.1.4.6		1.5 kW	no	1		
i.1.4.7		2.2 kW	no	1		
i.2		**Supply, deliver,install and test the following three phase submersible borehole pump and motor complete with lead out cable and flow inducer (cooling) sleeve. All parts to be stainless steel**				
i.2.1		**Single stage submersible pump & Motor (316 stainless steel)**				
i.2.1.1		0.25 kW	no	1		
i.2.1.2		0.37 kW	no	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.2.1.3		0.55 kW	no	1		
i.2.1.4		0.75 kW	no	1		
i.2.1.5		1.1 kW	no	1		
i.2.1.6		1.5 kW	no	1		
i.2.1.7		2.2 kW	no	1		
i.2.2		**Multistage submersible pump & Motor (316 Stainless steel)**				
i.2.2.1		1.5 kW	no	1		
i.2.2.2		2.2 kW	no	1		
i.2.2.3		3 kW	no	1		
i.2.2.4		3.7 kW	no	1		
i.2.2.5		4 kW	no	1		
i.2.2.6		5.5 kW	no	1		
i.2.2.7		7.5 kW	no	1		
i.2.2.8		11 kW	no	1		
i.2.2.9		15 kW	no	1		
i.2.2.10		18.5 kW	no	1		
i.2.2.11		22 kW	no	1		
i.2.2.12		30 kW	no	1		
i.2.2.13		37 kW	no	1		
i.2.2.14		45 kW	no	1		
i.2.2.15		55 kW	no	1		
i.2.3		**Single stage submersible pump & Motor (304 stainless steel)**				
i.2.3.1		0.25 kW				
i.2.3.2		0.37 kW				
i.2.3.3		0.55 kW				
i.2.3.4		0.75 kW				
i.2.3.5		1.1 kW				
i.2.3.6		1.5 kW				
i.2.3.7		2.2 kW				
i.2.4		**Multistage submersible pump & Motor (304 Stainless steel)**				
i.2.4.1		1.5 kW	no	1		
i.2.4.2		2.2 kW	no	1		
i.2.4.3		3 kW	no	1		
i.2.4.4		3.7 kW	no	1		
i.2.4.5		4 kW	no	1		
i.2.4.6		5.5 kW	no	1		
i.2.4.7		7.5 kW	no	1		
i.2.4.8		11 kW	no	1		
i.2.4.9		15 kW	no	1		
i.2.4.10		18.5 kW	no	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.2.4.11		22 kW	no	1		
i.2.4.12		30 kW	no	1		
i.2.4.13		37 kW	no	1		
i.2.4.14		45 kW	no	1		
i.2.4.15		55 kW				
i.3		**Supply, deliver,install and test the following three phase close coupled end suction pump and motor complete with cast iron impeller & cast iron and coated casing.**				
i.3.1		**Single stage end suction pump & Motor**				
i.3.1.1		3 kW	no	1		
i.3.1.2		3.7 kW	no	1		
i.3.1.3		4 kW	no	1		
i.3.1.4		5.5 kW	no	1		
i.3.1.5		7.5 kW	no	1		
i.3.1.6		11 kW	no	1		
i.3.1.7		15 kW	no	1		
i.3.1.8		18.5 kW	no	1		
i.3.1.9		22 kW	no	1		
i.3.1.10		30 kW	no	1		
i.3.1.11		37 kW	no	1		
i.3.1.12		45 kW	no	1		
i.3.1.13		55 kW	no	1		
i.3.2		**Two stage end suction pump & Motor**				
i.3.2.1		3 kW	no	1		
i.3.2.2		3.7 kW	no	1		
i.3.2.3		4 kW	no	1		
i.3.2.4		5.5 kW	no	1		
i.3.2.5		7.5 kW	no	1		
i.3.2.6		11 kW	no	1		
i.3.2.7		15 kW	no	1		
i.3.2.8		18.5 kW	no	1		
i.3.2.9		22 kW	no	1		
i.3.2.10		30 kW	no	1		
i.3.2.11		37 kW	no	1		
i.3.2.12		45 kW	no	1		
i.3.2.13		55 kW	no	1		
			no	1		
i.4		**Supply, deliver,install and test the following single phase centrifugal pump complete with cast iron impeller & cast iron and coated casing.**				
			no	1		
i.4.1		**Single Impeller**				
i.4.1.1		0.75 kW	no	1		
i.4.1.2		1.1 kW	no	1		
i.4.1.3		1.5 kW	no	1		
i.4.1.4		2.2 kW	no	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.4.2		**Twin Impeller**				
i.4.2.1		0.75 kW	no	1		
i.4.2.2		1.1 kW	no	1		
i.4.2.3		1.5 kW	no	1		
i.4.2.4		2.2 kW	no	1		
i.5		**Supply, deliver,install and test the following single phase centrifugal pump complete with cast iron impeller & cast iron and coated casing.**				
i.5.1		**Single Impeller**				
i.5.1.1		0.75 kW	no	1		
i.5.1.2		1.1 kW	no	1		
i.5.1.3		1.5 kW	no	1		
i.5.1.4		2.2 kW	no	1		
i.5.2		**Twin Impeller**				
i.5.2.1		0.75 kW	no	1		
i.5.2.2		1.1 kW	no	1		
i.5.2.3		1.5 kW	no	1		
i.5.2.4		2.2 kW	no	1		
i.6		**Supply, deliver,install and test the following long coupled end suction pump complete with cast iron impeller & cast iron and coated casing.**				
i.6.1		3 kW				
i.6.2		3.7 kW				
i.6.3		4 kW	no	1		
i.6.4		5.5 kW	no	1		
i.6.5		7.5 kW	no	1		
i.6.6		11 kW	no	1		
i.6.7		15 kW	no	1		
i.6.8		18.5 kW	no	1		
i.6.9		22 kW	no	1		
i.6.10		30 kW	no	1		
i.6.11		37 kW	no	1		
i.6.12		45 kW	no	1		
i.6.13		55 kW	no	1		
i.7		**Supply, deliver,install and test the following three phase motors complete with cast iron and coated frame .**				
i.7.1		**2 pole motor**				
i.7.1.1		3 kW	m	1		
i.7.1.2		3.7 kW	m	1		
i.7.1.3		4 kW	m	1		
i.7.1.4		5.5 kW	m	1		
i.7.1.5		7.5 kW	m	1		
i.7.1.6		11 kW	m	1		
i.7.1.7		15 kW	m	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.7.1.8		18.5 kW	m	1		
i.7.1.9		22 kW	m	1		
i.7.1.10		30 kW	m	1		
i.7.1.11		37 kW	m	1		
i.7.1.12		45 kW	m	1		
i.7.1.13		55 kW	m	1		
i.7.2		**4 pole motor**				
i.7.2.1		3 kW	m	1		
i.7.2.2		3.7 kW	m	1		
i.7.2.3		4 kW	m	1		
i.7.2.4		5.5 kW	m	1		
i.7.2.5		7.5 kW	m	1		
i.7.2.6		11 kW	m	1		
i.7.2.7		15 kW	m	1		
i.7.2.8		18.5 kW	m	1		
i.7.2.9		22 kW	m	1		
i.7.2.10		30 kW	m	1		
i.7.2.11		37 kW	m	1		
i.7.2.12		45 kW	m	1		
i.7.2.13		55 kW	m	1		
i.8		**Supply, deliver,install and test the following two core plus Earth SABS approved copper cables (SANS 1507)**				
i.8.1		**Steel Wired Armoured cable**				
i.8.1.1		1.5 mm^2	m	1		
i.8.1.2		2 mm^2	m	1		
i.8.1.3		6 mm^2	m	1		
i.8.1.4		10 mm^2	m	1		
i.8.1.5		16 mm^2	m	1		
i.8.1.6		25 mm^2	m	1		
i.8.1.7		35 mm^2	m	1		
i.8.1.8		50 mm^2	m	1		
i.8.1.9		70 mm^2	m	1		
i.8.1.10		95 mm^2	m	1		
i.8.1.11		120 mm^2	m	1		
i.8.1.12		150 mm^2	m	1		
i.8.1.13		185 mm^2	m	1		
i.8.2		**Submersible cable**				
i.8.2.1		1.5 mm^2	m	1		
i.8.2.2		2 mm^2	m	1		
i.8.2.3		6 mm^2	m	1		
i.8.2.4		10 mm^2	m	1		
i.8.2.5		16 mm^2	m	1		
i.8.2.6		25 mm^2	m	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.8.2.7		35 mm^2	m	1		
i.8.2.8		50 mm^2	m	1		
i.8.2.9		70 mm^2	m	1		
i.8.2.10		95 mm^2	m	1		
i.8.2.11		120 mm^2	m	1		
i.8.2.12		150 mm^2	m	1		
i.8.2.13		185 mm^2	m	1		
i.8.3		**Surfix**				
i.8.3.1		1.5 mm^2	m	1		
i.8.3.2		2 mm^2	m	1		
i.8.3.3		6 mm^2	m	1		
i.8.3.4		10 mm^2	m	1		
i.8.3.5		16 mm^2	m	1		
i.8.3.6		25 mm^2	m	1		
i.8.3.7		35 mm^2	m	1		
i.8.3.8		50 mm^2	m	1		
i.8.3.9		70 mm^2	m	1		
i.8.3.10		95 mm^2	m	1		
i.8.3.11		120 mm^2	m	1		
i.8.3.12		150 mm^2	m	1		
i.8.3.13		185 mm^2	m	1		
i.8.4		**Crabtyre**				
i.8.4.1		1.5 mm^2	m	1		
i.8.4.2		2 mm^2	m	1		
i.8.4.3		6 mm^2	m	1		
i.8.4.4		10 mm^2	m	1		
i.8.4.5		16 mm^2	m	1		
i.8.4.6		25 mm^2	m	1		
i.8.4.7		35 mm^2	m	1		
i.8.4.8		50 mm^2	m	1		
i.8.4.9		70 mm^2	m	1		
i.8.4.10		95 mm^2	m	1		
i.8.4.11		120 mm^2	m	1		
i.8.4.12		150 mm^2	m	1		
i.8.4.13		185 mm^2	m	1		
i.9		**Supply, deliver,install and test the following three core plus Earth SABS approved copper cables**				
i.9.1		**Steel Wired Armoured cable**				
i.9.1.1		1.5 mm^2	m	1		
i.9.1.2		2 mm^2	m	1		
i.9.1.3		6 mm^2	m	1		
i.9.1.4		10 mm^2	m	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.9.1.5		16 mm^2	m	1		
i.9.1.6		25 mm^2	m	1		
i.9.1.7		35 mm^2	m	1		
i.9.1.8		50 mm^2	m	1		
i.9.1.9		70 mm^2	m	1		
i.9.1.10		95 mm^2	m	1		
i.9.1.11		120 mm^2	m	1		
i.9.1.12		150 mm^2	m	1		
i.9.1.13		185 mm^2	m	1		
i.9.2		**Submersible cable**				
i.9.2.1		1.5 mm^2	m	1		
i.9.2.2		2 mm^2	m	1		
i.9.2.3		6 mm^2	m	1		
i.9.2.4		10 mm^2	m	1		
i.9.2.5		16 mm^2	m	1		
i.9.2.6		25 mm^2	m	1		
i.9.2.7		35 mm^2	m	1		
i.9.2.8		50 mm^2	m	1		
i.9.2.9		70 mm^2	m	1		
i.9.2.10		95 mm^2	m	1		
i.9.2.11		120 mm^2	m	1		
i.9.2.12		150 mm^2	m	1		
i.9.2.13		185 mm^2	m	1		
i.9.3		**Surfix**				
i.9.3.1		1.5 mm^2	m	1		
i.9.3.2		2 mm^2	m	1		
i.9.3.3		6 mm^2	m	1		
i.9.3.4		10 mm^2	m	1		
i.9.3.5		16 mm^2	m	1		
i.9.3.6		25 mm^2	m	1		
i.9.3.7		35 mm^2	m	1		
i.9.3.8		50 mm^2	m	1		
i.9.3.9		70 mm^2	m	1		
i.9.3.10		95 mm^2	m	1		
i.9.3.11		120 mm^2	m	1		
i.9.3.12		150 mm^2	m	1		
i.9.3.13		185 mm^2	m	1		
i.9.4		**Crabtyre**				
i.9.4.1		1.5 mm^2	m	1		
i.9.4.2		2 mm^2	m	1		
i.9.4.3		6 mm^2	m	1		
i.9.4.4		10 mm^2	m	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.9.4.5		16 mm^2	m	1		
i.9.4.6		25 mm^2	m	1		
i.9.4.7		35 mm^2	m	1		
i.9.4.8		50 mm^2	m	1		
i.9.4.9		70 mm^2	m	1		
i.9.4.10		95 mm^2	m	1		
i.9.4.11		120 mm^2	m	1		
i.9.4.12		150 mm^2	m	1		
i.9.4.13		185 mm^2	m	1		
I.10		**Supply, deliver,install and test the following four core plus Earth SABS approved copper cables (SANS 1507)**				
i.10.1		**Steel Wired Armoured cable**				
i.10.1.1		1.5 mm^2	m	1		
i.10.1.2		2 mm^2	m	1		
i.10.1.3		6 mm^2	m	1		
i.10.1.4		10 mm^2	m	1		
i.10.1.5		16 mm^2	m	1		
i.10.1.6		25 mm^2	m	1		
i.10.1.7		35 mm^2	m	1		
i.10.1.8		50 mm^2	m	1		
i.10.1.9		70 mm^2	m	1		
i.10.1.10		95 mm^2	m	1		
i.10.1.11		120 mm^2	m	1		
i.10.1.12		150 mm^2	m	1		
i.10.1.13		185 mm^2	m	1		
i.10.2		**Submersible cable**				
i.10.2.1		1.5 mm^2	m	1		
i.10.2.2		2 mm^2	m	1		
i.10.2.3		6 mm^2	m	1		
i.10.2.4		10 mm^2	m	1		
i.10.2.5		16 mm^2	m	1		
i.10.2.6		25 mm^2	m	1		
i.10.2.7		35 mm^2	m	1		
i.10.2.8		50 mm^2	m	1		
i.10.2.9		70 mm^2	m	1		
i.10.2.10		95 mm^2	m	1		
i.10.2.11		120 mm^2	m	1		
i.10.2.12		150 mm^2	m	1		
i.10.2.13		185 mm^2	m	1		
i.10.3		**Surfix**				
i.10.3.1		1.5 mm^2	m	1		
i.10.3.2		2 mm^2	m	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.10.3.3		6 mm^2	m	1		
i.10.3.4		10 mm^2	m	1		
i.10.3.5		16 mm^2	m	1		
i.10.3.6		25 mm^2	m	1		
i.10.3.7		35 mm^2	m	1		
i.10.3.8		50 mm^2	m	1		
i.10.3.9		70 mm^2	m	1		
i.10.3.10		95 mm^2	m	1		
i.10.3.11		120 mm^2	m	1		
i.10.3.12		150 mm^2	m	1		
i.10.3.13		185 mm^2	m	1		
i.10.4		**Crabtyre**				
i.10.4.1		1.5 mm^2	m	1		
i.10.4.2		2 mm^2	m	1		
i.10.4.3		6 mm^2	m	1		
i.10.4.4		10 mm^2	m	1		
i.10.4.5		16 mm^2	m	1		
i.10.4.6		25 mm^2	m	1		
i.10.4.7		35 mm^2	m	1		
i.10.4.8		50 mm^2	m	1		
i.10.4.9		70 mm^2	m	1		
i.10.4.10		95 mm^2	m	1		
i.10.4.11		120 mm^2	m	1		
i.10.4.12		150 mm^2	m	1		
i.10.4.13		185 mm^2	m	1		
I.11		**Supply, deliver,install and test the following single core plus Earth SABS approved Aluminium cables (SANS 1507)**				
i.11.1		**1000 Volts PVC unArmoured cable**				
i.11.1.1		50 mm^2	m	1		
i.11.1.2		70 mm^2	m	1		
i.11.1.3		95 mm^2	m	1		
i.11.1.4		120 mm^2	m	1		
i.11.1.5		150 mm^2	m	1		
i.11.1.6		185 mm^2	m	1		
i.11.1.7		240 mm^2	m	1		
i.11.1.8		300 mm^2	m	1		
i.11.1.9		400 mm^2	m	1		
i.11.2		**1000 Volts PVC Armoured cable**				
i.11.2.1		50 mm^2	m	1		
i.11.2.2		70 mm^2	m	1		
i.11.2.3		95 mm^2	m	1		
i.11.2.4		120 mm^2	m	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.11.2.5		150 mm^2	m	1		
i.11.2.6		185 mm^2	m	1		
i.11.2.7		240 mm^2	m	1		
i.11.2.8		300 mm^2	m	1		
i.11.2.9		400 mm^2	m	1		
I.12		**Supply, deliver,install and test the following three core plus Earth SABS approved Aluminium cables (SANS 1507)**				
i.12.1		**1000 Volts PVC unArmoured cable**				
i.12.1.1		50 mm^2	m	1		
i.12.1.2		70 mm^2	m	1		
i.12.1.3		95 mm^2	m	1		
i.12.1.4		120 mm^2	m	1		
i.12.1.5		150 mm^2	m	1		
i.12.1.6		185 mm^2	m	1		
i.12.1.7		240 mm^2	m	1		
i.12.1.8		300 mm^2	m	1		
i.12.1.9		400 mm^2	m	1		
i.12.2		**1000 Volts PVC Armoured cable**				
i.12.2.1		50 mm^2	m	1		
i.12.2.2		70 mm^2	m	1		
i.12.2.3		95 mm^2	m	1		
i.12.2.4		120 mm^2	m	1		
i.12.2.5		150 mm^2	m	1		
i.12.2.6		185 mm^2	m	1		
i.12.2.7		240 mm^2	m	1		
i.12.2.8		300 mm^2	m	1		
i.12.2.9		400 mm^2	m	1		
I.12		**Supply, deliver,install and test the following four core plus Earth SABS approved Aluminium cables (SANS 1507)**				
i.13.1		**1000 Volts PVC unArmoured cable**				
i.13.1.1		50 mm^2	m	1		
i.13.1.2		70 mm^2	m	1		
i.13.1.3		95 mm^2	m	1		
i.13.1.4		120 mm^2	m	1		
i.13.1.5		150 mm^2	m	1		
i.13.1.6		185 mm^2	m	1		
i.13.1.7		240 mm^2	m	1		
i.13.1.8		300 mm^2	m	1		
i.13.1.9		400 mm^2	m	1		
i.13.2		**1000 Volts PVC Armoured cable**				
i.13.2.1		50 mm^2	m	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.13.2.2		70 mm^2	m	1		
i.13.2.3		95 mm^2	m	1		
i.13.2.4		120 mm^2	m	1		
i.13.2.5		150 mm^2	m	1		
i.13.2.6		185 mm^2	m	1		
i.13.2.7		240 mm^2	m	1		
i.13.2.8		300 mm^2	m	1		
i.13.2.9		400 mm^2	m	1		
I.14		**Supply, deliver,install and test the following motor starters complete with Dry run protection ,Pump stall protection,Overload protection,Under voltage protection,Over voltage protection,phase protection,short circuit protection**				
i.14.1		**Single phase Direct on Line**				
i.14.1.1		0.25 kW	no	1		
i.14.1.2		0.37 kW	no	1		
i.14.1.3		0.55 kW	no	1		
i.14.1.4		0.75 kW	no	1		
i.14.1.5		1.1 kW	no	1		
i.14.1.6		1.5 kW	no	1		
i.14.1.7		2.2 kW	no	1		
i.14.2		**Three phase Direct on Line**				
i.14.2.1		0.25 kW	no	1		
i.14.2.2		0.37 kW	no	1		
i.14.2.3		0.55 kW	no	1		
i.14.2.4		0.75 kW	no	1		
i.14.2.5		1.1 kW	no	1		
i.14.2.6		1.5 kW	no	1		
i.14.2.7		2.2 kW	no	1		
i.14.2.8		3 kW	no	1		
i.14.2.9		3.7 kW	no	1		
i.14.2.10		4 kW	no	1		
i.14.2.11		5.5 kW	no	1		
i.14.2.12		7.5 kW	no	1		
i.14.3		**Star Delta Starter - open type**				
i.14.3.1		3 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.2		3.7 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.3		4 kW delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.4		5.5 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.14.3.5		7.5 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.6		11 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.7		15 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.8		18.5 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.9		22 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.10		30 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.11		37 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.12		45 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.3.13		55 kW star delta complete with thermal overload relay and star-delta timer	no	1		
i.14.4		**Star Delta Starter - enclosed type**				
i.14.4.1		3 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.2		3.7 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.3		4 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.4		5.5 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.5		7.5 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.6		11 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.7		15 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.8		18.5 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.9		22 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.10		30 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.14.4.11		37 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.12		45 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.14.4.13		55 kW star delta starter enclosed in powder coated mild steel enclosure (IP55) complete with ammeter ,isolator ,contactors thermal overload relay .mechanical interlock and star-delta timer	no	1		
i.15.4		**Soft Starter**				
		Motor size				
i.15.4.1		1.5 kW	no	1		
i.15.4.2		2.2 kW	no	1		
i.15.4.3		3 kW	no	1		
i.15.4.4		3.7 kW	no	1		
i.15.4.5		4 kW	no	1		
i.15.4.6		5.5 kW	no	1		
i.15.4.7		7.5 kW	no	1		
i.15.4.8		11 kW	no	1		
i.15.4.9		15 kW	no	1		
i.15.4.10		18.5 kW	no	1		
i.15.4.11		22 kW	no	1		
i.15.4.12		30 kW	no	1		
i.15.4.13		37 kW	no	1		
i.15.4.14		45 kW	no	1		
i.15.4.15		55 kW	no	1		
i.15.5		**Solar-Powered Variable Speed Drives (VSDs) for**				
		motor size				
i.15.5.1		1.5 kW	no	1		
i.15.5.2		2.2 kW	no	1		
i.15.5.3		3 kW	no	1		
i.15.5.4		3.7 kW	no	1		
i.15.5.5		4 kW	no	1		
i.15.5.6		5.5 kW	no	1		
i.15.5.7		7.5 kW	no	1		
i.15.5.8		11 kW	no	1		
i.15.5.9		15 kW	no	1		
i.15.5.10		18.5 kW	no	1		
i.15.5.11		22 kW	no	1		
i.15.5.12		30 kW	no	1		
i.15.5.13		37 kW	no	1		
i.15.5.14		45 kW	no	1		
i.15.5.15		55 kW	no	1		
i		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
i		**Brought forward**				
i.15.6		**Variable Speed Drives (VSDs) suitable for:**				
		motor size				
i.15.6.1		1.5 kW	no	1		
i.15.6.2		2.2 kW	no	1		
i.15.6.3		3 kW	no	1		
i.15.6.4		3.7 kW	no	1		
i.15.6.5		4 kW	no	1		
i.15.6.6		5.5 kW	no	1		
i.15.6.7		7.5 kW	no	1		
i.15.6.8		11 kW	no	1		
i.15.6.9		15 kW	no	1		
i.15.6.10		18.5 kW	no	1		
i.15.6.11		22 kW	no	1		
i.15.6.12		30 kW	no	1		
i.15.6.13		37 kW	no	1		
i.15.6.14		45 kW	no	1		
i.15.6.15		55 kW	no	1		
		TOTAL SECTION "i" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION J : LDPE PIPES AND FITTINGS				
J.1		**Supply, deliver,install and test the following non SABS approved LDPE pipes, fittings subject to engineers approval . A two year warranty for pipe and a year warranty for fittings . All material to be manufactured from virgin plastic**				
J.1.1		**Coupling Insert**				
J.1.1.1		15mm	no	1		
J.1.1.2		20mm	no	1		
J.1.1.3		25mm	no	1		
J.1.1.4		32mm	no	1		
J.1.1.5		40mm	no	1		
J.1.1.6		50mm	no	1		
J.1.2		**Endplug Insert**				
J.1.2.1		15mm	no	1		
J.1.2.2		20mm	no	1		
J.1.2.3		25mm	no	1		
J.1.2.4		32mm	no	1		
J.1.2.5		40mm	no	1		
J.1.2.6		50mm	no	1		
J.1.3		**Tee insert**				
J.1.3.1		15mm	no	1		
J.1.3.2		20mm	no	1		
J.1.3.3		25mm	no	1		
J.1.3.4		32mm	no	1		
J.1.3.5		40mm	no	1		
J.1.3.6		50mm	no	1		
J.1.4		**Elbow insert**				
J.1.4.1		15mm	no	1		
J.1.4.2		20mm	no	1		
J.1.4.3		25mm	no	1		
J.1.4.4		32mm	no	1		
J.1.4.5		40mm	no	1		
J.1.4.6		50mm	no	1		
J.1.5		**Male Adaptors**				
J.1.5.1		20mm x 15mm	no	1		
J.1.5.2		20mm x 20mm	no	1		
J.1.5.3		20mm x 25mm	no	1		
J.1.5.4		25mm x 15mm	no	1		
J.1.5.5		25mm x 20mm	no	1		
J.1.5.6		25mm x 25mm	no	1		
J.1.5.7		32mm x 15mm	no	1		
J		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
J		**Brought forward**				
J.1.5.8		32mm x 20mm	no	1		
J.1.5.9		32mm x 25mm	no	1		
J.1.5.10		32mm x 32mm	no	1		
J.1.5.11		40mm x 25mm	no	1		
J.1.5.12		40mm x 32mm	no	1		
J.1.5.13		40mm x 40mm	no	1		
J.1.5.14		40mm x 50mm	no	1		
J.1.5.15		50mm x 25mm	no	1		
J.1.5.16		50mm x 32mm	no	1		
J.1.5.17		50mm x 40mm	no	1		
J.1.5.18		50mm x 50mm	no	1		
J.1.6		**Female Adaptors**				
J.1.6.1		20mm x 15mm	no	1		
J.1.6.2		20mm x 20mm	no	1		
J.1.6.3		20mm x 25mm	no	1		
J.1.6.4		25mm x 15mm	no	1		
J.1.6.5		25mm x 20mm	no	1		
J.1.6.6		25mm x 25mm	no	1		
J.1.6.7		32mm x 15mm	no	1		
J.1.6.8		32mm x 20mm	no	1		
J.1.6.9		32mm x 25mm	no	1		
J.1.6.10		32mm x 32mm	no	1		
J.1.6.11		40mm x 25mm	no	1		
J.1.6.12		40mm x 32mm	no	1		
J.1.6.13		40mm x 40mm	no	1		
J.1.6.14		40mm x 50mm	no	1		
J.1.6.15		50mm x 25mm	no	1		
J.1.6.16		50mm x 32mm	no	1		
J.1.6.17		50mm x 40mm	no	1		
J.1.6.18		50mm x 50mm	no	1		
J.1.7		**Reducing Inserts**				
J.1.7.1		25mm x 20mm	no	1		
J.1.7.2		32mm x 20mm	no	1		
J.1.7.3		32mm x 25mm	no	1		
J.1.7.4		40mm x 25mm	no	1		
J.1.7.5		40mm x 32mm	no	1		
J.1.7.6		50mm x 25mm	no	1		
J.1.7.7		50mm x 32mm	no	1		
J.1.7.8		50mm x 40mm	no	1		
J		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
J		**Brought forward**				
J.1.8		**Female/Male Elbow Adaptor**				
J.1.8.1		20mm x 15mm	no	1		
J.1.8.2		20mm x 20mm	no	1		
J.1.8.3		20mm x 25mm	no	1		
J.1.8.4		25mm x 15mm	no	1		
J.1.8.5		25mm x 20mm	no	1		
J.1.8.6		25mm x 25mm	no	1		
J.1.8.7		32mm x 15mm	no	1		
J.1.8.8		32mm x 20mm	no	1		
J.1.8.9		32mm x 25mm	no	1		
J.1.8.10		32mm x 32mm	no	1		
J.1.8.11		40mm x 25mm	no	1		
J.1.8.12		40mm x 32mm	no	1		
J.1.8.13		40mm x 40mm	no	1		
J.1.8.14		40mm x 50mm	no	1		
J.1.8.15		50mm x 25mm	no	1		
J.1.8.16		50mm x 32mm	no	1		
J.1.8.17		50mm x 40mm	no	1		
J.1.8.18		50mm x 50mm	no	1		
J.1.9		**Female/ Male Tee Adaptor**				
J.1.9.1		20mm x 15mm	no	1		
J.1.9.2		20mm x 20mm	no	1		
J.1.9.3		20mm x 25mm	no	1		
J.1.9.4		25mm x 15mm	no	1		
J.1.9.5		25mm x 20mm	no	1		
J.1.9.6		25mm x 25mm	no	1		
J.1.9.7		32mm x 15mm	no	1		
J.1.9.8		32mm x 20mm	no	1		
J.1.9.9		32mm x 25mm	no	1		
J.1.9.10		32mm x 32mm	no	1		
J.1.9.11		40mm x 25mm	no	1		
J.1.9.12		40mm x 32mm	no	1		
J.1.9.13		40mm x 40mm	no	1		
J.1.9.14		40mm x 50mm	no	1		
J.1.9.15		50mm x 25mm	no	1		
J.1.9.16		50mm x 32mm	no	1		
J.1.9.17		50mm x 40mm	no	1		
J.1.9.18		50mm x 50mm	no	1		
J.1.10		**Reducing Tee**				
J.1.10.1		25mm x 20mm	no	1		
J.1.10.2		32mm x 20mm	no	1		
J		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
J		**Brought forward**				
J.1.10.3		32mm x 25mm	no	1		
J.1.10.4		40mm x 25mm	no	1		
J.1.10.5		40mm x 32mm	no	1		
J.1.10.6		50mm x 25mm	no	1		
J.1.10.7		50mm x 32mm	no	1		
J.1.10.8		50mm x 40mm	no	1		
J.1.11		**Equal Tee**				
J.1.11.1		15mm	no	1		
J.1.11.2		20mm	no	1		
J.1.11.3		25mm	no	1		
J.1.11.4		32mm	no	1		
J.1.11.5		40mm	no	1		
J.1.11.6		50mm	no	1		
J.1.12		**Male/Female Elbow adaptor**				
J.1.12.1		20mm x 15mm	no	1		
J.1.12.2		20mm x 20mm	no	1		
J.1.12.3		25mm x 15mm	no	1		
J.1.12.4		25mm x 20mm	no	1		
J.1.12.5		25mm x 25mm	no	1		
J.1.12.6		32mm x 15mm	no	1		
J.1.12.7		32mm x 20mm	no	1		
J.1.12.8		32mm x 25mm	no	1		
J.1.12.9		32mm x 32mm	no	1		
J.1.12.10		40mm x 20mm	no	1		
J.1.12.11		40mm x 25mm	no	1		
J.1.12.12		40mm x 32mm	no	1		
J.1.12.13		40mm x 40mm	no	1		
J.1.12.14		50mm x 32mm	no	1		
J.1.12.15		50mm x 40mm	no	1		
J.1.12.16		50mm x 50mm	no	1		
J.1.13		**LDPE pipe complete with fittings (Class 6)**				
J.1.13.1		20mm	m	100		
J.1.13.2		25mm	m	100		
J.1.13.3		32mm	m	100		
J.1.13.4		40mm	m	100		
J.1.13.5		50mm	m	100		
J.1.14		**LDPE pipe complete with fittings (Class 3)**				
J.1.14.1		20mm	m	100		
J.1.14.2		25mm	m	100		
J		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
J		**Brought forward**				
J.1.14.3		32mm	m	100		
J.1.14.4		40mm	m	100		
J.1.14.5		50mm	m	100		
		TOTAL SECTION "J" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION K : VALVES & METERS				
K.1		**Supply, deliver,install and test the following ball valves**				
K.1.1		**PVC ball valve (PN 16)**				
K.1.1.1		15mm	no	1		
K.1.1.2		20mm	no	1		
K.1.1.3		25mm	no	1		
K.1.1.4		32mm	no	1		
K.1.1.5		40mm	no	1		
K.1.1.6		50mm	no	1		
K.1.2		**Solvent Weld PVC ball valve (PN16)**				
K.1.2.1		15mm	no	1		
K.1.2.2		20mm	no	1		
K.1.2.3		25mm	no	1		
K.1.2.4		32mm	no	1		
K.1.2.5		40mm	no	1		
K.1.2.6		50mm	no	1		
K.1.2.7		63mm	no	1		
K.1.2.8		80mm	no	1		
K.1.2.9		90mm	no	1		
K.1.2.10		100mm	no	1		
K.1.3		**Brass ball valve (PN16)**				
K.1.3.1		15mm	no	1		
K.1.3.2		20mm	no	1		
K.1.3.3		25mm	no	1		
K.1.3.4		32mm	no	1		
K.1.3.5		40mm	no	1		
K.1.3.6		50mm	no	1		
K.1.3.7		65mm	no	1		
K.1.3.8		80mm	no	1		
K.1.3.9		90mm	no	1		
K.1.3.10		100mm	no	1		
K.1.4		**Stainless ball valve (PN16)**				
K.1.4.1		15mm	no	1		
K.1.4.2		20mm	no	1		
K.1.4.3		25mm	no	1		
K.2		**Supply, deliver,install and test the following gate valves**				
K.2.1		**Flange to Flange cast iron gate valve (PN25)**				
K.2.1.1		100mm	no	1		
K.2.1.2		150mm	no	1		
K.2.1.3		200mm	no	1		
K.2.1.4		250mm	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.2.2		**Female to Female brass gate valve (PN25)**				
K.2.2.1		25mm	no	1		
K.2.2.2		32mm	no	1		
K.2.2.3		40mm	no	1		
K.2.2.4		50mm	no	1		
K.2.2.5		65mm	no	1		
K.2.2.6		80mm	no	1		
K.2.2.7		90mm	no	1		
K.2.2.8		100mm	no	1		
K.3		**Supply, deliver,install and test the following coated cast iron butterfly valves**				
K.3.1		**Butterfly lever operated valve, Stainless steel disc**				
K.3.1.1		40mm	no	1		
K.3.1.2		50mm	no	1		
K.3.1.3		65mm	no	1		
K.3.1.4		80mm	no	1		
K.3.1.5		90mm	no	1		
K.3.1.6		100mm	no	1		
K.3.1.7		125mm	no	1		
K.3.1.8		150mm	no	1		
K.3.1.9		200mm	no	1		
K.3.1.10		250mm	no	1		
K.3.2		**Butterfly lever operated valve, Stainless Chrome disc**				
K.3.2.1		40mm	no	1		
K.3.2.2		50mm	no	1		
K.3.2.3		65mm	no	1		
K.3.2.4		80mm	no	1		
K.3.2.5		90mm	no	1		
K.3.2.6		100mm	no	1		
K.3.2.7		125mm	no	1		
K.3.2.8		150mm	no	1		
K.3.2.9		200mm	no	1		
K.3.2.10		250mm	no	1		
K.3.3		**Butterfly gear operated valve, Stainless steel disc**				
K.3.3.1		40mm	no	1		
K.3.3.2		50mm	no	1		
K.3.3.3		65mm	no	1		
K.3.3.4		80mm	no	1		
K.3.3.5		90mm	no	1		
K.3.3.6		100mm	no	1		
K.3.3.7		125mm	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.3.3.8		150mm	no	1		
