



MNQUMA LOCAL MUNICIPALITY

TENDER DOCUMENT

ERECTION OF STREET LIGHTS IN EXT 2

BID NUMBER: MNQ/SCM/19/25-26

(GCC 2015)

VOLUME 1

A Tender for Category 4EP or Higher CIDB Registered Contractors

ISSUED & PREPARED BY:	
Mnquma Local Municipality Corner King & Mthatha Street Butterworth 4960	
For Technical Contact Details	For SCM Contact Details
Contact Person: Mr L. Boya Telephone: 047 050 1322	Contact Person: Ms Y. Vava Telephone: 047 050 1156

Registered Name of Tenderer:			
TRADING NAME OF TENDERER:			
Registration No. of Entity:			
Contact Person:		E-mail Address:	
Telephone No.:			
Mobile No.:		CIDB CRS Number(s) :	
Fax No:			

THE TENDER

Part T1: Tendering procedures

T1.1: TENDER NOTICE AND INVITATION TO TENDER

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (MNQUMA LOCAL MUNICIPALITY)

BID NUMBER: MNQ/SCM19/25-26

CLOSING DATE: 23/06/2024

CLOSING TIME: 12H00.

DESCRIPTION: ERECTION OF STREET LIGHTS IN EXT 2

The successful bidder will be required to fill in and sign a written Contract Form (MBD 7).

BID DOCUMENTS MAY BE POSTED TO:

Mnquma Local Municipality

Cnr King & Mthatha Street, Butterworth, 4960

OR

DEPOSITED IN THE BID BOX SITUATED AT (*STREET ADDRESS*)

Box 36, Butterworth, 4960

Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.

The bid box is generally open between 08H00-16H00 Monday to Friday.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF THE CONTRACT (GCC 2015) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF THE CONTRACT

NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (as defined in Regulation 1 of the Local Government: Municipal Supply Chain Management Regulations)



**ADVERT FOR NOTICE BOARD
PROJECT DESCRIPTION**

Mnquma Local Municipality hereby invites bids from all prospective accredited and qualifying service providers for

BID NO.	Description	Evaluation Criteria	Compulsory Tender Briefing	Closing Date & Time	CIDB Grading
MNQ/SCM/19/25-26	ERECTION OF STREET LIGHTS IN EXT 2	80/20	Date: 29/05/2025 Time: 10:00 Venue: Foyer Mnquma Local Municipality, Corner King and Mthatha Street Butterworth, 4960	Date: 23/06/2025 Time: 12:00	4EP or Higher

Technical Enquiries: Mr L. Boya (Manager: Electrical Services) at (047) 050 1322 / 073 427 6703 email:

lboya@mnquma.gov.za

SCM Enquiries: Ms. Y Vava (Acting Manager: SCM) at (047) 050 1156 / 072 698 6085 email: yvava@mnquma.gov.za

Evaluation Criteria: The evaluation will be conducted in two (02) stages namely:

Stage 1: Administrative compliance

Bidders that do not meet the **Administrative compliance** (Compliance with mandatory and other bid requirements) will not be eligible for further evaluation and will be deemed as non-responsive.

Stage 2: Evaluation in terms of the 80/20 preference point systems prescribed in Preferential Procurement Regulations 2022

Price=80 points,

Specific goals =20 points

The specific goals allocated points in terms of this tender	Specific Goal Points Allocated 20 points	Proof Required to score points
An EME or QSE which is at least 51% owned by black people	20	Fully completed and signed MBD 6.1 and Full Central Supplier Database Report (CSD) not older than one month.

NB: No points will be claimed by the bidder if it fails to submit proof required to score points for specific goals

REQUIRED DOCUMENTS:

Potential bidders are urged to submit the following attachments when submitting their proposals, **failure to do so will lead to disqualification.**

PROOF OF COMPANY EXPERIENCE:

- Bidder has successfully completed Four (04) similar projects i.e. Erection/Refurbishment of Street Lights projects.

Completion certificates with appointment letters in relation to the required services must be attached as a proof.

NB: Key staff personnel must be working for the bidding company.