K.3.3.9		200mm	no	1		
K.3.3.10		250mm	no	1		
K.3.4		**Butterfly gear operated valve, Stainless Chrome disc**				
K.3.4.1		40mm	no	1		
K.3.4.2		50mm	no	1		
K.3.4.3		65mm	no	1		
K.3.4.4		80mm	no	1		
K.3.4.5		90mm	no	1		
K.3.4.6		100mm	no	1		
K.3.4.7		125mm	no	1		
K.3.4.8		150mm	no	1		
K.3.4.9		200mm	no	1		
K.3.4.10		250mm	no	1		
K.4		**Supply, deliver,install and test the following reinforced nylon irrigation control (diaphram) valves**				
K.4.1		**Manually Controlled Valve**				
K.4.1.1		40mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.4.1.2		50mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.4.1.3		65mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.4.1.4		80mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.4.1.5		100mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.4.2		**Solenoid Controlled Valve**				
K.4.2.1		40mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.4.2.2		50mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.4.2.3		65mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.4.2.4		80mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.4.2.5		100mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.4.3		**Hydraulic Remote Controlled Valve**				
K.4.3.1		40mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.3.2		50mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.3.3		65mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.3.4		80mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.4.3.5		100mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.3.6		150mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.3.7		200mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.4		**Pressure Reducing Valve**				
K.4.4.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.4.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.4.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.4.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.4.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.4.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.4.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.5		**Pressure Sustaining & Relief Valve**				
K.4.5.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.4.5.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.4.5.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.4.5.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.5.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.5.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.5.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.6		**Pressure Differential Sustaining Valve**				
K.4.6.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.4.6.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.4.6.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.4.6.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.6.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.6.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.6.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.4.7		**Flow Control Valve**				
K.4.7.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.7.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.7.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.7.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.4.7.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.7.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.7.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.8		**Excessive Flow Shut-off Valve**				
K.4.8.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.8.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.8.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.8.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.8.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.8.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.8.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.4.9		**Modulating Float Controlled Valve**				
K.4.9.1		40mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.4.9.2		50mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.4.9.3		65mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.4.9.4		80mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.4.9.5		100mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.4.9.6		150mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.4.9.7		200mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.4.10		**Electric Float Controlled Valve**				
K.4.10.1		40mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.10.2		50mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.10.3		65 mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.10.4		80mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.10.5		100mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.10.6		150mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.10.7		200mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.11		**Differential Float Controlled Valve**				
K.4.11.1		40 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.11.2		50 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.11.3		65 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.11.4		80 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.11.5		100 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.11.6		150 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.11.7		200 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.4.12		**Altitude Pilot Controlled Valve**				
K.4.12.1		40 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.4.12.2		50 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.4.12.3		65 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.4.12.4		80 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.4.12.5		100 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.4.12.6		150 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.4.12.7		200 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.4.13		**Pump Control Valve**				
K.4.13.1		40mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.4.13.2		50mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.4.13.3		65mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.4.13.4		80mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.4.13.5		100mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.4.13.6		150mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.4.13.7		200mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.4.14		**Surge Anticipating Valve**				
K.4.14.1		40 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.4.14.2		50 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.4.14.3		65 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.4.14.4		80 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.4.14.5		100 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.4.14.6		150 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.4.14.7		200 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.4.15		**Quick Pressure-relief Valve**				
K.4.15.1		40 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.4.15.2		50 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.4.15.3		65 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.4.15.4		80 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.4.15.5		100 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.4.15.6		150 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.4.15.7		200 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.5		**Supply, deliver,install and test the following epoxy-coated cast iron irrigation control (diaphram) valves**				
K.5.1		**Manually Controlled Valve**				
K.5.1.1		40mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.5.1.2		50mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.5.1.3		65mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.5.1.4		80mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.5.1.5		100mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter	no	1		
K.5.2		**Solenoid Controlled Valve**				
K.5.2.1		40mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.5.2.2		50mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.5.2.3		65mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.5.2.4		80mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.5.2.5		100mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.5.3		**Hydraulic Remote Controlled Valve**				
K.5.3.1		40mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.3.2		50mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.3.3		65mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.3.4		80mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & three or two way solenoid valve	no	1		
K.5.3.5		100mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.3.6		150mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.3.7		200mm direct sealing diaphragm type three way valve complete with three way selector , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.4		**Pressure Reducing Valve**				
K.5.4.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.4.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.5.4.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.4.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.4.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.4.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.4.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.5		**Pressure Sustaining & Relief Valve**				
K.5.5.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.5.5.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.5.5.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.5.5.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.5.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.5.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.5.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.6		**Pressure Differential Sustaining Valve**				
K.5.6.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.5.6.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.5.6.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual override selector	no	1		
K.5.6.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.5.6.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.6.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.6.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter & manual overide selector	no	1		
K.5.7		**Flow Control Valve**				
K.5.7.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.7.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.7.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.7.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.7.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.7.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.7.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.8		**Excessive Flow Shut-off Valve**				
K.5.8.1		40mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.8.2		50mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.8.3		65mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.8.4		80mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.8.5		100mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.8.6		150mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K.5.8.7		200mm direct sealing diaphragm type three way valve complete with three/two pilot valve , cock valve ,Self-flushing filter, manual override selector & Orifice plate	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.5.9		**Modulating Float Controlled Valve**				
K.5.9.1		40mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.5.9.2		50mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.5.9.3		65mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.5.9.4		80mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.5.9.5		100mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.5.9.6		150mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.5.9.7		200mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, modulating float pilot valve	no	1		
K.5.10		**Electric Float Controlled Valve**				
K.5.10.1		40mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.10.2		50mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.10.3		65 mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.10.4		80mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.10.5		100mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.10.6		150mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.10.7		200mm direct sealing diaphragm type three way valve complete with three/two solenoid valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.11		**Differential Float Controlled Valve**				
K.5.11.1		40 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.11.2		50 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.5.11.3		65 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.11.4		80 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.11.5		100 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.11.6		150 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.11.7		200 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, Electric float switch	no	1		
K.5.12		**Altitude Pilot Controlled Valve**				
K.5.12.1		40 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.5.12.2		50 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.5.12.3		65 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.5.12.4		80 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.5.12.5		100 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.5.12.6		150 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.5.12.7		200 mm direct sealing diaphragm type three way valve complete with Manual over-ride selector valve , cock valve ,Self-flushing filter, High sensitivity altitude control pilot valve	no	1		
K.5.13		**Pump Control Valve**				
K.5.13.1		40mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.5.13.2		50mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.5.13.3		65mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.5.13.4		80mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.5.13.5		100mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.5.13.6		150mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.5.13.7		200mm direct sealing diaphragm type three way valve complete with three/two Solenoid valve , ,Open/close speed adjustment needle valve ,cock valve ,Self-flushing filter, Check valve &Limit switch assembly	no	1		
K.5.14		**Surge Anticipating Valve**				
K.5.14.1		40 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.5.14.2		50 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.5.14.3		65 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.5.14.4		80 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.5.14.5		100 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.5.14.6		150 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.5.14.7		200 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, Low and high pressure relief pilot valves, pressure gauge	no	1		
K.5.15		**Quick Pressure-relief Valve**				
K.5.15.1		40 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.5.15.2		50 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.5.15.3		65 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.5.15.4		80 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
K		**Brought forward**				
K.5.15.5		100 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.5.15.6		150 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.5.15.7		200 mm direct sealing diaphragm type three way valve complete with needle valve , cock valve ,Self-flushing filter, pressure relief pilot valve	no	1		
K.6		**Supply deliver and install the following water meters**				
K.6.1		**Cast Iron , Epoxy coated (Flange Table D)**				
K.6.1.1		40mm	no	1		
K.6.1.2		50mm	no	1		
K.6.1.3		65mm	no	1		
K.6.1.4		80mm	no	1		
K.6.1.5		90mm	no	1		
K.6.1.6		100mm	no	1		
K.6.1.7		125mm	no	1		
K.6.1.8		150mm	no	1		
K.6.1.9		200mm	no	1		
		TOTAL SECTION "K" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION L : SHADENET				
L.1		**Supply deliver and install the following SABS approved shadenet materials and accessories.Shade Cloth to be manufactured from HDPE (High-Density Polyethylene) with UV stabiliser**				
L.1.1		**Shade Cloth**				
L.1.1.1		20% Shade White	m^2	1		
L.1.1.2		40% Shade White	m^2	1		
L.1.1.3		20% Green	m^2	1		
L.1.1.4		40% Green	m^2	1		
L.1.1.5		50% Green	m^2	1		
L.1.1.6		80% Green	m^2	1		
L.1.1.7		20% Black	m^2	1		
L.1.1.8		40% Black	m^2	1		
L.1.1.9		50% Black	m^2	1		
L.1.1.10		80% Black	m^2	1		
L.1.2		**CCA H4 poles (75-100)**				
L.1.2.1		2.1 m	no	1		
L.1.2.2		2.4 m	no	1		
L.1.2.3		2.7 m	no	1		
L.1.2.4		3 m	no	1		
L.1.2.5		3.6 m	no	1		
L.1.2.6		4,2 m	no	1		
L.1.2.7		4.8 m	no	1		
L.1.3.1		**CCA H4 poles (100-125)**				
L.1.3.1		2.1 m	no	1		
L.1.3.2		2.4 m	no	1		
L.1.3.3		2.7 m	no	1		
L.1.3.4		3 m	no	1		
L.1.3.5		3.3 m	no	1		
L.1.3.6		3.6 m	no	1		
L.1.3.7		3.9 m	no	1		
L.1.3.8		4.2 m	no	1		
L.1.4		**CCA H4 poles (125-150)**				
L.1.4.1		2.1 m	no	1		
L.1.4.2		2.4 m	no	1		
L.1.4.3		2.7 m	no	1		
L.1.4.4		3 m	no	1		
L.1.4.5		3.6 m	no	1		
L.1.4.6		4,2 m	no	1		
L.1.4.7		4.8 m	no	1		
L.1.5		**CCA H4 poles (150-175)**				
L.1.5.1		2.1 m	no	1		
L.1.5.2		2.4 m	no	1		
L		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
L		**Brought forward**				
L.1.5.3		2.7 m	no	1		
L.1.5.4		3 m	no	1		
L.1.5.5		3.6 m	no	1		
L.1.5.6		4,2 m	no	1		
L.1.5.7		4.8 m	no	1		
L.1.6		**ANCHORS**				
L.1.6.1		Duckbill type - minimum Model 88 - installed as per manufactures specifications	no	1		
L.1.6.2		Manta Ray type - minimum MR2 type - installed as per manufactures specifications.	no	1		
L.1.6.3		Tyre type - minimum vehicle tyre size 14" installed and secured at minimum depth of 800mm	no	1		
L.1.6.4		Casted concrete blocks - min 15Mpa/19, min of 0.5m x 0.5m x 0.5m,installed at miimum depth of 800mm	no	1		
L.1.7		**ACCESSORIES**				
L.1.7.1		M10 Wire tensioners with shackles on both ends	no	1		
L.1.7.2		M12 Wire tensioners with shackles on both ends	no	1		
L.1.7.3		2.5 x 25mm Nail staples	no	1		
L.1.7.4		2.5 x 30mm Nail staples	no	1		
L.1.7.5		2.5 x 40mm Nail staples	no	1		
L.1.7.6		3 x 30mm Nail staples	no	1		
L.1.7.7		3.5 x 30mm Nail staples	no	1		
L.1.7.8		4 x 30mm Nail staples	no	1		
L.1.7.9		2.5 x 40mm Nail staples	no	1		
L.1.7.10		3 x 40mm Nail staples	no	1		
L.1.7.11		3.5 x 40mm Nail staples	no	1		
L.1.7.12		4 x 40mm Nail staples	no	1		
L.1.7.13		25mm Flat head ceiling nails	no	1		
L.1.7.14		4,0mm Roof Wire for anchor poles	no	1		
L.1.7.15		2,24mm high tensile Steel wire for netting	no	1		
L.1.7.16		2,0mm Galvanized wire clamps for net wire (fabricate from wire)	no	1		
L.1.7.17		40mm Wire Staples	no	1		
L.1.7.18		32mm Wire staples	no	1		
L.1.7.19		M12 x 1 000mm long galvanized round bar	no	1		
L.1.7.20		M10 x 1 000mm Long galvanized round bar	no	1		
L.1.7.21		M12 galvanized washers	no	1		
L.1.7.22		M10 Galvanized washers	no	1		
L.1.7.23		M12 Galvanized nuts	no	1		
L.1.7.24		M10 Galvanized nuts	no	1		
L.1.7.25		M10 x 2 000mm Galvanized anchors made from round bar	no	1		
L.1.7.26		1500mm Long Y-standard Iron fencing poles	no	1		
L		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
L		**Brought forward**				
L.1.7.27		150,000 Galv hogrings(15 boxes)	no	1		
L.1.7.28		3000 x 5 mm Aluminium Ferrules	no	1		
L.1.7.29		2000 x 6 mm Aluminium Ferrules	no	1		
L.1.7.30		7 x 1.6 mm Galvanised staywire	m	1		
L.1.7.31		7 x 2 mm Galvanised staywire	m	1		
L.1.7.32		7 x 2.65 mm Galvanised staywire	m	1		
L.1.7.33		7 x 3.25 mm Galvanised staywire	m	1		
L.1.7.34		7 x 4 mm Galvanised staywire	m	1		
L.1.7.35		M10 Galv. Straining bolts	no	1		
L.1.7.36		M12 Turnbuckle & Eye Hook	no	1		
L.1.7.37		M16 Turnbuckle & Eye Hook	no	1		
L.1.7.38		1500m x 12mm rust treated anchor steel	no	1		
L.1.7.39		vine grips	no	1		
L.1.7.40		Double wrap grip	no	1		
L.1.7.41		2,24mm high tension steel wire.Full galvanised	m	1		
L.1.7.42		10mm Crosby Clamps	no	1		
L.1.7.43		Ref 888 mesh for ground anchor blocks	m2	1		
L.1.7.44		25MPa concrete for anchoring	m3	1		
L.1.7.45		500x500x150mm depth concrete shutter for shuttering anchor blocks	no	1		
		TOTAL SECTION "L" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION M : TUNNELS & RESEVOIRS				
M.1		**Supply deliver and install galvanised steel structure tunnel complete with all the uprights, arches, tie beams, connecting poles on top and corner; and other connecting poles with following minimum specifications.** **a) Side pole - 48 mm x 2 mm** **b) Arches - 42 mm x 2 mm** **c) Tie beams - 34 mm x 2 mm** **d) Connecting poles top and corners - 42 mm x 2 mm** **e) Other connecting poles = 34 mm x 2 mm**				
M.1.1.1		30 m x 10 m x 3,5 m	Sum	1		
M.1.1.2		30 m x 12 m x 3,5 m	Sum	1		
M.1.1.3		32 m x 10 m x 3,5 m	Sum	1		
M.1.1.4		33 m x 10 m x 3,5 m	Sum	1		
M.1.1.5		34 m x 10 m x 3,5 m	Sum	1		
M.1.1.6		35 m x 10 m x 3,5 m	Sum	1		
M.1.2.1		10 L, 150 micron black planting bag	no	1		
M.1.2.2		Trellising hooks	no	1		
M.1.2.3		Heavy duty polypropolyne trellising twines	no	1		
M.1.2.4		pH and EC meter	no	1		
M.1.2.5		4 mm Galvanised Wire for Crop Support in the Tunnels	no	1		
M.1.2.6		200 Micron UV protected, 3 layer Greenhouse plastic to cover of the tunnel structure	no	1		
M.1.2.7		A UV stabilized black 150 Micron floor plastic Roll to cover the complete floor of a tunnel.	no	1		
		Provisional Sum				
M.1.3.1		Allow Provisional sum for the installation of tunnel equipment such as fertigation, pumping unit. Computer aided monitoring, ventilation controls by specialist manufacturing company	Prov sum	1	200000	R 200 000,00
M.1.3.2		Profit Over above	%	200000		
M.1.3.3		Allow Provisional sum for the erection of Semi-automated Ventilated Tunnel House by specialist manufacturing company	Prov sum	1	6000000	R 6 000 000,00
M.1.3.4		Profit Over above	%	6000000		
M.1.4		**Prefabricated Reservoirs**				
M.1.4.1		5000 Litres LDPE Tank	No	1		
M.1.4.2		10 000 Litres LDPE Tank	No	1		
		Galvanized steel panels water reservoir complete with dome roof, internal ladder, external cat ladder with safety cage, 50mm butterfly valve normal, 1x50mm inlets including 50mm galvanized steel inlet pipes and fittings, 50mm outlet, 50mm overflow and 50mm scour drain assembly, manhole, whirlybird or similar approved ventilator, felt seal, water level indicator, float switch, concrete ring beam and PVC lining. Issue COC				
M.1.4.3		249 000 Litres capacity	Sum	1		
M.1.4.4		250 000 Litres capacity	Sum	1		
M		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
M		**Brought forward**				
M.1.4.5		500 000 Litres capacity	Sum	1		
M.1.4.6		750 000 Litres capacity	Sum	1		
M.1.4.7		1 000 000 Litres capacity	Sum	1		
M.1.4.8		1 250 000 Litres capacity	Sum	1		
M.1.5		**HDPE Dam Linning**				
		Supply, deliver, install and commission HDPE Dam Linnings. Including on-site plastic welding.				
M.1.5.1		HDPE Dam Linning 1,5mm	m²	1000		
M.1.5.2		HDPE Dam Linning 2,0mm	m²	1000		

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	SABS 1200 L	**CENTRE PIVOTS** **Supply, Deliver and Install and Commission**				
N		**Centre Pivot Irrigation**				
N.1		**Centre pivot centre** Complete centre tower with control box and wiring Diameter: 6 $^{5}/_{8}$ "	Sum	1		
N.2		**Centre pivot towers** Complete with tyres, tyre motors, tyres wiring and sprinklers **Diameter: 5"** 38 m	Sum	1		
N.3		44 m	Sum	1		
N.4		49 m	Sum	1		
N.5		55 m	Sum	1		
N.6		**Centre pivot overhangs** Complete with sprinklers **Diameter: 4 "** 6 m	Sum	1		
N.7		9 m	Sum	1		
N.8		17 m	Sum	1		
N.9		23 m	Sum	1		
N.10		Pipeline marker, 150x100mm top and 250x250mm base, 2m long	No	1		
N.11		25MPa concrete for anchors and platforms	m3	1		
N		**Carried forward to summary**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION P : BUILDING				
P.1		DEMOLITIONS				
P.1.1		**DEMOLISHING AND REMOVING**				
P.1.1.1		Demolish existing building structures comprising of brickwork, roofing, closures and foundations. and dispose safely	m^2	1		
P.1.1.2		Demolision of non-reinforced concrete	m^2	1		
P.1.1.3		Demolision of reinforced concrete	m^2	1		
P.1.1.4		Cart away rubble from demolitions and dispose off site.	m^3	1		
P.1.1.5		Restore site with soil material filling and compacton	m^3	1		
P.1.1.6		Empty Sewage Septic tank and dispose in line with regulations	m^3	1		
P.1.1.7		Decomishion a pit toilet, including treatment,removal and disposal of sluge waste	no	1		
P.1.2		**EARTHWORKS**				
P.1.2.1		Excavation in earth not exceeding 1,5m deep:				
P.1.2.2		Foundation Trenches	m^3	1		
P.1.2.3		Footing Holes.	m^3	1		
P.1.2.4		Cut levels and depositing excavated material in prescribed stock piles on site.	m^3	1		
		Extra over trench and hole excavations in earth for excavation in:				
P.1.2.5		Intermediate excavation	m^3	1		
P.1.2.6		Soft/loose rock	m^3	1		
P.1.2.7		Hard rock	m^3	1		
		Extra over all excavations for carting away:				
P.1.2.8		Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m^3	1		
		Risk of collapse of excavations:				
P.1.2.9		Sides of trench and hole excavations not exceeding 1,5m deep.	m^2	1		
P.1.2.10		Ditto, but from ground level to exceeding 1,5m.	m^2	1		
		Keeping excavations free of water:				
P.1.2.11		Keeping excavations free from mud and storm water	Sum	1		
P.1.2.12		Handling and Keeping excavations free from subterranean sources.	Sum	1		
P.1.3		**SOIL POISONING**				
		Vegetation herbicide and anti-termite soil poisoning applied by a Registered Pest Control company utilizing complaint chemical compounds				
P.1.3.1		Surrouding area, foundation trenches/ furrows, under floors, forming agaisnt foundation walls,	m^2	1		
P.1.3.2		To bottoms and sides of trenches, holes, etc.	m^2	1		
P.1.4		**EARTH FILLING**				
		Earth filling obtained from the excavations and / or prescribed stock piles on site (minimum G7 material) compacted to 93% Mod. AASHTO density:				
P.1.4.1		Backfilling to trenches, holes, etc.	m^3	1		
P.1.4.2		Under floors, steps, pavings, trenches, etc.	m^3	1		
		Imported G5 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to trenches, holes, etc.				
P.1.4.3		Under floors, etc.	m^3	1		
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
		Imported G7 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry density to holes, trenches etc.				
P.1.4.4		Under floors, etc.	m^3	1		
P.1.4.5		Backfilling to holes, trenches, etc.	m^3	1		
		Coarse river sand filling supplied by the contractor:				
P.1.4.6		Under floors etc.	m^3	1		
		Compaction of surfaces:				
P.1.4.7		Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density.	m^2	1		
		Prescribed density tests on filling:				
P.1.4.8		Allow for compaction tests by an approved laboratory to determine density of filling material.	no	1		
		Prescribed soil materila testing:				
P.1.4.9		Allow for sample collection and submitting for test by an approved laboratory to determine material class, for site stock piled and borrowing materials	no	1		
P.1.5		**CONCRETE, FORMWORK AND REINFORCEMENT**				
		15Mpa/19mm Concrete				
P.1.5.1		Surface blinding under footings and bases.	m^3	1		
		20Mpa/19mm Screed				
P.1.5.2		Surface screeds, limited to 30mm thick	m^3	1		
		25MPa/19mm Un-Reinforced concrete casting and vibrated:				
P.1.5.3		Foundations, footings to columns, footings to walls, cavity walls, slabs, apron, Floors / surface beds, etc	m^3	1		
		25MPa/19mm Reinforced concrete casting and vibrated:				
P.1.5.4		Foundations, footings to columns, footings to walls, cavity walls, slabs, apron, Floors / surface beds, etc	m^3	1		
		30MPa/19mm Unreinforced concrete casting and vibrated:				
P.1.5.5		Foundations, footings to columns, footings to walls, cavity walls, slabs, apron, Floors / surface beds, etc	m^3	1		
		30MPa/19mm Reinforced concrete casting and vibrated:				
P.1.5.6		Foundations, footings to columns, footings to walls, cavity walls, slabs, apron, Floors / surface beds, etc	m^3	1		
		Concrete Test Blocks				
P.1.5.7		Making and testing of 150x150x150mm concrete strength test cubes	no	1		
		Concrete Surface Finishing				
		Finishing top surfaces of concrete to or with				
P.1.5.8		Smooth wood finish	m^2	1		
		Steel Float Finish				
		Charmfers at corners				
P.1.5.9		19 x 19mm triangular fillet at corners forming	m	1		
P.1.6		**ROUGH FORMWORK**				
P.1.6.1		Permanent Formwork:				
P.1.6.1.1		To sides, edging, risers, ends and reveals, not exceeding 300mm height	m^2	1		
P.1.6.1.2		To sides, edging, risers, ends and reveals, not exceeding 600mm height	m^2	1		
P.1.6.1.3		To sides, edging, risers, ends and reveals, not exceeding 1500mm height	m^2	1		
P.1.6.1.4		Circular columns shuttering	m^2	1		
P.1.6.1.5		Suspended slabs shuttering	m^2	1		
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.1.6.2		Temporal Formwork:				
P.1.6.2.1		To sides, edging, risers, ends and reveals, not exceeding 300mm height	m^2	1		
P.1.6.2.2		To sides, edging, risers, ends and reveals, not exceeding 600mm height	m^2	1		
P.1.6.2.3		To sides, edging, risers, ends and reveals, not exceeding 1500mm height	m^2	1		
P.1.6.2.4		Circular columns shuttering	m^2	1		
P.1.6.2.5		Suspended slabs shuttering	m^2	1		
P.1.7		**SMOOTH FORMWORK**				
P.1.7.1		Permanent Formwork:				
P.1.7.1.1		To sides, edging, risers, ends and reveals, not exceeding 300mm height	m^2	1		
P.1.7.1.2		To sides, edging, risers, ends and reveals, not exceeding 600mm height	m^2	1		
P.1.7.1.3		To sides, edging, risers, ends and reveals, not exceeding 1500mm height	m^2	1		
P.1.7.1.4		Circular columns shuttering	m^2	1		
P.1.7.1.5		Suspended slabs shuttering	m^2	1		
P.1.7.2		Temporal Formwork:				
P.1.7.2.1		To sides, edging, risers, ends and reveals, not exceeding 300mm height	m^2	1		
P.1.7.2.2		To sides, edging, risers, ends and reveals, not exceeding 600mm height	m^2	1		
P.1.7.2.3		To sides, edging, risers, ends and reveals, not exceeding 1500mm height	m^2	1		
P.1.7.2.4		Circular columns shuttering	m^2	1		
P.1.7.2.5		Suspended slabs shuttering	m^2	1		
P.1.7.2.6		Reinforced precasted rib and block Slabs as permanent shutters - top ref mesh and concrete topping measured elsewhere	m^2	1		
P.1.8		**CONCRETE JOINTS**				
P.1.8.1		Saw cut joints:				
P.1.8.1.1		6mm wide x 50mm deep Saw cut joints on top of concrete	m	1		
P.1.8.2		Construction Joints				
P.1.8.2.1		6mm Soft board, not exceeding	m	1		
P.1.9		CONCRETE REINFORCEMENT				
P.1.9.1		High tensile steel reinforcement bars to structural concrete work.	t	1		
P.1.10		Fabric reinforcement:				
P.1.10.1		REF. 193 fabric reinforcement in concrete surface beds, raft slabs etc.	m^2	1		
P.1.10.2		REF. 245 fabric reinforcement in concrete surface beds, raft slabs etc.	m^2	1		
P.1.10.3		REF. 395 fabric reinforcement in concrete surface beds, raft slabs etc.	m^2	1		
P.1.10.4		REF. 617 fabric reinforcement in concrete surface beds, raft slabs etc.	m^2	1		
P.1.10.5		REF. 888 fabric reinforcement in concrete surface beds, raft slabs etc.	m^2	1		
P.2		**MASONRY**				
P.2.1		BRICKWORK				
		Brickwork consisting of solid bricks with 10.5 MPa minimum nominal compressive strength in Class I mortar with Coprox masonry waterproofing or equal approved waterproof cement additive. (Cement to be 42.5N all-purpose cement):				
P.2.1.1		220mm wide (One brick) walls.	m^2	1		
P.2.1.2		110mm wide (half brick) walls.	m^2	1		
P.2.1.3		150mm wide (one brick) using maxi bricks walls.	m^2	1		
P.2.1.4		345mm thick cavity brick walls made of two leafs of 110mm wall with 135mm concrete fill (concrete elsewhere measured).	m^2	1		
P.2.1.5		345mm thick cavity brick walls made of two leafs of 110mm wall with 135mm concrete fill (concrete elsewhere measured).	m^2	1		
P.2.1.6		Cavity brick walls made of two leafs of 110mm wall with over 135mm concrete fill (concrete elsewhere measured).	m^2	1		
P.2.2		BRICKWORK AND BLOCKWORK SUNDRIES				
P.2.2.1		Galvanized brickwork reinforcement				
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.2.2.2		115mm Wide reinforcement built in horizontally	m	1		
P.2.2.3		230mm Wide reinforcement built in horizontally.	m	1		
P.2.2.4		Ditto, but in foundations	m	1		
P.3		**ROOF TIES**				
P.3.1		30 x 2mm Galvanized roof tie 1500mm long with one end fixed to timber and other built into brickwork or concrete.	no	1		
P.3.2		WATERPROOFING				
P.3.2.1		Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture to walls	m^2	1		
P.3.2.2		Sealing walls face with two coats of bitumen emulsion waterproofing coating:	m^2	1		
P.3.2		Samples bricks				
P.3.2.1		Supply and deliver sample bricks for approval	no	1		
P.4		**FACE BRICK**				
P.4.1		FBS clay face brick , size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):				
P.4.1.1		Extra over brickwork for face brickwork externally.	m^2	1		
P.4.1.2		Extra over for face brick in foundations	m^2	1		
P.4.1.3		Half brick wall in beam filling pointed one side including cutting and fitting around roof timbers and bedding roofing solid on top in cement mortar.	m^2	1		
P.4.1.4		One brickwall pointed on both sides.	m^2	1		
P.4.1.5		Half brickwall pointed on both sides.	m^2	1		
P.4.1.6		Cutting at beam filling level or other locations	m	1		
		Face brick copings, roller coarse, corbeling, lintels over windows, sills, etc, pointed with recessed joints on all exposed faces:	m	1		
P.5		**LINTOLS**				
P.5.1		Pre-Cast Concrete lintols 75 x 110				
P.5.1.1		On internal skin above doors and windows and openings				
P.5.1.1.1		Lintels 0.9 m	no	1		
P.5.1.1.2		Lintels 1.2 m	no	1		
P.5.1.1.3		Lintels 1.8 m	no	1		
P.5.1.1.4		Lintels 2.4 m	no	1		
P.5.1.1.5		Lintels 3 m	no	1		
P.5.1.1.6		Lintels 4 m	no	1		
P.5.2		Pre-Cast Concrete lintols 75 x 150mm				
P.5.2.1		On internal skin above doors and windows and openings				
P.5.2.1.1		Lintels 0.9 m	no	1		
P.5.2.1.2		Lintels 1.2 m	no	1		
P.5.2.1.3		Lintels 1.8 m	no	1		
P.5.2.1.4		Lintels 2.4 m	no	1		
P.5.2.1.5		Lintels 3 m	no	1		
P.5.2.1.6		Lintels 4 m	no	1		
P.6		**WATERPROOFING**				
P.6.1		DAMPPROOFING OF WALLS AND FLOORS				
P.6.1.1		One layer of 250 micron waterproof plastic sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':				
P.6.1.2		Under surface beds, bases, etc.	m^2	1		
P.6.1.3		One layer of 350 micron embossed dampcourse waterproof sheeting below walls, sills, etc:				
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.6.1.4		Below walls, sills, etc.	m^2	1		
P.6.2		JOINT SEALANTS				
P.6.2.1		Clear Neutral silicone sealant:				
P.6.2.2		In joint sealing and pointing all round external window and door frames.	m	1		
P.6.2.3		Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc				
P.6.2.4		10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	1		
P.7		**ROOF COVERINGS**				
P.7.1		PROFILED METAL SHEETING AND ACCESSORIES, Color Coated				
P.7.1.1		0,58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face including installation accessories :				
P.7.1.2		Roof sheeting laid to a mono-pitch.	m^2	1		
P.7.1.3		0,58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face including installation accessories :for side Cladding	m^2	1		
P.7.1.4		0.58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions including installation accessories :				
P.7.1.5		Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	1		
P.7.1.6		Ridge cover, 0,58mm ridge pre-painted to match roof shitting and fixed	m	1		
P.7.1.7		Ridge Closures, 0,58mm ridge closures fixed under the ridge line	m	1		
P.7.2		PROFILED METAL SHEETING AND ACCESSORIES, Galvanised treated				
P.7.2.1		0,58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, including installation accessories :				
P.7.2.2		Roof sheeting laid to a mono-pitch.	m^2	1		
P.7.2.3		0,58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, including installation accessories :for side Cladding	m^2	1		
P.7.2.4		0.58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions including installation accessories :				
P.7.2.5		Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	1		
P.7.2.6		Ridge cover, 0,58mm ridge pre-painted to match roof shitting and fixed	m	1		
P.7.2.7		Ridge Closures, 0,58mm ridge closures fixed under the ridge line	m	1		
P.7.2.8		Clear /transparent Poly carbonated, IBR profile on roofing	m^2	1		
P.8		**ROOF INSULATION**				
P.8.1		"Alububble" or equal approved insulation				
P.8.1.1		Insulation laid and strained by 2mm galvanized wires on timber roof trusses/ steel purlins	m^2	1		
P.8.1.2		Polyesterene foam of 50mm thickness	m^2	1		
P.8.1.3		Polyesterene foam of 75mm thickness	m^2	1		
P.8.1.4		Polyesterene foam of 100mm thickness	m^2	1		
P.8.1.5		Polyesterene foam of 150mm thickness	m^2	1		
P.8.2		Sandwich panels (IBR sheets and insualtion foam) for Roofing				
P.8.2.1		Roof panel sandwich made of 0,58mm color coated chromadek IBR profile in top, 50mm insulation foam and 1mm thick white enamal coated sheet	m^2	1		
P.8.2.2		Roof panel sandwich made of 0,58mm color coated chromadek IBR profile in top, 75mm insulation foam and 1mm thick white enamal coated sheet	m^2	1		
P.8.2.3		Roof panel sandwich made of 0,58mm color coated chromadek IBR profile in top, 100mm insulation foam and 1mm thick white enamal coated sheet	m^2	1		
P.8.3		Sandwich panels (IBR sheets and insualtion foam) for Panel Walls				
P.8.3.1		Wall panel sandwich made of 1mm thick sheet, coated with white enamel, 50mm insulation foam, and 1mm thick sheet coated with enamel	m^2	1		
P.8.3.2		Wall panel sandwich made of 1mm thick sheet, coated with white enamel, 75mm insulation foam, and 1mm thick sheet coated with enamel	m^2	1		
P.8.3.3		Wall panel sandwich made of 1mm thick sheet, coated with white enamel, 100mm insulation foam, and 1mm thick sheet coated with enamel	m^2	1		
P.8.3.4		Wall panel sandwich made of 1mm thick sheet, coated with white enamel, 150mm insulation foam, and 1mm thick sheet coated with enamel	m^2	1		
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.9		**STEEL WORKS FABRICATION**				
P.9.1		Steelworks for the spply, fabricate, surface preparation, shop priming, delivery to site & installation of a complete roof structure. Including all necessary columns, frame members, cleats, brackets, gussets, packs, nuts, bolts, washers, roof screws, roof washers, ridging, side flashing, insulation, etc. Cut off losses not included for pricing. Actual work constructed quantities considered				
P.9.1.1		H Sections	ton	1		
P.9.1.2		IPE sections	ton	1		
P.9.1.3		Flat bars	ton	1		
P.9.1.4		Angle Irons	ton	1		
P.9.1.5		Round Bars	ton	1		
P.9.1.6		Square Bars	ton	1		
P.9.1.7		Channel	ton	1		
P.9.1.8		Lipped Channel for roof purlins	ton	1		
P.9.1.9		Round Tubes	ton	1		
P.9.1.10		Square Tubes	ton	1		
P.9.1.11		Rectangular Tube	ton	1		
P.9.1.12		Expanded Metal sheet for security	ton	1		
P.9.1.13		Welded Mesh	ton	1		
P.9.1.14		Plates	ton	1		
P.9.1.15		Threated Bars	ton	1		
P.9.1.16		Bolt and nut and washers	kg	1		
P.9.2		Treatment of Steel				
P.9.2.1		Cold foam galvanising	ton	1		
P.9.2.2		Full dip galvanising	ton	1		
P.9.2.3		Primer paint application	m^2	1		
P.9.2.4		Enamel paint application	m^2	1		
P.10		**CARPENTRY & JOINERY**				
P.10.1		CARPENTRY				
P.10.1.1		Sawn softwood:				
P.10.1.2		38 x 114mm Wall plate.	m	1		
P.10.1.3		50 x 76mm Purlins/ Bracing	m	1		
P.10.1.4		38 x 152mm Rafters.	m	1		
P.10.2		Sundries:				
P.10.2.1		TRI FIX or equal approved hurricane clip fixed using 10 x 32mm galvanised clout nails (Provisional).	no	1		
P.10.2		EAVES, VERGES, ETC				
P.10.2.1		"Everite Nutec" or equal approved fibre cement				
P.10.2.2		12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc.	m	1		
P.10.2.3		85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc.	m	1		
P.10.3		**DOORS**				
P.10.3.1		SANS Approved meranti:				
P.10.3.2		44mm Framed, ledged, and battened single door with flush ply panel internally size 813 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards .	no	1		
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.10.3.3		44mm Framed, ledged, and battened single door with flush ply panel internally size 950 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards (D2).	no	1		
P.10.3.4		44mm Framed, ledged, and battened purpose made single door with flush ply panel internally size 813 x 1832mm high comprising 44 x 110mm stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards	no	1		
P.10.3.5		44mm Framed, ledged, and battened single door with flush ply panel internally size 950 x 2032mm high comprising 44 x 110mm top rail and stiles, 44 x 220mm bottom rail, 44 x 150mm lock rail and 22 x 70mm vertical "v" jointed boards	no	1		
P.10.3.6		Hard board door panels:Semi-solid core door with 3mm thick tampered Hardboard sides and concealed hardware edges				
P.10.3.7		44mm frames, Hrd board hollow core door, size 813 x 2032mm high	no	1		
P.10.3.8		44mm frames, Hrd board hollow core door, size 950 x 2032mm high	no	1		
P.10.3.9		44mm frames, Hrd board hollow core door, size 813 x 1832mm high	no	1		
P.10.3.10		44mm frames, Hrd board hollow core door, size 950 x 2032mm high	no	1		
P.10.4		IRONMONGERY				
P.10.4.1		HINGES:				
P.10.4.1.1		75 x 100mm Brass Medium duty ball bearing HMP butt hinges.	Pairs	1		
P.10.4.2		LOCKS				
P.10.4.2.1		"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	no	1		
P.10.4.2.2		Door indicator bolt satin chrome complete	no	1		
P.10.5		HANDLES				
P.10.5.1		"Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull door handle flange fixing.	no	1		
P.10.5.2		Sundries:				
P.10.5.3		Stainless Steel Hat and coat hook, code DHC - SS-030-A or equal approved.	no	1		
P.10.5.4		38mm Diameter black rubber door stop plugged and screwed to wall.	no	1		
P.11		**METALWORK**				
P.11.1		STEEL BURGLAR GATES TO DOORS				
P.11.1.1		Security Gate consisting of 25 x 25 x 2mm galvanised mild steel frame with 12mm galvanised mild steel square bars infill placed at 109mm centres, hung with one pair of galvanised mild steel hinges including locks, handles, ironmongery complete and fixed to brickwork:				
P.11.1.2		Security gate size 900 x 2050mm high	no	1		
P.11.1.3		Security double gate size 1800 x 2050mm high.	no	1		
P.12		**PLASTERING**				
P.12.1		SCREEDS				
P.12.1.1		Untinted granolithic, on concrete:				
P.12.1.2		30mm Thick on floors and landings.	m^2	1		
P.12.2		Skirtings				
P.12.2.1		75mm High coved granolithic skirting.	m	1		
P.12.3		INTERNAL PLASTER				
P.12.3.1		10mm thick of 1:4 sand cement plaster				
P.12.3.2		On walls.	m^2	1		
P.12.3.3		Inside Pits	m^2	1		
P.13		**PAINTWORK**				
P.13.1		ON WOOD				
P.13.1.1		Stop, sand down and prepare wood surfaces and apply one coat wood primer, one undercoat and two coats eggshell enamel paint as per Plascon or equal approved:				
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.13.1.2		On doors	m^2	1		
P.13.1.3		On door frames	m^2	1		
P.13.1.4		Prepare and apply two coats carbolenium on:				
P.13.1.5		On exposed timbers.	m^2	1		
P.13.2		ON FIBRE-CEMENT				
P.13.2.1		Prepare and apply two coats pure acrylic roof paint on:				
P.13.2.2		On fascias and barge boards.	m^2	1		
P.13.2.3		ON Windows and Frames				
P.13.2.4		Prepare and apply two coats enamel paint				
P.13.2.5		Windows frame putty	m^2	1		
P.13.2.6		On door frames	m^2	1		
P.13.2		Doors, Window Frames and Glazing				
P.13.2.1		Roller Doors				
P.13.2.2		Industrial Roller door, Chain operated, 2400 x 3000mm high galvanized with locking mechanism	no	1		
P.13.2.3		Industrial Sliding Door on track and guide, 2400 x 3000mm high galvanized with locking mechanism	no	1		
P.13.2.4		Standard Garage roll up door 2400 x 2000mm, with a pedestrian lock mechanism	no	1		
P.13.3		Steel Window frames				
P.13.3.1		Window frames measured by total length of steel sections used	m	1		
P.13.3.2		Window frame opening frames, measured by total length of steel section	m	1		
P.13.3.3		Window frames closing catchers and adjustment mechanism	no	1		
P.13.3.4		Glazing including putty, 6mm plain glass	m^2	1		
P.13.3.5		Glazing including putty, 6mm frosted glass	m^2	1		
P.13.3.6		Glazing including putty, 8mm plain glass	m^2	1		
P.13.4		Aluminium Windows and Doors				
P.13.4.1		Aluminium Windows frame measured by total frame section length	m	1		
P.13.4.2		Aluminium frame opening frames, measured by total length of section	m	1		
P.13.4.3		Window frames closing catchers and adjustment mechanism	no	1		
P.13.4.4		Shutter proof/ laminated glazing including holding and sealing rubber, 6,38mm	no	1		
P.13.4.5		Form 12mm diameter hole through fence post.	no	1		
P.13.5		Supply & install Strong room door, 120mm thick, 6mm outer plate, 2032.5H x 1000W, Outward opening, one key lock with emergency inner release, Mass 150 to 300kg and 7 Lever security keylock 8 bolt, 180 degree opening	no	1		
P.13.5.1		PRESSED STEEL DOOR FRAMES				
P.13.5.2		Inclusing all accessories for complete frame ready for fixing door panel	no	1		
P.13.5.3		1,2mm thick Double rebated mild steel door frames suitable for half brick walls. Frame complete with one pair standard butt hinges and factory applied primer				
P.13.5.4		Frame for door 813 x 2032mm high	no	1		
P.13.5.5		Frame for door 813 x 2032mm high and fixed fanlight 305mm high	no	1		
P.13.5.6		1,2mm thick Double rebated mild steel door frames suitable for one brick walls. Frame complete with one pair standard butt hinges and factory applied primer				
P.13.5.7		Frame for door 813 x 2 032mm high	no	1		
P.13.5.8		Frame for door 813 x 2032mm high and fixed fanlight 305mm high	no	1		
P.13.5.9		Frame for door 914 x 2 032mm high	no	1		
P.13.5.10		Frame for door 1 511 x 2 032mm high	no	1		
P.13.6		Combi Steel Door Frames and Door, 1,2mm thickness				
P.13.6.1		Double Doors Steel Combination Door and Frame, 1 511 x 2 032mm high	no	1		
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.13.6.2		Single Door Steel Frameand Door 813 x 2 032mm high	no	1		
P.13.7		**LOCKS**				
P.13.7.1		Supply 50 mm "Viro" Padlocks and Keys (or equal approved)	no	1		
P.13.7.2		Three lever double cylinder lockset code 2222 or similar with Gower Handel code CZ682-05 SC complete with striking plate fixed to metal	no	1		
P.13.7.3		Four-lever lockset with striking plate fixed to metal	no	1		