CONDITIONS OF ACCEPTANCE:

- The Municipality is under no obligation to accept any proposal/tender and reserves the right to accept the whole or any part of the proposal/tender. No proposal/tenders will be considered from persons in the service of the state.
- The bidder or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- The bidder has not abused the Employer's Supply Chain Management System; or failed to perform on any previous contract and has been given a written notice to this effect.
- No late, incomplete, unsigned faxed, couriered,

- **Site Agent/Project Manager:** Academic Qualification: National diploma: Engineering Electrical, must have a minimum of 5 years' experience in similar projects i.e. Electrification Projects.
- **Occupational Health and Safety Officer:** Grade 12 or equivalent qualification and Occupational Safety and Health certificate and must have a minimum of 3 years' experience in Electrification Projects.

Bidders must submit detailed CVs with original certified (not older than 06 months) copies of the required professional qualifications. If the required certified copies of professional qualifications are not attached to the CVs, will lead to disqualification (Copy of a certified copy will not be considered).

CONSTRUCTION EQUIPMENT AND TOOLS

- TLB
- Crane Truck
- Bakkie

Bidding Company must attach certificate of registration for (TLB, Crane Truck and Bakkie) or submit signed Letter of intent to lease with proof of certificate of registration for (TLB, Crane Truck and Bakkie). The signed letter of intent to lease must contain the relevant bid number/project description and construction equipment/ tools leased

NB: COMPLIANCE WITH THE TENDER SPECIFICATION:

- Fully completed by non-erasable ink and signed Bill of Quantities
- Full CSD Report (Not older than one Month)
- Valid CIDB Grading 4EP or Higher
- Only the original tender document will be accepted.
- Fully Completed Tender Forms i.e. Form of Offer, all returnable MBDs (MBD1-9) –Part of the tender document. Return all returnable documents to the employer after completing them in their entirety by writing legibly in non – erasable ink.
- In the case of partnerships/consortiums/ joint venture agreement, signed agreement must be submitted with the tender document, and
- All parties/partners to the partnership/ consortium/joint venture agreement must be registered on the Central Supplier Database

NB: Failure to furnish all the above required documents, bidder will be disqualified.

OBTAINING OF TENDER DOCUMENTS:

Tender documents for this project are downloadable at the municipal website: www.mnquma.gov.za and on eTender portal: <https://etenders.treasury.gov.za/>

and emailed tenders will be accepted

- The tender offer submitted shall remain valid, irrevocable and open for written acceptance by the Mnquma Local Municipality for a period of 90 days from the closing date.
- The award of the tender may be subjected to price negotiation with the preferred tenderers.
- The municipality reserves the right to extend the tender period by notice in the press and on the municipality's official website www.mnquma.gov.za

NB: Preferred bidders will be required to furnish the municipality with:

- CK/ Company registration, Certified ID Copies not older than six (06) months
- Tax Compliance Status PIN
- Certificate issued by the municipality or any other municipality to which he may be indebted to the effect that he and, in the event of the bidder being a company, also any of its directors, is not indebted to the municipality or any other municipality or municipal entity for rates, taxes and/or municipal service charges which are in arrear for a period more than **three months** and that no dispute exists between such bidder and municipality or municipal entity concerned in respect of any such arrear amounts. Bidders who reside within the Mnquma Local Municipality (MLM) jurisdiction will be verified with MLM Revenue Section.

TENDER SUBMISSION AND OPENING

Tenders/Proposals must be submitted by hand at Bid Box,
Corner King and Mthatha Street, Butterworth. 4960
Bids may only be submitted on the bid document provided by
the municipality.

Tenders should be sealed, endorsed on the envelope with:

BID NUMBER: MNQ/SCM/19/25-26

PROJECT NAME: ERECTION OF STREET LIGHTS IN EXT 2

Back of the envelope with:

**Company Name, address, Contact person and Contact
details.**

.....
S. Mahlasela
MUNICIPAL MANAGER

T1.2 Tender Data

The conditions of tender are those contained in the latest edition of SANS 10845-3, *Construction Procurement – Part 3: Standard conditions of tender*.

SANS 10845-3 makes 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 provisions of SANS 10845-3.

Each item of data given below is cross-referenced to the clause in SANS 10845-3 to which it mainly applies.