P.13.7.4		DMWS-SS-008 or similar Bathroom /WC small case deadlock	no	1		
P.13.8		LETTERS, NAMEPLATES				
P.13.8.1		DSS4 'Wheelchair' or similiar pictogram on 76mm diameter stainless steel plate	no	2		
P.13.8.2		DSS2 'Female' or similiar pictogram on 76mm diameter stainless steel plate	no	2		
P.13.8.3		DSS1 'Male' or similiar pictogram on 76mm diameter stainless steel plate	no	3		
P.13.8.4		Approved Aluminuim door stop with rubber insert	no	1		
P.13.8.5		Overhead surface mounted type door closer with aluminium casing	no	1		
P.14		**CEILINGS**				
		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				
P.14.1		NAILED UP CEILINGS				
P.14.1.1		12,5mm "Rhino" gypsum plasterboard with taped and skimmed joints finished with one coat rhinolite plaster				
P.14.1.2		Ceilings including 38 x 38mm sawn softwood brandering at 350mm centres	m^2	1		
P.14.1.3		Extra over ceiling for opening of 650 x 650mm trap door complete with trimmers, frame,etc	no	1		
P.14.1.4		Cornices				
P.14.1.5		50 mm Fibre cement coved cornice planted on including mitres, etc.	m	1		
P.14.2		SUSPENDED CEILINGS				
P.14.2.1		Pre-painted 600 x 1200 x 17mm "Armstrong Fine Fissured 95% RH" or equally approved acoustic panels on aluminium pre-painted exposed tee suspension system including main and cross tees, necessary hangers, grids, etc				
P.14.2.2		Ceilings suspended not exceeding 1m below steel trusses	m^2	1		
P.14.2.3		Cornices to suspended ceilings				
P.14.2.4		25 x 25mm Angle profile cornice	m	1		
P.14.2.5		Aerolite insulation				
P.14.2.6		50mm Thick insulation laid on ceiling boards	m^2	1		
P.15		**FLOOR TILES**				
P.15.1		400x400mm A Grade ceramic floor tiles including adhesive cement and grouting, including constraint cuttings and partitions	m^2	1		
P.15.2		A Grade ceramic floor tiles 75mm skating including adhesive cement and grouting	m^2	1		
P.15.3		500x500mm Porcelain floor tiles including adhesive cement and grouting, including constraint cuttings and partitions	m^2	1		
P.15.4		600x600mm Porcelain floor tiles including adhesive cement and grouting, including constraint cuttings and partitions	m^2	1		
P.15.5		Porcelain floor tiles 75mm skating including adhesive cement and grouting	m^2	1		
P.15.6		A grade ceramic 198 x 198 x 6mm White glazed ceramic wall tiles	m^2	1		
P.15.7		A grade ceramic walls tiles in showers, behind basins and ablution general walls	m^2	1		
P.16		**HAND RAILS IN TOILETS**				
P.16.1		Hot-dipped double spelter galvanised mild steel grab rails formed of 32mm outside diameter x 1,6mm round section rails and 75mm diameter x 3mm flat section fixing flanges each three times holed and bolted to walls with M8 x 50mm expansion bolts				
P		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
P		**Brought forward**				
P.16.2		32mm Grab rail 700mm long with two 80mm return ends bolted	no	4		
P.16.3		**HAND RAILS ELSEWHERE**				
P.16.4		Provide a sum for Prefabricated hand rails installation	Prov Sum	1	20000	R 20 000,00
P.16.5		Profit Over	%	20000		
P.17		**FIRE SERVICES**				
P.17.1		Fire appliances including piping, etc				
P.17.2		4,5kg DCP dry powder portable fire extinguisher on and including wrought Meranti backboard size 520 x 100 x 22mm thick plugged and screwed to wall and finished with two coats of polyurethane varnish, including 120 x 20 x 2mm mild steel strip bent to form hook	no	1		
P.17.3		Fire hose reel complete with 30m rubber hose, chromium plated stopcock, shut-off nozzle and wall bracket bolted to wall with and including expansion bolts	no	1		
P.18		**FIELD SANITATION UNITS**				
		Building mortar, earthworks, concrete and others measures elsewhere. Rates below are for the supply and installation of complete on site.				
P.18.1		Supply, deliver ,Install and commission Similar to 'Rocla', Ama Loo Loo or similar approved Precast Concrete Panel Toilet, 900mm W x 1100mm L x 2000mm H, Complete with prefabricated walls, roof, door, seat, pit slab cover, handwash basin	Sum	1		
P.18.2		Supply, deliver ,Install and commission Similar to 'ENVIRO LOO VIP', or similar approved. Prefabricated unit with toilet seat, extraction pipe and fan, collector pit plate setup, back inspection chamber/cover. Concrete Panel Toilet, 900mm W x 1100mm L x 2000mm H, Complete with prefabricated walls, roof, door, seat, pit slab cover, handwash basin	Sum	1		
		TOTAL SECTION "P" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION R : ELECTRICALS AND PLUMBING				
R.1		All items include Supply, delivery and installation ELECTIRCAL, WATER AND SEWAGE WORKS, EARTHWORKS (PIPE TRENCHES) Site Clearance and Removal of Topsoil				
R.1.1		**EXCAVATION ANCILLARIES**				
		Make up deficiency in backfill material (provisional)				
R.1.1.1		a) From other necessary excavations on site Services that intersect a trench:	m^3	1		
R.1.1.2		1) Stock fences	no	1		
R.1.1.3		2) Water Pipes	no	1		
R.1.1.4		3) Gravel Roads	no	1		
R.1.1.5		4) Power cables	no	1		
R.1.2		Finishing				
R.1.2.1		Reinstate road surfaces complete with all courses:				
R.1.2.2		d) Gravel road surfaces	m^2	1		
R.1.2.3		e) Paved road surfaces	m^2	1		
R.1.2		**Electrical Cables and Fittings**				
R.1.2.1		Supply and install 50mm^2, 3core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.2		Supply and install 50mm^2, 4core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.3		Supply and install 35mm^2, 3core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.4		Supply and install 35mm^2, 4core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.5		Supply and install 25mm^2, 3core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.6		Supply and install 25mm^2, 4core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.7		Supply and install 16mm^2, 4core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.8		Supply and install 16mm^2, 3core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.9		Supply and install 10mm^2, 4core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
R		**Brought forward**				
R.1.2.10		Supply and install 10mm², 3core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.11		Supply and install 6mm², 4core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.12		Supply and install 6mm², 3core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.13		Supply and install 4mm², 4core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.14		Supply and install 4mm², 3core PVC/SWA/PVC copper cable +ECC, Including all Terminate, complete with lugs and/or clamps, stainlessteel nuts, bolts and lock washer, Danger tape: Orange/Yellow PVC material-300mm above cable.	m	1		
R.1.2.15		Surfix cable - 2.5mm²	m	1		
R.1.2.16		Insulated 1,5mm2 wiring 1core cable; red, black, yellow, brown	m	1		
R.1.2.17		Insulated 2,5mm2 wiring 1core cable; red, black, yellow, brown	m	1		
R.1.2.18		Insulated 4mm2 wiring 1core cable; red, black, yellow, brown	m	1		
R.1.3		**Round balast light, including bulb holder and cover**	m	1		
R.1.3.1		60W Fluorescent 1.5m complete unit	no	1		
R.1.3.2		30W Fluorescent 1.5m complete unit	no	1		
R.1.4		**30W Fluorescent replacement tube 1.2m**	no	1		
R.1.5		**15W replacement globe/lamp, energy saver**	no	1		
R.1.5.1		1,2m long. LED fluorescent light, single complete unit	no	1		
R.1.5.2		1,2m long. LED fluorescent light, double complete unit	no	1		
R.1.5.3		Surface Fluorescent ceiling light complete unit with 3 tubes and holding frame, appx 615x615mm	no	1		
R.1.5.4		Splash/Vapour proof to faurescenet lights	no	1		
R.1.6		**Splash/Vapour proof to round balast lights**	no	1		
R.1.6.1		60W LED flood lights outdoor waterproofing	no	1		
R.1.6.2		Type C Outdooor bulkhead luminaire c/w LED Lamp	no	1		
R.1.6.3		Type B Ceiling luminaire complete with LED Lamp	no	1		
R.2		**DISTRIBUTION BOXES**				
R.2.1		Outdoor/Wall SURFACE or Ground Plinth mounted Steel cabinet enclousures: mild steel and enamel weather proof coated				
R.2.1.1		450x450x220mm box	no	1		
R.2.1.2		400x300x200mm box	no	1		
R.2.1.3		600x400x250mm box	no	1		
R.2.1.4		800x600x250mm box	no	1		
R.2.1.5		1200x600x250mm box	no	1		
R.2.1.6		1200x800x250mm box	no	1		
R.2.2		Steel and coated : Indoor Wall Built/installed DB enclosures				
R.2.2.1		24 Way DB Box	no	1		
R.2.2.2		12 Way DB Box	no	1		
R.2.2.3		6 Way DB Box	no	1		
R.2.3		DB FITTINGS AND PLUGS	no			
R.2.3.1		S11 Weatherproof plug	no	1		
R		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
R		**Brought forward**				
R.2.3.2		Main switch (60Amp) - in sub-DB box	no	1		
R.2.3.3		Earth switch circuit breaker (60Amp) – earth breaker in sub-DB box	no	1		
R.2.3.4		Earth wire & copper rod, allow for 10m	no	1		
R.2.3.5		Circuit breaker - lights (10Amp)	no	1		
R.2.3.6		Circuit breaker - lights (15Amp)	no	1		
R.2.3.7		Circuit breaker - plugs (20Amp)	no	1		
R.2.3.8		Circuit breaker - plugs (25Amp)	no	1		
R.2.3.9		Circuit breaker - plugs (30Amp)	no	1		
R.2.4		Circuit breaker - plugs (40Amp)	no	1		
R.2.4.1		Circuit breaker - plugs (50Amp)	no	1		
R.2.4.2		Circuit breaker - plugs (60Amp)	no	1		
R.2.4.3		Circuit breaker - plugs (70Amp)	no	1		
R.2.4.4		Circuit breaker - plugs (80Amp)	no	1		
R.2.4.5		Circuit breaker - plugs (90Amp)	no	1		
R.2.4.6		Circuit breaker - plugs (100Amp)	no	1		
R.2.4.7		Six Pin 3 Phase wall plug, 60-80Amp	no	1		
R.2.4.8		Six Pin 3 Phase wall plug, 90-100Amp	no	1		
R.2.4.9		Single socket 3 pin single Phase wall plug, 15Amp	no	1		
R.2.4.10		Single socket 3 pin single Phase wall plug, 20Amp	no	1		
R.2.4.11		Single socket 3 pin single Phase wall plug, 30Amp	no	1		
R.2.4.12		Double socket 3 pin single Phase wall plug, 20Amp	no	1		
R.2.4.13		Double socket 3 pin single Phase wall plug, 30Amp	no	1		
R.2.5		Conduit pipes including all joints and fittings to electrical fittings				
R.2.5.1		Conduit pipes (20mm Ø PVC for surfix where visible) chiseled into wall	m	1		
R.2.5.2		Conduit pipes (25mm Ø PVC) chiseled into wall	m	1		
R.2.5.3		Conduit pipes (20mm Ø Galvanised Steel Tubes)	m	1		
R.2.5.4		Conduit pipes (30mm Ø Galvanised Steel Tubes)	m	1		
R.2.5.5		Conduit pipes (50mm Ø Galvanised Steel Tubes)	m	1		
R.2.5.6		3 Lever 2 way light switch including 2 x 4 electrical box	no	1		
R.3		**PLUMBING AND SEWAGE**				
R.3.1						
R.3.1.1		"Pearl Paraplegic" or similar approved white vitreous china low level washdown suite (code 750200), matching 9litre front single flush cistern complete with waste/drain connections, flushpipe, purpose made cp side flush lever and BEMIS 7500 economy double flap thermoset seat.	no	1		
R.3.1.2		"Emerald" or similar approved vitreous china basin (code 703003) or similar approved, to vanities (elsewhere) complete, white, including one mixer tap, integrated overflow, chain stay hole bolted to wall with two 10mm bolts, and waste/drain connections.	no	1		
R.3.1.3		"Vaal Lavatera" or similar approved White Vitreous china wall mounted bowl urinal with top inlet, supplied with 38mm chromium plated domical grating, chromium plated spreader, and two hanger brackets	no	1		
R.3.1.4		Supply & install shower clothes hooks and soap holders in showers	no	1		
R.3.1.5		Supply & install 2 tier toilet roll holder, lockable mild white steel, color coated with enamel paint.	no	1		
R		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
R		**Brought forward**				
R.3.1.6		Supply & install SHE bin, 10L.	no	1		
R.3.1.7		Supply & install shower head complete with chrome shower arm and all accessories to control valves for hot and cold water in each shower	no	1		
R.3.1.8		Supply & install 450x600x6mm "GG"QUALITY POLISHED GLASS MIRROR: Fix above each basin with round nose chromium plated mirrow screws	no	1		
R.3.1.9		Supply & install 600 x 19mm STAINLESS STEEL CHROMIUM PLATED TOWEL RAIL in each shower and next to each basin,	no	1		
R.3.1.10		Supply & install shower curtain rail, alluminium/chrome, 1110mm - 2000mm	no	1		
R.3.1.11		Supply & install heavy duty plastic shower curtains	no	1		
R.3.2		Sewage Pipeline				
R.3.2.1		Supply and install sewage 50mm PVC pipe including straight coupling	m	1		
R.3.2.2		Supply and install sewage 50mm PVC pipe fittings				
R.3.2.3		Bends	no	1		
R.3.2.4		T - Junctions	no	1		
R.3.2.5		**Y- Junctions**	no	1		
R.3.2.6		Inspection Eyes	no	1		
R.3.2.7		End Cap	no	1		
R.3.2.8		Air Release/Breather on behind toilet and on septic tank	no	1		
R.3.2.9		P-Trap	no	1		
R.3.2.10		Supply and install sewage 110mm PVC pipe including straight coupling	m	1		
R.3.2.11		Supply and install sewage 110mm PVC pipe fittings				
R.3.2.12		Bends	no	1		
R.3.2.13		T - Junctions	no	1		
R.3.2.14		Y- Junctions	no	1		
R.3.2.15		Inspection Eyes	no	1		
R.3.2.16		End Cap	no	1		
R.3.2.17		Air Release/Breather	no	1		
R.3.2.18		Concrete Gulley with Grid and Trap, complete	no	1		
R.3.2.19		**Shower Trap and grid Complete**	no	1		
R.3.2.20		P-Trap for basins and sinks	no	1		
R.3.2.21		Supply and install sewage 160mm PVC pipe including straight coupling	m	1		
R.3.2.22		Supply and install sewage 160mm PVC pipe fittings				
R.3.2.23		T - Junctions	no	1		
R.3.2.24		Y- Junctions	no	1		
R.3.2.25		Inspection Eyes	no	1		
R.3.2.26		End Cap	no	1		
R.4		**WATER SUPPLY**				
R.4.1		Supply and install fully galvanized steel pipes, both ends threaded				
R.4.1.1		300mm length				
R.4.1.2		20mm Diameter	no	1		
R.4.1.3		25mm Diameter	no	1		
R.4.1.4		40mm Diameter	no	1		
R.4.1.5		50mm Diameter	no	1		
R.4.1.6		600mm length				
R.4.1.7		20mm Diameter	no	1		
R.4.1.8		25mm Diameter	no	1		
R		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
R		**Brought forward**				
R.4.1.9		40mm Diameter	no	1		
R.4.1.10		50mm Diameter	no	1		
R.4.1.11		1500mm length				
R.4.1.12		20mm Diameter	no	1		
R.4.1.13		25mm Diameter	no	1		
R.4.1.14		**40mm Diameter**	no	1		
R.4.1.15		50mm Diameter	no	1		
R.4.1.16		100mm Diameter	no	1		
R.4.1.17		Galvanised Pipes Joints				
R.4.1.18		Straight Joint/Coupling bush				
R.4.1.19		20mm Diameter	no	1		
R.4.1.20		25mm Diameter	no	1		
R.4.1.21		**40mm Diameter**	no	1		
R.4.1.22		50mm Diameter	no	1		
R.4.1.23		100mm Diameter	no	1		
R.4.1.24		Bends				
R.4.1.25		20mm Diameter	no	1		
R.4.1.26		25mm Diameter	no	1		
R.4.1.27		40mm Diameter	no	1		
R.4.1.28		50mm Diameter	no	1		
R.4.1.29		100mm Diameter	no	1		
R.4.2		**Nipple Barrel**				
R.4.2.1		20mm Diameter	no	1		
R.4.2.2		25mm Diameter	no	1		
R.4.2.3		40mm Diameter	no	1		
R.4.2.4		50mm Diameter	no	1		
R.4.2.5		100mm Diameter	no	1		
R.5		**Tees**				
R.5.1.1		20mm Diameter	no	1		
R.5.1.2		25mm Diameter	no	1		
R.5.1.3		40mm Diameter	no	1		
R.5.1.4		50mm Diameter	no	1		
R.5.1.5		100mm Diameter	no	1		
R.5.2		COPPER PIPES				
R.5.2.1		Copper pipes Chased into brickwalls, including joints and bends and sockets				
R.5.2.2		15mm Pipes.	m	1		
R.5.2.3		20mm Pipes.	m	1		
R.5.2.4		Copper pipes joints				
R.5.2.5		15mm Tees, Bend, straight Join	no	1		
R.5.2.6		20mm Tees, Bend, straight Join	no	1		
R.5.2.7		Copper pipes adapters to fittings, i.e Valve or water source pipes				
R.5.2.8		15mm	no	1		
R.5.2.9		20mm	no	1		
R.5.3		HDPE PIPES				
R.5.3.1		All to be of Class 9 and Compression fittings				
R		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
R		**Brought forward**				
R.5.3.2		20mm Pipe	m	1		
R.5.3.3		32mm Pipe	m	1		
R.5.3.4		50mm Pipe	m	1		
R.5.3.5		63mm Pipe	m	1		
R.5.3.6		75mm Pipe	m	1		
R.5.3.7		Straight Joint/Coupling				
R.5.3.8		20mm Pipe	no	1		
R.5.3.9		32mm Pipe	no	1		
R.5.3.10		50mm Pipe	no	1		
R.5.3.11		63mm Pipe	no	1		
R.5.3.12		75mm Pipe	no	1		
R.5.3.13		Bends				
R.5.3.14		20mm Pipe	no	1		
R.5.3.15		32mm Pipe	no	1		
R.5.3.16		50mm Pipe	no	1		
R.5.3.17		63mm Pipe	no	1		
R.5.3.18		75mm Pipe	no	1		
R.5.3.19		Tess				
R.5.3.20		20mm Pipe	no	1		
R.5.3.21		32mm Pipe	no	1		
R.5.3.22		50mm Pipe	no	1		
R.5.3.23		63mm Pipe	no	1		
R.5.3.24		75mm Pipe	no	1		
R.5.3.25		Reducers				
R.5.3.26		75-63mm	no	1		
R.5.3.27		63-50mm	no	1		
R.5.3.28		50-32mm	no	1		
R.5.3.29		32-20mm	no	1		
R.5.4		VALVES				
R.5.4.1		50mm steel Ball/Gate valve	no	1		
R.5.4.2		25mm steel ball/gate valve	no	1		
R.5.4.3		15mm steel ball/gate valve	no	1		
R.5.4.4		50mm PVC threaded ball valve, black handle	no	1		
R.5.4.5		25mm PVC threaded ball valve, black handle	no	1		
R.5.4.6		50 mm Flanged hyraulic pressure regulating valve	no	1		
R.5.4.7		50 mm butter fly valve lever type	no	1		
R.5.4.8		Pressure control valve for 600kPA, on 15 or 20mm pipes	no	1		
R.5.4.9		15mm Ball-o-stop valve.	no	1		
R.5.4.10		22mm Non Return valve.	no	1		
R.6		**HOT WATER GEYSERS**				
R.6.1.1		150 Litres Electric element geyser complete with waste water tray, anchoring and plumbing inlet and outlent adapters, fitted with isolator switch, with temperature and pressure safety relief valve, vacuum breaker, draincock.	no	1		
R		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
R		**Brought forward**				
R.6.1.2		200 Litres Electric element geyser complete with waste water tray, anchoring and plumbing inlet and outlent adapters, fitted with isolator switch, with temperature and pressure safety relief valve, vacuum breaker, draincock.	no	1		
R.6.1.3		200 Litres Dual Solar and Electric element geyser complete with Solar panel, and circulation pump, waste water tray, anchoring and plumbing inlet and outlent adapters, fitted with isolator switch, with temperature and pressure safety relief valve, vacuum breaker, draincock.	no	1		
R.6.1.4		250 Litres Dual Solar and Electric element geyser complete with Solar panel, and circulation pump, waste water tray, anchoring and plumbing inlet and outlent adapters, fitted with isolator switch, with temperature and pressure safety relief valve, vacuum breaker, draincock.	no	1		
R.6.2		Excavate and Build Valve Chamber				
R.6.2.1		Excavate in compacted earth for building Valve Chamber, size approximately 1235mm x 1235mm not exceeding 1000mm deep externally constructed with 230mm brick wall sides built in engineering bricks with 150mm thick 25Mpa in-situ concrete base and cover slab, fitted with 610mm x 305mm x 150mm cast iron hydrant box with lid with slotted hole for lifting key. Excavation to include all backfilling, compaction, working space, formwork, reinforcing, etc. all as per Engineers details and specifications	no	1		
R.6.2.2		Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m^3	1		
R.6.2.3		Gate/Isolation Valves in Chambers				
R.6.2.4		Resilient seal gate valves. Specifications to SABS 664Resilient seal gate valve fitted to flange adaptors. Clockwise closing Non rising spindle Anti-clockwise closing. A removable coupling must be Supplyd at one side of the valve at least 500mm from the shaft.				
R.6.2.5		50mm Gate/Isolation Valve in chamber (chamber elsewhere measured) to water main as per Engineers detail and specification	no	1		
R.6.2.6		50mm Non-Return Valve in chamber (chamber elsewhere measured) to water main, complete including all couplings, flanges, etc. as per Engineers detail and specification	no	1		
R.7		**Water Purification Plants**				
R.7.1.1		Reverse Osmosis System, 150 Litres per hour,Complete Unit Including micro computer controller with dash board for Total Dissolved Substance readings, stainless steel membrane housing, up to 6 multi-stage pump, sediment filter, pressure gauge and control switches	sum	1		
R.7.1.2		Reverse Osmosis System, 300 Litres per hour,Complete Unit Including micro computer controller with dash board for Total Dissolved Substance readings, stainless steel membrane housing, up to 6 multi-stage pump, sediment filter, pressure gauge and control switches	sum	1		
R.7.1.3		Reverse Osmosis System, 500 Litres per hour,Complete Unit Including micro computer controller with dash board for Total Dissolved Substance readings, stainless steel membrane housing, up to 6 multi-stage pump, sediment filter, pressure gauge and control switches	sum	1		
R.7.1.4		Water Chlorinator: 50 mm Klorman In-line Chlorinator or similar approved, which dispenes 550g or 700g Disposal refils, at Dose Rate 1PPM a 550G Refil treat, Up to 350 000 Lt At 1 PPM (7000 Lt AT 50 PPM), At 1 BAR/ 90 PSI operating Pressure	sum	1		
R.8		**AIR CONDITIONING SYSTEM**				
R.8.1.1		6000 BTU complete air Conditioning unit, wall mounted	sum	1		
R.8.1.2		9000 BTU complete air Conditioning unit, wall mounted	sum	1		
R.8.1.3		12000 BTU complete air Conditioning unit, wall mounted	sum	1		
R		**Carried forward**				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
R		**Brought forward**				
R.8.1.4		16000 BTU complete air Conditioning unit, wall mounted	sum	1		
R.8.1.5		18000 BTU complete air Conditioning unit, wall mounted	sum	1		
R.8.1.6		24000 BTU complete air Conditioning unit, wall mounted	sum	1		
R.9		**PROVISIONAL SUMS**				
R.9.1.1		Allow for a provisional sum for Mechanical/Electrical or processing Equipment required works to be instructed by the engineer for purchase of materials and installation, Below R60 000,00	Prov Sum	1	60000	R 60 000,00
R.9.1.2		Profit profit over above	%	60000		
R.9.1.3		Allow for a provisional sum for Mechanical/Electrical or processing Equipment required works to be instructed by the engineer for purchase of materials and installation, Below R100 000,00	Prov Sum	1	100000	R 100 000,00
R.9.1.4		Profit profit over above	%	100000		
R.9.1.5		Allow for a provisional sum for Mechanical/Electrical or processing Equipment required works to be instructed by the engineer for purchase of materials and installation, Below R250 000,00	Prov Sum	1	250000	R 250 000,00
R.9.1.6		Profit profit over above	%	250000		
R.9.1.7		Allow for a provisional sum for Mechanical/Electrical or processing Equipment required works to be instructed by the engineer for purchase of materials and installation, Below R500 000,00	Prov Sum	1	500000	R 500 000,00
R.9.1.8		Profit profit over above	%	500000		
R.9.1.9		Allow for a provisional sum for Mechanical/Electrical or processing Equipment required works to be instructed by the engineer for purchase of materials and installation , Below R1 000 000	Prov Sum	1	1000000	R 1 000 000,00
R.9.1.10		Profit profit over above	%	1000000		
R.9.1.11		Allow for a provisional sum for Mechanical/Electrical or processing Equipment required works to be instructed by the engineer for purchase of materials and installation , Below R3 000 000	Prov Sum	1	3000000	R 3 000 000,00
R.9.1.12		Profit profit over above	%	3000000		
R.9.1.13		Allow for a provisional sum for Mechanical/Electrical or processing Equipment required works to be instructed by the engineer for purchase of materials and installation , Below R5 000 000	Prov Sum	1	5000000	R 5 000 000,00
R.9.1.14		Profit profit over above	%	5000000		
R.9.1.15		Allow for a provisional sum for Fencing Repairs works to be instructed by the engineer for purchase of materials and installation , Below R60 000	Prov Sum	1	60000	R 60 000,00
R.9.1.16		Profit profit over above	%	60000		
R.10		**TESTING**				
R.10.1		**Supply all necessary testing apparatus, water, materials, etc. and allow for testing of plumbing works and issue Certificate of Compliance**	no	1		
R.10.2		Provide certificate of compliance (COC) for all electrical per building or facility	no	1		
		TOTAL SECTION "R" CARRIED FORWARD TO SUMMARY				

	CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION S : POWER GENERATION EQUIPMNET				
		SOLAR SYSTEM				
S.1.1		Supply deliver and install 300W monocrystalline or similar solar panels,	no	1		
		Supply deliver and install 550W monocrystalline or similar solar panels,	no	1		
S.1.2		Pure sine wave invertor complete with: *AC/DC compatibility *Overvoltage and undervoltage protection *Overload protection and overcurrent protection *Overtemperature protection *No-load protection. *Operating history memory *Detachable control panel *Enclosure class IP66 *Automatic generator start, Display and digital function				
S.1.3		3kVA	sum	1		
S.1.4		5kVA	sum	1		
S.1.5		8kVA	sum	1		
S.1.6		10kVA	sum	1		
S.1.7		16kVA	sum	1		
S.1.8		25kVA	sum	1		
S.1.9		50kVA	sum	1		
S.1.10		Supply and install arrray to array cable for solar panels	m	1		
S.1.11		Supply and install DC Cicuit breakers and surge protector	sum	1		
S.1.12		Supply and install Combined Junction Box for solar panels	sum	1		
S.1.13		**FUEL GENERATORS**				
S.1.14		Diesel generator complete with: *Electric start *Automatic voltage regulator and Dashboard dispaly *Automatic transfer switch				
S.1.15		5kVA	sum	1		
S.1.16		8kVA	sum	1		
S.1.17		15kVA	sum	1		
S.1.18		25kVA	sum	1		
S.1.19		50kVA	sum	1		
S.1.20		65kVA	sum	1		
S.1.21		100kVA	sum	1		
S.1.22		**Provisional Sums**				
S.1.23		Allow a sum for power generation equipmnet by instruction	Prov Sum	1	R 200 000,00	R 200 000,00
S.1.24		Profit over	**%**	200 000		
S.1.25		**Service of Generators**				
S.1.26		Minor service: includes consumables replacement and filters replacement: Oil, Coolant, air filter, fuel filter, thermostat, antifreeze,				
S.1.27		5kVA	sum	1		
S.1.28		8kVA	sum	1		
S.1.29		15kVA	sum	1		
S.1.30		25kVA	sum	1		
S.1.31		50kVA	sum	1		
S.1.32		65kVA	sum	1		
S.1.33		100kVA	sum	1		
S.1.34		Allow a sum for fuel generators major service by instruction	Prov Sum	1	R 30 000,00	R 30 000,00
S.1.35		Profit over above	%	30 000		
S.1.36		**Batteries and Battery Banks**				
S.1.37		Allow a sum for replacement of batteries, and provision of energy bank batteries by instruction	Prov Sum	1	R 100 000,00	R 100 000,00
S.1.38		Profit over above	%	100 000		
S.1.39		**Power Transformers**				
		Supply, installation, registration and commission of new transformer including 12m treated poles				
		25kVA	sum	1		
		50kVA	Sum	1		
		100kVA	sum	1		
S.1.40		Allow a sum for replacement, upgrade or installation of power grid line and transfomers by a Eskom registered contractor by instruction	Prov Sum	1	R 200 000,00	R 200 000,00
S.1.41		Profit over above	%	200 000		
		TOTAL SECTION "S" CARRIED FORWARD TO SUMMARY				

PART C3: SCOPE OF WORK

C3.1: STANDARD SPECIFICATIONS

C3.2: PROJECT SPECIFICATIONS

C3.3: PARTICULAR SPECIFICATIONS

LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

C3: SCOPE OF WORK

C3.1 STANDARD SPECIFICATIONS

C3.2 PROJECT SPECIFICATIONS

PART A: GENERAL

PS-1 Project Description
PS-2 Description of the Site and Access
PS-3 Details of the Works
PS-4 Construction Programme
PS-5 Site Facilities Available
PS-6 Facilities Required on site
PS-7 Management and Disposal of Water
PS-8 Rainfall Figures
PS-9 Security Clearance of Personnel
PS-10 Health and Safety
PS-11 Subcontractors
PS-12 Deviation from Construction Programme
PS-13 Delay in Completion
PS-14 Supply of Materials
PS-15 Execution of Works
PS-16 Existing Services
PS-17 Labour Intensive Specification

PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

C3.3 PARTICULAR SPECIFICATIONS

PART D: ENVIRONMENTAL MANAGEMENT SPECIFICATION

PART E: OHSA 1993 HEALTH AND SAFETY

LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

A 3-YEAR FRAMEWORK AGREEMENT FOR THE DEVELOPMENT AND MAINTENANCE OF IRRIGATION PROJECTS AND SCHEMES FOR THE LIMPOPO DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

C3.1 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are the SANS Standardised Specifications for Civil Engineering Works.

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

SABS 1200 A	-	General
SABS 1200 C	-	Site Clearance (amended 1982)
SABS 1200 DA	-	Earthworks (Small Works)
SABS 1200 GA	-	Concrete (Small Works)
SABS 1200 HA	-	Structural Steelwork

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

SANS 10396: 2003: Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures

SANS 1914-1 to 6 (2002) : Targeted Construction Procurement

SANS 1921 – 1 (2004): Construction and Management Requirements for Works Contracts
Part 1: General Engineering and Construction Works

and where accommodation of traffic is involved:

SANS 1921-2 (2004): Construction and Management Requirements for Works Contracts
Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor.

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C3.2: PROJECT SPECIFICATIONS

STATUS

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

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

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

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

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

PART A: GENERAL

PS 1 PROJECT DESCRIPTION

To be provided with the issuing of a Task Order.

PS 2 DESCRIPTIONS OF THE SITE AND ACCESS

PS 2.1 Location of site

To be provided with the issuing of a Task Order.

PS 2.2 Access to site

To be provided with the issuing of a Task Order.

PS 3 DETAILS OF THE WORKS

To be provided with the issuing of a Task Order.

PS 3.1 Brief description of works

To be provided with the issuing of a Task Order.

PS 3.3 Labour recruitment conditions

A Project Steering Committee (PSC) will be established and is a vital means of communication between all parties involved with the project. The composition of the PSC comprises representation by the Employer, the Engineer and formal structures within the community.

The contractor shall make use of these communication channels and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PSC, and this representative may be also required to attend the monthly PSC meetings.

It is mandatory that the Contractor shall interact with the community via proactive project liaison and project participation by its leaders and constituted organisations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

Local labour is to be used and the employment of such labour is to be done in conjunction with the PSC.

PSC shall, if necessary, appoint a Community liaison officer (CLO). The duties of the CLO shall consist of inter alias of the following:

- To be available on site daily between the hour of 07:00 and 17:00 and at other times as the need arises. His normal working day will extend from 07:00 in the morning until 17:00 in the afternoon.
- To communicate daily with regard to number and skills, to facilitate in labour disputes and to assist in their resolution.
- To attend all meetings in which the community and/or labour are present or are required to be represented.
- To attend all PSC meeting to report on labour.
- To assist in the identification and screening of labourers from the community in accordance with the contractor's requirements.
- To advise and inform temporary labourers of their conditions of employment and to inform temporary labourers as early as possible when their period of employment will be terminated.
- To attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- To keep a daily written record of his interviews and community liaison, labour force etc.
- To attend monthly site meetings and report in writing on labour and contract matters.
- Keeping a data base of available labour.
- All such other duties as agreed upon between all parties concerned.
- Compile a list of available skills in the area (skills audit).

PS 4 CONSTRUCTION PROGRAMME

PS 4.1 General

The submission of a construction programme as stated per Clause 12 of the General Conditions of Contract is compulsory.

Before any work is to be commenced on the site (within a period as stated in Clause 12.2 of the General Conditions of Contract), the Contractor must submit a detailed project programme for the construction of the Works to the Engineer for his approval.

In preparation of the construction programme the Contractor must liaise with the Engineer and the programme must take into account the coordination of all activities. The programme must consist of a detailed schedule or block diagram covering all aspects of the Works and the planned time thereof must, with the Contract Period as time basis, be shown.

Rainfall conditions will be taken as abnormal when the average rainfall, as shown in Clause PS 8, is exceeded and the contractor must then apply in writing for extension of the contract period using Clause 48 of the Conditions of Contract.

The service provider is required to state in the Appendix to the Form of Tender the time in which he is prepared to undertake and complete the works.

The Contractor shall submit to the Engineer a realistic, detailed programme not later than 14 days after receipt of the Letter of Acceptance. The programme shall be in bar-chart format showing in detail how the Contractor proposes to complete the work covered by this contract by the Due Completion Date.

The following details must be stated:

I. The quantity of work applicable to each bar item as well as the rate at which the work will be completed.
II. A budget of the value of completed work, month by month, for the full contract period.
III. The Contractor's plant commitment on the contract for every fortnight.
IV. The critical path.

The programme shall be kept up to date. If a Contractor fails to maintain progress in terms of the programme, he shall produce a revised programme showing the modifications to the original programme necessary to ensure completion of the Works before the Due Completion Date.

The approval of any programme by the Engineer shall have no contractual significance, other than satisfying the Engineer that the Work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. The Engineer will have the right to instruct the Contractor to revise the programme if necessitated by circumstances.

PS 4.2 Time for Completion

The maximum time allowed for the completion of the contract is **(**To be provided with the issuing of a Task Order) **MONTHS** (excluding special non-working days and the yearend break) from the date of Letter of Acceptance / or Site Handover.

PS 5 SITE FACILITIES AVAILABLE

PS 5.1 Water Supply

The Contractor must make his own arrangements for provision of fresh water on site for domestic and construction purposes.

The rates Tendered for the relevant items in the Preliminary and General Section of the schedule shall include all costs for the establishment and maintenance of water supply to the works and the Contractor shall make his own arrangements for the possible conveyance and storage of water if necessary.

PS 5.2 Power Supply

The Contractor must make his own arrangements for the provision of electricity on site. The rates Tendered for the relevant items in the Preliminary and General Section of the schedule shall include all costs for the establishment and maintenance of a power supply to the works.

PS 6 FACILITIES REQUIRED ON SITE

PS 6.1 Facilities for the Engineer

A site office for the Engineer is not required.

PS 6.2 Facilities for the Contractor

Site Establishment

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel and labourers. If the Employer can make any specific site available to the Contractor, such site will be pointed out to the Contractor. The site office should be user friendly, cleaned at all times and be equipped with office furniture such as printer, desk and chairs.As the area is hot during summer, a fan will be necessary for the site office.

The chosen site shall be subject to the approval of the beneficiary/Engineer and the Project Steering Committee (if available). Possible locations for a campsite shall be pointed out at the Site inspection. The Contractor shall conform to all beneficiary, local authority, environmental and industrial regulations.

The Contractor shall make his own arrangements concerning the supply of electrical power and all other services. No direct payment shall be made for the provision of electrical and other services. The cost thereof shall be deemed to be included in the rates and amounts Tendered for the various items of work for which these services are required.

The Contractor shall provide security watchmen for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as well as the employees of his subcontractors are able to identify themselves as members of the construction team.

Ablution and Sanitary Facilities:

The Contractor shall erect and maintain on the site proper ablution facilities. The Contractor shall service and maintain the facilities in a clean and hygienic state for the duration of the contract period and on completion of the works remove it from the site to the satisfaction of the Employer/beneficiary.

PS 6.3 Laboratory Facilities

The contractor shall provide laboratory facilities at an SABS accredited laboratory to conduct tests as required or as specified/measured in the bills of quantity.

PS 6.4 Construction Notice Board (Name Board)

1 Official Name Board per site (if necessary), as per C4.2 Site Information: Construction Notice Board, is required for this contract.

PS 6.5 Housing for the Engineer and/or his Representative

No housing is required for the Engineer or his Representative.

PS 6.6 Telephone Facilities

Items have been provided in the Bill of Quantities to cover for communication costs for the Engineer.

PS 7 MANAGEMENT AND DISPOSAL OF WATER

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

PS 8 RAINFALL FIGURES

The following figures are applicable for Clause 50(5) of the Special Conditions of Contract.

INFORMATION SOURCE: WRC Report 1994

Rainfall station: (To be provided with the issuing of a Task Order.)					
Rainfall station:					
Period:					
Month	**N_n**	**R_n**	**Month**	**N_n**	**R_n**
January			July		
February			August		
March			September		
April			October		
May			November		
June			December		

Nn = Average amount of days on which a rainfall of 10 mm or more has been recorded.
Rn = Average monthly rainfall in mm

The contractor will be expected to maintain on site a standard rain gauge for measurement of rainfall on day to day basis during the project implementation period.

Extensions of time in respect of Clause 42 in the General Conditions of Contract for Construction Works (2004) in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:

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

Where:
V = Extension of time in calendar days in respect of 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 in the relevant calendar month , as derived from existing rainfall records, on which a rainfall of 10mm or more has been recorded for the calendar month.
Rw = Actual average rainfall in mm recorded for the calendar month under consideration.
Rn = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.
X = 20mm

For purposes of the Contract Nn, Rn and Nn shall have those values assigned to them in the table above based on figures from the WRC report 1994.

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

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

This formula does not take account flood damage which could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.

The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the average in the number of days during which rainfall exceeds 10 mm. The factor (Rw-Rn) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed 10 mm but wet conditions prevented or disrupted work.

For the purpose of applying the formula, accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.

PS 9 SECURITY CLEARANCE OF PERSONNEL

Service Providers to note that the Limpopo Department of Agriculture may require that Security Clearance investigations be conducted on any number of the service providers personnel.

If so required, by the Limpopo Department of Agriculture, the service provider must remove personnel as indicated immediately and ensure that they have no access to the works or documentation or any other information pertaining the site.

The Employer shall not be liable for any cost concerning the removal of personnel or the effect thereof on the execution of the work.

PS 10 HEALTH AND SAFETY

PS 10.1 General statement

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act (OHSA) No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2003 issued on 18 July 2003 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in section C1.5.

PS 10.2 Health and Safety Specifications and Plans

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in Section C3.3, Part E of the Tender documents as part of the Particular Specifications.

(b) Service Providers Health and Safety Plan

The service provider shall submit with the Tender his own documented Health and Safety Plan he proposes to be implement for the execution of the work under the contract. The Health and Safety Plan must at least cover the following:

(i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 7 to 28;
(ii) pro-active identification of potential hazards and unsafe working conditions;
(iii) provision of a safe working environment and equipment;
(iv) statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 5)*;
(v) monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
(vi) details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 6 and other applicable regulations; and
(vii) details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2003.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

PS 10.3 Cost of compliance with the OHSA Construction Regulations

The rates and prices Tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

PS 11 SUB-CONTRACTORS

The Contractor shall have the right to cede any sub-contract under this contract to a subcontractor of his/her choice.

PS 12 DEVIATION FROM CONSTRUCTION PROGRAMME

The programme of work as required in terms of the “General Conditions of Contract 2nd edition (2010)” shall be submitted to the Engineer not later than fourteen days after the Commencement Date.

The Contractor shall take into account the requirements of the Occupational Health and Safety Act, as well as the Construction Regulations in the drafting of the programme.

The format shall not be in the form of a bar chart only, but shall also clearly indicate the anticipated quantity of work to be executed each month. The construction programme shall also clearly indicate the local and foreign labour to be utilised for the duration of the Contract.

If during the progress of the work, the quantities of the work performed per month fall below the expected indicated in the Construction programme, or if the sequence of operation is altered, or if the programme is deviated from in any other way, the Contractor shall, within one week after being notified by the Engineer, submit a revised construction programme.

Such a revised construction programme shall be based on the tempo of work achieved by the Contractor up to the date of revision. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on site or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided for in the "General Conditions of Contract – 2nd edition (2010)"

PS 13 DELAY IN COMPLETION

The Contractor shall organise the Works in such a manner that no delays occur. Delay due to faulty organisation or lack or shortage of materials or labour or co-operation with other parties or to any other cause within the control of the Contractor will not be countenanced and full power is reserved by the Engineer to order the Contractor to expedite the work should the work, in the opinion of the Engineer, not progress in a satisfactory way.

PS 14 SUPPLY OF MATERIALS

All material to be used in the Works is to be supplied by the Contractor.

The Contractor shall ensure that the work is not delayed due to the lack of materials on Site, by placing orders for material required under this Contract as soon as possible. No extension of time will be allowed for any delay due to the supply of materials.

Although the quantities have been carefully calculated, it must be considered as approximate only and the Contractor, before ordering any materials, should check the quantities required. The bill of quantities is provisional.

PS 15 EXECUTION OF THE WORKS

PS 15.1 Inspection by the Engineer

No portion of the work shall be proceeded with until the Engineer or his representative has examined and approved the previous stage. If any work is covered or hidden from view before the Engineer or his representative has inspected the work, the Contractor shall at his own cost expose the covered or hidden work for inspection. The Contractor shall also be responsible for making good any work damaged during the uncovering.

PS 15.2 Certificate of Completion

When all the work under the Contract have been completed to the entire satisfaction of the Engineer, he will issue a certificate of completion to the Contractor informing the Contractor of the date the date at which the works are deemed to be completed and accepted by the Employer.

The sureties provided by the Contractor for the fulfilment and completion of the Contract in terms of the Form of Agreement will be released upon the issue of the Certificate of Completion.

PS 16 EXISTING SERVICES

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

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

A provisional amount is included in the bill of quantities for the protection and/or shifting of services.

Two weeks prior to commencing construction activities in a particular area, the Contractor shall also diligently enquire of local landowners as to whether there are any other known services which have not been shown on the drawings but which may be affected by the construction activities in that area, and any such services shall

be brought to the attention of the Engineer immediately. The contractor shall make provision in his programme for the location and/or shifting of services.

The Contractor shall take note of the requirements of the standard specifications with regard to services.

PS 17 LABOUR INTENSIVE SPECIFICATION

PS 17.1 Labour intensive competencies of supervisory and management staff

Contractors having a CIDB contractor grading designation of 2CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2004 to 30 June 2006, are registered for training towards, the skills programme outlined in Table 1.

The managing principal of the contractor, namely, a sole proprietor, the senior partner, the managing director or managing member of a close corporation, as relevant, having a contractor grading designation of 1CE and 2CE, shall have personally completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for the NQF level 2. All other site supervisory staff in the employ of such contractors must have completed, or for the period 1 April 2004 to 30 June 2006 be registered on a skills programme for, the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, **and**
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman/ supervisor	4	Implement labour Intensive Construction Systems and Techniques	This unit standard must be completed, **and**
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard

PS 17.2 Employment of unskilled and semi-skilled workers in labour-intensive works

PS 17.2.1 Requirements for the sourcing and engagement of labour.

Unskilled and semi-skilled labour required for the execution of all labour intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.

The rate of pay set for a day task is 90% of the statutory daily wage applicable for the areas.

Tasks established by the contractor must be such that:

a) the average worker completes 5 tasks per week in 40 hours or less; and
b) the weakest worker completes 5 tasks per week in 55 hours or less.

The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 5.2.1.3.

The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

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

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

a) 60 % women;
b) 20% youth who are between the ages of 18 and 25; and
c) 2% on persons with disabilities.

PS 17.2.2 Specific provisions pertaining to SANS 1914-5

Training of targeted labour

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

b) The cost of the formal training of targeted labour will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically possible. The contractor must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The employer must be furnished with a copy of this request.

c) The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he she is employed for 4 months or more.

d) The contractor shall do nothing to dissuade targeted labour from participating in training programmes.

e) An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of d above.

f) Proof of compliance with the requirements of b to e must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

B1 PROJECT SPECIFICATIONS RELATING TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS

In certain clauses in the standard, standardised and particular specifications, allowance is made for a choice to be specified in the project specifications between alternative materials or methods of construction, and for additional requirements to be specified to suit a particular contract. Details of such alternative or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains the necessary additional specifications required for this particular contract.

VARIATIONS TO REQUIREMENTS OF SPECIFICATIONS LISTED IN C3.1

PSAA SABS 1200 A : GENERAL (SMALL WORKS)

PSA 4.2: Contractor's Camp

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

PSA 6.2 Degree of Accuracy

A Degree of Accuracy II shall be applicable for the construction of the various portions of the Works.

PSC SABC 1200 C: SITE CLEARANCE

PSC 3.1 Disposal of Material

Disposal areas are not available on site. The Contractor shall locate his own disposal areas and shall remove and cart away any accumulation of material generated by his construction activities and not required for further use in the Works. The cost of loading, carting away and disposing of material shall be deemed to have been included in the excavation rates.

Care should be taken during clearing that no significant amounts of topsoil are being removed and pushed into windrows. Should that be found, contractor will move such topsoil back at his own cost.

PSDA: SABS 1200 DA: EARTHWORKS (SMALL WORKS)

PSD 3 Classification for Excavation Purposes

Delete Sub-Clause 3.1 and substitute the following:

Excavation shall mean excavating in all kinds of material met with the exception only of "Rock" as hereinafter defined and shall include for the grubbing up and clearing away of all old foundations, footings, manholes, drains, paving, etc, that may be encountered; and not claim by the Contractor in respect of such items will be allowed unless specified in the Schedules of Quantities.

PSD 3.1.3 Rock

"Rock" shall mean hard un-decomposed boulders exceeding one cubic meter each in volume and such hard stone occurring in bulk, banks or ledges, that practical excavation would require the use of explosives or drilling, wedging and splitting. Explosives may only be used if written permission has been obtained from the Engineer and there is no guarantee given or implied that this permission will be given.

Should the Contractor consider that any excavations encountered are in "rock" he shall immediately notify the Engineer in writing. Failing such notification, the excavations will be assumed to be in accordance with Clause PSD3 and will be measured and paid for accordingly.

The Engineer shall be the sole judge as to the classification of materials encountered in the excavations.

PSGA: SABS 1200 GA: CONCRETE (SMALL WORKS)

PSGA 5.1.2: Welding

Welding of reinforcement and steel pipes is permitted.

PSGA 5.4.1.6 Ready mixed concrete

Use of ready-mixed concrete is permitted, and the manufacturer's quality control system will be acceptable.

PSGA 5.4.7 Concrete Curing

Where suitable water for curing of the concrete is not readily available, the contractor is to allow for the use of an approved curing compound.

PSH SABS 1200 H: STRUCTURAL STEELWORKS

PSH 3.1 Materials: Structural Steel

The various grades of steel to be used in the works are shown on the drawings.

PSH 5.1.2 Drawings and Shop Details

The Contractor shall be responsible to prepare shop drawings which will be issued to the Engineer for approval.

C3.3 PARTICULAR SPECIFICATIONS

PART D: Environmental Management

PART E: OHSA 1993 Health & Safety

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C3.3 PARTICULAR SPECIFICATIONS

In addition to the Standardised and Project Specifications the following Particular Specifications shall apply to this contract and are bound in hereafter.

PART D: Environmental Management

PART E: OHSA 1993 Health & Safety

C5. OPERATION AND MAINTENANCE MANUALS

The contractor prior to commissioning shall provide three copies of the Operation and Maintenance Manual. These manuals shall be of a standard acceptable to the Engineer and shall be subject to his approval. At least one set of manuals shall contain original copies.

Manuals shall be in English, shall be easy to use, practically and neatly presented, bound between plastic protected covers, clearly titled, well indexed and sectionalised and specifically applicable to the equipment supplied. Where standard manuals are used these shall be marked up to be unambiguously applicable to the equipment supplied. Drawings shall be held in plastic envelopes in the manual.

The manuals must contain the following:

a) A description of the equipment supplied giving full details of name, manufacturer, model number, size design duty and design and performance data. This shall, inter alia, include the information called for in the Pump and Motor Data Forms – part of the bill of quantities.

b) Descriptive and technical literature including clear and comprehensive performance curves specifically applicable to the equipment supplied. Re Pump curves and test certificates)

c) Operating instructions supported by drawings, flow diagrams, explanatory sketches etc as may be necessary and including details of control and protection systems incorporated, and safety precautions which must be observed.

d) Dimensional arrangement and layout drawings.

e) A comprehensive lubricating schedule covering all equipment supplied with full details of recommended lubricants, initial fill lubricants used, capacities and lubrication periods.

f) A comprehensive schedule of routine maintenance with timelines, for all equipment supplied.

g) Assembly and disassembly instructions, supported by clear assembly and/or exploded view drawings.

h) A comprehensive spare list for the equipment, complete referenced cross sectional drawings and indicating recommended spares. All information required for the ordering of spares to be given including manufacturer’s part numbers, supplier's name and all identification information.

i) Electrical circuit drawings.

j) Copies of all Test Certificates.

k) Documents, information and charts providing a full record of the results of the Tests on Completion.

C6. INSPECTION AND TESTING

C6.1 GENERAL

a) The equipment supplied under this Contract shall be subject to inspection by the Engineer or his Nominated Agent at all stages of manufacture.

b) The tests and commissioning procedure laid down below and such additional tests as the Engineer may reasonably require to prove compliance with the Specification shall be carried out at the

Contractor's Works and at Site.

c) The Contractor shall give reasonable notice of time and place in writing to enable the Engineer to inspect and witness tests of materials and equipment. He shall provide the Engineer with facilities for witnessing these tests and for any additional tests or inspection of any portion of the Works as required by the Engineer.

d) The Contractor shall at his own cost render all assistance and supply all labour appliance and any other materials as the Engineer may require to check the setting out, measure up and inspect any portions of the Works at any stage during fabrication, construction, erection or painting. During such operations the Contractor shall if required suspend any or all of the Works without having claim for loss or damage as a result thereof.

e) The testing of the plant (or a part thereof) supplied under this Contract shall be carried out through its full operating range (or part thereof) as required by the Engineer. All such tests and inspections and the necessary inspection facilities shall be provided at the Contractor's expense.

f) At the commencement of and during the whole of Commissioning and Testing Periods, the Contractor shall have available on site all essential spares and tools considered necessary to enable repair work of defective parts to be carried out immediately in the event of a breakdown.

g) The Contractor shall be responsible for the proper operation and maintenance of the plant throughout the period of the tests.

h) Acceptance by the Engineer of any plant item, following such inspection or tests, shall not relieve the Contractor of any obligations under this Contract.

C6.2 TESTING BEFORE DELIVERY

a) All items of plant are subject to inspection at the manufacturer's works before despatch.

b) Materials, components and electric motors shall be tested for compliance with relevant British or South African standards and certificates submitted in triplicate.

C6.3 TESTING AT SITE

a) Welds

Welds shall be tested as required by the relevant Code of Practice.

Where the test pressure specified for individual items of equipment is less than the test pressure specified for the connecting pipe line the equipment shall be disconnected for the test and suitable make-up lengths of pipe work or plugged connections shall be installed to enable the pipe line tests to be carried out.

b) Draining and cleaning

Upon completion of the pressure test on a section of pipe work the water used for testing shall be drained away as quickly as possible to remove as much dirt and dross. After completion of a pipe work circuit the circuit shall be flushed through to remove all pipe scale, dross and similar material.

The Contractor shall provide all necessary connections, by-pass pipes, temporary strainers, temporary make-up pieces, to enable the systems to be drained and cleaned.

d. Alignment

Alignment checks of all driven machinery are required and shall be witnessed by the Engineer and the results recorded.

e. Controls

All automatic control functions, alarm and safety cut-out devices shall be tested by operational or simulated tests and set-points and calibrations set and their settings recorded, all in the presence of the Engineer.

f. Performance Tests

Tests shall be carried out on all plant items to check that they are capable of their rated performance.

Each test shall be witnessed by the Engineer and a signed certificate of approval shall be issued by the Engineer upon completion of the tests to his satisfaction.

C6.4 TESTS ON COMPLETION

During completion of the balancing and commissioning of equipment the plant shall be brought into normal operation and the final adjustments of the equipment shall be made.

Thereafter the Tests on Completion in terms of the Conditions of Contract shall be carried out to ensure that the plant will fulfil the functions for which it has been designed.

Such tests shall include the following:

a) Simulated tests for all alarm and safety cut out equipment to prove the operation of the equipment.

b) Simulation tests on automatic controls to prove the ability of the controls to correct the conditions outside the required design parameters needs to be done by the Contractor. The tests shall be carried out by manually changing the desired values to produce an incorrect condition and then re-setting the controls to the design conditions and checking the operation of valves, etc, to restore the design conditions.

The Contractor shall provide all necessary temporary measuring and recording equipment. The equipment shall be of a type generally used for this type of testing and shall be to the approval of the Engineer. All instruments shall be accurately calibrated before the tests begin.

On completion of the whole of the tests and when the Contractor is satisfied that the entire plant is operating satisfactorily and will fulfil the function for which it has been supplied, he shall submit to the Engineer triplicate copies of all test records and charts together with reports on all the tests called for in this Specification.

The Engineer shall reserve the right to ask for any reasonable additional tests or for the repetition of previous tests in order to prove that the operation of the plant is satisfactory and in accordance with the Specification and Drawings.

C6.5 TEST CERTIFICATES

The Contractor shall provide three copies of test certificates for the installed pumps and materials and equipment specified for testing. Further copies are to be bound into the manuals to be supplied.

PART D: ENVIRONMENTAL MANAGEMENT SPECIFICATION

D.1 General

In order to ensure that the construction works is carried out in an environmentally sensitive matter, strict compliance to the Environmental Management Plan (EMP) guidelines is required. The purpose of the EMP is to:

- Encourage good management practices through planning and commitment to environmental issues,
- Provide rational and practical environmental guidelines to:
  - i. Minimise disturbance of the natural environment,
  - ii. Prevent pollution of land, air and water,
  - iii. Prevent soil erosion and facilitate re-vegetation.
- Adopt the best practicable means available to prevent or minimise adverse environmental impact,
- Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of wastes,
- Train employees and contractors with regard to environmental obligations.

D.2 Training and Induction of Employees

- The Contractor has a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes sub-contractors, casual labour, etc.). The EMP shall be part of the terms of reference for all contractors, sub-contractors and suppliers.

D.3 Complaints Register and Environmental Incident Book

Any complaints received by the project team from the public will be recorded. The complaint should be brought to the attention of the site manager, who will respond.

The following information must be recorded:

- Time, date and nature of the complaint,
- Type of communication (telephone, letter etc),
- Name, contact address and telephone number of the complainant,
- Response and investigation undertaken and
- Actions taken and by whom.

All complaints received will be investigated and a response give to the complainant within 14 days.

All environmental incidents occurring on the site will be recorded. The following information will be provided:

- Time, date, location and nature of the incident,
- Actions taken and by whom.

D.4 Site Cleanliness and Neatness

- Location of a construction camp is to be approved by the Engineer and is to be restored to its previous condition after completion of construction.
- The construction camp should preferably be fenced with a 1.8m bonnox fence or similar approved.
- All materials, equipment, plant and vehicles must be stored within the construction camp.
- A dedicated area must be made available for construction staff to change and store their personal belongings.

D.5 Access

- Access to existing roads, schools, buildings, shop and residential properties must not be impeded during construction.
- Access roads utilised by the Contractor must be maintained in good condition.

D.6 Borrow Pits

- Mining authorisations (permits) for borrow pits must be obtained from the Department of Minerals and Energy (DME) in consultation with the Department of Water Affairs and Forestry (DWAF).
- Spoil dumps resulting from borrow pits must not interfere with any natural surface drainage.
- Borrow pits must be rehabilitated after use in accordance with the requirements of DME and DWAF.

D.7 Dust Control / Air Quality

- Dust suppression measures must be implemented during construction by ensuring that all surfaces prone to dust generation are kept damp (e.g. use of water tanker).
- Ensure that vehicles and equipment are in good working conditions and that emissions are not excessive.
- Ensure that vehicles and equipment are in good working conditions and that emissions are not excessive.
- Special care must be taken in areas where the route passes close to schools and residential areas.
- The speed of construction vehicles must be reduced.

D.8 Fauna

- Contractor staff may not chase, catch or kill animals encountered during construction.

D.9 Fire Prevention and Control

- Smoking is prohibited in the vicinity of flammable substances.
- The contractor must ensure that fire-fighting equipment is available on site, particularly where flammable substances are being stored or used, and that construction staff are aware of where it is kept and how it is operated.
- Fires started for comfort (warmth) are prohibited, due to the risk of veld fires and risk to adjacent property owner's lands.

D.10 Grave sites

- Gravesites in close proximity to the road must not be disturbed during construction.

D.11 Materials Handling and Spills Management

- Any hazardous materials to be used during construction (e.g. lime, fuel, paint, etc) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel/petrol tanks) must be placed on an impermeable surface and surrounded by a bund wall, in order to ensure that accidental spillage does not pollute the environment.
- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g. smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals.
- Any spill of potentially hazardous materials must be cleaned up immediately (Potentially hazardous materials on site include paint, oil, grease, fuel, turpentine, etc).
- The area of contaminated soil or spill must be deposited into the hazardous waste

container(s).

- The contractor should keep Peat Sorb or a similar absorbent on site to clean up any spills.
- The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

D.12 Noise

- Noise generating activities must be restricted to between 07h00 and 17h00 Monday to Friday, unless otherwise approved by the appropriate competent person in consultation with adjacent landowners/affected persons.
- All equipment, vehicles and machinery must be in good working conditions and be equipped with sound mufflers if necessary.
- Construction staff must be trained and made aware of not creating unnecessary noise such as hooting and shouting.

D.13 Pollution Control

- Soil and water pollution through usage of fuel, oil, paint, bitumen or other hazardous substances must be avoided.
- All construction vehicles are to be maintained in good working order so as to prevent soil or water pollution from oil, fuel or other leaks, and to reduce noise pollution.

D.14 Rivers and Streams

- During construction of bridge structures, there must be no obstruction of the water flow of rivers and streams.
- Excavated material must not be stockpiled on or near riverbanks, in order to prevent sedimentation occurring.
- Erosion control measures must be employed both during and after construction.
- No impediments to natural surface water flow, other than approved erosion control measures, must occur.

D.15 Safety

- Safety measures, such as detour signs, must be implemented during construction to ensure the safety of workers, pedestrians and drivers/passengers in vehicles in the vicinity of construction work.
- Special care must be taken in the vicinity of schools to ensure the safety of children wishing to cross the road under construction.
- The relevant signage (e.g. speed control signs) must be erected alongside the road during the operation phase in order to control traffic.
- Accommodation must be made for pedestrian pathways alongside the road during the construction and operation phases.

D.16 Soil Management

- Storm water drainage pipes must be installed alongside the road in all areas susceptible to soil erosion.
- Erosion should be minimised by the construction of meadow drains and the planting of indigenous vegetation on the side slopes and drains to reduce flow velocity of stormwater.
- Spoil from cuts may be used in existing erosion galleys.
- Stone pitching and gabions should be constructed at pipe culvert outlets.
- Accidental spills of contaminants onto the ground e.g. oil, concrete, fuel and chemicals should be removed together with the contaminated soil.
- If necessary an absorbent such as Peat Sorb should be used the aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and re-fuelling of vehicles must only be carried out at construction camp.

D.17 Worker Conduct

Code of Conduct for Construction Personnel:

- Do not leave the construction site untidy and strewn with rubbish which will attract animal pests.
- Do not set fires.
- Do not cause any unnecessary, disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
- Do not drive a construction-related vehicle under the influence of alcohol.
- Do not exceed the national speed limits on public roads or exceed the recommended speed limits on the site.
- Do not drive a vehicle which is generating excessive noise or gaseous pollution (noisy vehicles must be reported and repaired as soon as possible).
- Do not litter along the roadsides, including both the public and private roads.
- Do not pollute any water bodies (whether flowing or not).
- No member of the construction team is allowed to enter the areas outside the construction site.

D.18 Traffic Disturbances and Diversions

- Any traffic diversions must be undertaken with the approval of all relevant authorities and in accordance with all relevant legislation.
- Wherever possible, traffic diversion must only take place on existing disturbed areas and remain within the existing road reserve.
- Traffic diversion routes must be rehabilitated after use.

D.19 Vegetation

- Only vegetation falling directly on the route must be removed where necessary.
- Alien vegetation within the road reserve must be eradicated, and management measures must be implemented for future control of these species.
- Vegetation that has been removed from large areas (e.g. on traffic diversion routes) during construction must be replaced with indigenous vegetation after construction has been completed.

D.20 Waste Management

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The container is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, plant empty lime bags, contaminated wash water, etc) must be stored in leakproof containers and disposed of a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.
- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimise the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Project Manager.
- Each working area must be cleared of litter and building waste (e.g. rubble, wood, concrete packets etc) on completion of the day's work.
- Any spill around the container(s) should be treated as per Section C11 and C16.

PART E: OHSA 1993 HEALTH AND SAFETY SPECIFICATION

E1 SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2003, and all other safety codes and specifications referred to in the said Construction Regulations.

In terms of the OHSA Agreement in Section C1.2.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHSA 1993 and the Construction Regulations 2003.

This safety specification and the Contractor's own Safety Plan as well as the Construction Regulations 2003, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risks associated with this project:

- Working with electrically powered equipment in the pump stations, with potential for electrical shock and fire.
- Working on the side of the tar road with the necessity of persons and equipment having to cross the road in face of oncoming traffic.
- Erection of travelling gun, with potential of electrical shock due to faulty electrical installations etc.
- Dusty conditions resulting from land clearing and preparation activities.
- Possibility of lightning strikes when electrical storms are prevalent during the summer months.
- Possibility of runaway veld fires resulting from burning of de-bushed vegetation.
- Potentially dangerous existing services, i.e. gas lines, water and sewage mains, electrical high voltage cables, buried and overhead
- Deep excavations in soils requiring shoring or reducing of slopes
- Blasting of hard rock or demolition of concrete
- High pressure during testing of the pipe lines, which could result in potentially dangerous situations in the event of the pipeline or fittings failing
- Movement of construction vehicles on site, taking into consideration steep slopes, other traffic and existing services
- Exposure to possible injuries due to mishandling or failure of power and hand tools
- Non-conformance to specifications with regards to fasteners and materials
- Risks related to general safety and security on site

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessary covered in the above.

E2 DEFINITIONS

For the purpose of this contract the following shall apply:

(a) **Employer**" where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as "**client**" as defined in the Construction Regulations 2003. "**Employer**" and "**client**" is therefore interchangeable and shall be read in the context of the relevant document.

(b) "**Contractor**" wherever used in the contract documents and in this specification, shall have the same meaning as "**Contractor**" as defined in the General Conditions of Contract.

In this specification the terms "**principal contractor**" and "**contractor**" are replaced with "**Contractor**" and "**subcontractor**" respectively.

For the purpose of this contract the **Contractor** will, in terms of OHSA 1993, be the mandatory, without derogating from his status as an employer in his own right.

(c) "**Engineer**" where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

E3 TENDERS

The Contractor shall submit the following with his tender:

(a) a documented Health and Safety Plan as stipulated in Regulation 5 of the Construction Regulations. The Safety Plan must be based on the Construction Regulations 2003 and will be subject to approval by the Employer;

(b) a declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2003;

(c) a declaration to the effect that he made provision in his tender for the cost of the health and safety measures envisaged in the Construction Regulations.

(d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

E4 NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

After award of the contract, but before commencement of construction work, the Contractor shall, in terms of Regulation 3, notify the Provincial Director of the Department of Labour in writing if the following work is involved:

(a) the demolition of structures and dismantling of fixed plant of height of 3,0m or more;
(b) the use of explosives;
(c) construction work that will exceed 30 days or 300 person-days;
(e) excavation work deeper than 1,0m; or
(f) working at a height greater than 3,0m above ground or landings.

The notification must be done in the form of the pro forma included under Section 9 (Forms to be completed by Successful Tenderer) of the tender document.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

E5 RISK ASSESSMENT

Before commencement of any construction work during the construction period, the Contractor shall have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 7 of the Construction Regulations 2003).

The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified.

The risk assessment shall be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be

monitored and reviewed periodically by the Contractor.

E6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

E6.1 Health and Safety plan

The Contractor shall appoint his employees and any subcontractors to be employed on the contract, in writing, and he shall provide them with a copy of his documented Health and Safety Plan, or relevant sections thereof. The Contractor shall ensure that all subcontractors and employees are committed to the implementation of his Safety Plan.

E6.2 Health and safety induction training

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo a health and safety induction training course by a competent person before commencement of construction work. No visitor or other person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety training pertaining to hazards prevalent on site.

The Contractor shall ensure that every employee on site shall at all times be in possession of proof of the health and safety induction training issued by a competent person prior to commencement of construction work.

E7. APPOINTMENT OF SAFETY PERSONNEL

E7.1 Construction Supervisor

The Contractor shall appoint a full-time **Construction Supervisor** with the duty of supervising the performance of the construction work.

He may also have to appoint one or more competent employees to assist the construction supervisor where justified by the scope and complexity of the works.

E7.2 Construction safety officer

Taking into consideration the size of the project and the hazards or dangers that can be expected, the Contractor shall appoint in writing a full-time or part-time **Construction Safety Officer** if so decided by the Inspector of the Department of Labour. The Safety Officer shall have the necessary competence and resources to perform his duties diligently.

Provision shall be made by the Contractor in his rates, to cover the cost of this dedicated construction safety officer appointed after award of the contract.

E7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 100 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

E7.4 Health and safety committee

In terms of Sections **17 and 18 of the Act (OHSA 1993)** the Contractor (as employer), shall establish one or more **health and safety committee(s)** where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular internals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

E7.5 Competent persons

In accordance with the Construction Regulations the Contractor has to appoint in writing **competent persons** responsible for supervising construction work on each of the following work situations that may be expected on the site of the works.

(a) Risk assessment and induction training as described in Regulation 7 of the Construction Regulations;
(b) Fall protection as described in Regulation 8;
(c) Formwork and support work as described in Regulation 10;
(f) Excavation work as described in Regulation 11;
(g) Demolition work as described in Regulation 12;
(h) Scaffolding work as described in Regulation 14;
(i) Suspended platform operations as described in Regulation 15;
(j) Material hoists as described in Regulation 17;
(k) Batch plant operations as described in Regulation 18;
(l) Explosive powered tools as described in Regulation 19;
(m) Cranes as described in Regulation 20;
(n) Construction vehicle and mobile plant inspections on a daily basis by a competent person as described in Regulation 21(1);
(o) Control of all temporary electrical installation on the construction site as described in Regulation 22;
(p) Stacking and storage on construction sites as described in Regulation 26; and
(q) Inspections of fire equipment as described in Regulation 27.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with **all** requirements of the Construction Regulations.

E8. RECORDS AND REGISTERS

In accordance with the Construction Regulations the Contractor is bound to keep records and registers related to health and safety on site for periodic inspection by inspectors, the Engineer, the Employer, trade union officials and subcontractors and employees. The following records and registers must be kept on site and shall be available for inspection at all times.

(a) A copy of the OHSA 1993 Construction Regulations 2003;
(b) A copy of this Health and Safety Specification;
(c) A copy of the Contractor's Health and Safety Plan (Regulation 4);
(d) A copy of the Notification of Construction Work (Regulation 3);
(e) A health and safety file in terms of Regulation 5(7) with inputs by the Construction Safety Officer (Regulation 6(7));
(f) A copy of the risk assessment described in Regulation 7;
(g) A full protection plan and the corresponding records of evaluation and training of employees working

from elevated positions as described in Regulation 8;

(h) Drawings pertaining to the design of structures (Regulation 9(3)) and formwork and support work structures (Regulation 10(d)) must be kept on site;
(i) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 11(3)(h));
(j) A copy of the certificate of the system design for suspended platforms (Regulation 15(3));
(k) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 7(5));
(l) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 17(8));
(m) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 18(9));
(n) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 19(2));
(o) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 21(1)(j)).

E9. CONTRACTORS RESPONSIBILITIES

For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2003.

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

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2003, and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

(a) Contractor's position in relation to the Employer (Client) (Regulation 4)

In accordance with Section 4 of the Regulations, the Contractor shall liaise closely with the Employer or the Engineer on behalf of the Employer, to ensure that all requirements of the Act and the Regulations are met and complied with.

(b) The Principal Contractor and Contractor (Regulation 5)

The Contractor is in terms of the definition in Regulation 2(b) the equivalent of Principle Contractor as defined in the Construction Regulations, and he shall comply with all the provisions of Regulation 5.

Any subcontractors employed by the Contractor must be appointed in writing, setting out the terms of the appointment in respect of health and safety. An independent subcontractor shall however provide and demonstrate to the Contractor a suitable, acceptable and sufficiently documented health and safety plan before commencement of the subcontract. In the absence of such a health and safety plan the subcontractor shall undertake in writing that he will comply with the Contractor's safety plan, the health and safety specifications of the Employer and the Construction Regulations 2003.

(c) Supervision of construction work (Regulation 6)

The Contractor shall appoint the safety and other personnel and employees as required in terms of Regulation 6 and as set out in paragraph 7 above. Appointment of those personnel and employees does not relieve the Contractor from any of the obligations under Regulation 6.

(d) Risk assessment (Regulation 7)

The Contractor shall have the risk assessment made as set out in paragraph 7 above before commencement of the work and it must be available on site for inspection at all times. The Contractor shall consult with the health and safety committee or health and safety representative(s) etc. on a regular basis to ensure that all employees, including subcontractors under his control, are informed and trained by a competent person regarding health hazards and related work procedures.

No subcontractor, employee or visitor shall be allowed to enter the site of works without prior health and safety induction training, all as specified in Regulation 7.

(e) Fall protection (Regulation 8)

Fall protection, if applicable to this contract shall comply in all respects with Regulation 8 of the Construction Regulations.

(f) Structures (Regulation 9)

The Contractor will be liable for all claims arising from collapse or failure of structures if he failed to comply with all the specifications, project specifications and drawings related to the structures, unless it can be proved that such collapse or failure can be attributed to faulty design or insufficient design standards on which the specifications and the drawings are based.

In addition the Contractor shall comply with all aspects of Regulation 9 of the Construction Regulations.

(g) Formwork and support work (Regulation 10)

The Contractor will be responsible for the adequate design of all formwork and support structures by a competent person.

All drawings pertaining to formwork shall be kept on site and all equipment and materials used in formwork, shall be carefully examined and checked for suitability by a competent person.

The provisions of Regulation 10 of the Construction Regulations shall be followed in every detail.

(h) Excavation work (Regulation 11)

It is essential that the Contractor shall follow the instructions and precautions in the Standard Specifications and Project Specifications as well as the provisions of the Construction Regulations to the letter as unsafe excavations can be a major hazard on any construction site. The Contractor shall therefore ensure that all excavation work is carried out under the supervision of a competent person, that inspections are carried out by a Professional Engineer or Technologist, and that all work is done in such a manner that no hazards are created by unsafe excavations and working conditions.

Supervision by a competent person will not relieve the Contractor from any of his duties and responsibilities under Regulation 11 of the Construction Regulations.

(i) Demolition work (Regulation 12)

Whenever demolition work is included in a contract, the Contractor shall comply with all the requirements of Regulation 12 of the Construction Regulations. The fact that a competent person has to be appointed by the Contractor does not relieve the Contractor from any of his responsibilities in respect of safety of demolition work.

(j) Tunnelling (Regulation 13)

The Contractor shall comply with Regulation 13 wherever tunnelling of any kind is involved.

(k) Scaffolding (Regulation 14)

The Contractor shall ensure that all the provisions of Regulation 14 of the Construction Regulations are complied with. [Note: Reference in the Regulations to “Section 44 of the Act” should read “Section 43 of the Act”].

(l) Suspended platforms (Regulation 15)

Wherever suspended platforms will be necessary on any contract, the Contractor shall ensure that copies of the system design issued by a Professional Engineer are submitted to the Engineer for inspection and approval. The Contractor shall appoint competent persons as supervisors and competent scaffold erectors, operators and inspectors and ensure that all work related to suspended platforms are done in accordance with Regulation 15 of the Construction Regulations.

(m) Boatswain’s chains (Regulation 16)

Where boatswain’s chains are required on the construction site, the Contractor shall comply with Regulation 16.

(n) Material Hoists (Regulation 17)

Wherever applicable, the Contractor shall comply with the provisions of Regulation 17 to the letter.

(o) Batch plants (Regulation 18)

Wherever applicable, the Contractor shall ensure that all lifting machines, lifting tackle, conveyors, etc. used in the operation of a batch plant shall comply with, and that all operators, supervisors and employees are strictly held to the provisions of Regulation 18. The Contractor shall ensure that the General Safety Regulations (Government Notice R1031 of 30 May 1986), the Driven Machinery Regulations (Government Notice R295 of 26/2/1988) and the Electrical Installation Regulations (Government Notice R2271 of 11/10/1995) are adhered to by all involved.

In terms of the Regulations, records of repairs and maintenance shall be kept on site.

(p) Explosive powered tools (Regulation 19)

The Contractor shall ensure that, wherever explosive-powered tools are required to be used, all safety provisions of Regulation 19 are complied with.

It is especially important that warning notices are displayed and that the issue and return of cartridges and spent cartridges be recorded in a register to be kept on site.

(q) Cranes (Regulation 20)

Wherever the use of tower cranes becomes necessary, the provisions of Regulation 20 shall be complied with.

(r) Construction vehicles And mobile plant (Regulation 21

The Contractor shall ensure that all construction vehicles and plant are in good working condition and safe for use, and that they are used in accordance with their design and intended use. The vehicles and plant shall only be operated by workers or operators who have received appropriate training, all in accordance with all the requirements of Regulation 21.

All vehicles and plant must be inspected on a daily basis, prior to use, by a competent person and the findings must be recorded in a register to be kept on site.

(s) Electrical installation and machinery on construction sites (Regulation 22)

The Contractor shall comply with the Electrical Installation Regulations (Government Notice R2920 of 23 October 1992) and the Electrical Machinery Regulations (Government Notice R1953 of 12 August 1993). Before commencement of construction, the Contractor shall take adequate steps to ascertain the presence of, and guard against dangers and hazards due to electrical cables and apparatus under, over or on the site.

All temporary electrical installations on the site shall be under the control of a competent person, without relieving the Contractor of his responsibility for the health and safety of all workers and persons on site in terms of Regulation 22.

(t) Use of temporary storage of flammable liquids on construction sites (Regulation 23)

The Contractor shall comply with the provisions of the General Safety Regulations (Government Notice R1031 of 30 May 1986) and all the provisions of Regulation 23 of the Construction Regulations to ensure a safe and hazard-free environment to all workers and other persons on site.

(u) Water environments (Regulation 24)

Where construction work is done over or in close proximity to water, the provisions of Regulation 24 shall apply.

(v) Housekeeping on Construction sites (Regulation 25)

Housekeeping on all construction sites shall be in accordance with the provisions of the environment Regulations for workplaces (Government Notice R2281 of 16 October 1987) and all the provisions of Regulation 25 of the Construction Regulations.

(w) Stacking and storage on construction sites (Regulation 26)

The provisions for the stacking of articles contained in the General Safety Regulations (Government Notice R1031 of 30 May 1986) as well as all the provisions Regulation 26 of the Construction Regulations shall apply.

(x) Fire precautions on construction sites (Regulation 27)

The provisions of the Environmental Regulations for Workplaces (Government Notice R2281 of 16 October 1987) shall apply.

In addition the necessary precautions shall be taken to prevent the incidence of fires, to provide adequate and sufficient fire protection equipment, sirens, escape routes etc. all in accordance with Regulation 27 of the Construction Regulations.

(y) Construction welfare facilities (Regulation 28)

The Contractor shall comply with the construction site provisions as in the Facilities Regulations (Government Notice R1593 of 12 August 1988) and the provisions of Regulation 28 of the Construction Regulations.

(z) Non-compliance with the Construction Regulations 2003

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.

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

imprisonment as set out in Regulation 30.

***The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations*.**

E10. MEASUREMENT AND PAYMENT

E10.1 Principles

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

(a) Safety personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 7.1 to 7.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

(b) Records and Registers

The keeping of health and safety-related records and registers as described in 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.

PART C 4: SITE INFORMATION

C4.1: LOCALITY PLAN

To be provided with the issuing of a Task Order.