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

3.4	<p>The employer's agent is:</p> <p>Name: Electrical Services, Department of Infrastructural Development</p> <p>Address: Mnquma LM, Corner King & Mthatha street, Butterworth, 4960</p> <p>Tel: 047 050 1247</p>
3.4	The language for communications is English
3.6	The competitive negotiation procedure shall be applied.
3.6	The proposal procedure using the two stage-system is not to be used.
4.1	<p>only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with regulation 25 (1b) or 25(7a) of the construction industry development regulations, for ERECTION OF STREET LIGHTS IN EXT 2 class of construction work, are eligible to have their tenders evaluated.</p> <p>joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> 1. every member of the joint venture is registered with the CIDB. 2. the lead partner has a contractor grading designation in the required or higher class of construction work; and 3. the combined contractor grading designation calculated in accordance with the construction industry development regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for ERECTION OF STREET LIGHTS IN EXT 2, class of construction work or a value determined in accordance with regulation 25 (1b) or 25(7a) of the construction industry development regulations.
4.7	<p>The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender.</p> <p>Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list.</p>
4.10	Tenderers are required to state the rates in Rand
4.12	No alternative tender offers will be considered
4.13.1	Each tender offer communicated on paper shall be submitted as an original.
4.13.2	The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are:
4.13.3	<p>Each tender shall be enclosed in a sealed envelope, bearing the correct identification details and shall be placed in the tender box located at the foyer of;</p> <p>Mnquma Local Municipality</p> <p>Corner king & Mthatha Street, Butterworth, 4960</p> <p>Identification details: Tender reference number, Title of Tender and the closing date and time of the tender</p>

4.13.4	<p>The tenderer is required to submit with his tender the following certificates:</p> <ol style="list-style-type: none"> 1. A tax compliant pin or an original Tax Clearance Certificate issued by the South African Revenue Services. 2. Full CSD report not older than 1 month 3. Fully completed and signed form of Offer 4. Proof of CIDB registration
4.13.5	A two-envelope procedure is not required.
4.13.6	Only the "ORIGINAL tender document is to be submitted as a tender package.
4.13.7	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
4.15	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
4.16	The tender offer validity period is 120 days.
4.17	The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part C1.3 of this procurement document
5.1	The Employer will respond to requests for clarification received up to seven (7) working days before the tender closing time.
5.2	The employer shall issue addenda until five (5) days working days before tender closing time.
5.3	Tenders will be opened immediately after closing time for tenders at the foyer next to the Tender box, at 12H00.
5.4	<p>The procedure for the evaluation of responsive tenders is Method 2 (Financial offer and quality).</p> <p>The financial offer is scored using Formula 2 in Table 1 where W_1 is</p> <p>The value of W_2 is equal to 100 minus W_1</p>
5.5	<p>The procedure for the evaluation of responsive tenders is Method 3 (Financial offer and preference)</p> <p>The financial offer will be scored using the following formula:</p> $A = (1 - (P - P_m))$ <p style="text-align: center;">P_m</p> <p>The 80/20 Preference Point System for bids with a Rand value not exceeding R50,000,000-00 (all applicable taxes included); and</p> <p>The 90/10 Preference Point System for bids with a Rand value above R50,000,000-00 (all applicable taxes included).</p>

5.6	<p>The procedure for the evaluation of responsive tenders is Method 4 (Financial offer, quality and preference)</p> <p>The total number of tender evaluation points (T_{EV}) shall be determined in accordance with the following formula.</p> $T_{EV} = f_1 (N_{FO} + N_P) + f_2 N_Q$ <p>where f_1 and f_2 are fractions, f_1 equals 1 minus f_2 and f_2 equals</p> <p>N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with 5.11.7 where the score for financial offer is calculated using the following formula</p> $A = (1 - (P - P_m))$ <p style="text-align: center;">P_m</p> <p>and W_1 equals:</p> <ol style="list-style-type: none"> 1) 90 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R50 000 000 or 2) 80 where the financial value inclusive of VAT of one or more responsive tender offers have a value that equals or is less than R 50 000 000 <p>N_P is the number of tender evaluation points awarded for preferences claimed in accordance with the Preferencing Schedule</p> <p>N_Q is the number of tender evaluation points awarded for quality offered in accordance with 5.11.9 where $W_2 = 100$.</p> <p>Up to 100 minus W_1 tender evaluation points will be awarded to tenderers who complete the referencing schedule and who are found to be eligible for the preference claimed.</p>
5.7	<p>Tender offers will only be accepted if:</p> <ol style="list-style-type: none"> a) the tenderer is registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/) unless it is a foreign supplier with no local registered entity b) the tenderer is in good standing with SARS according to the Central Supplier Database. c) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation. d) the tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector. e) the tenderer has not: <ol style="list-style-type: none"> i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; f) the tenderer has completed the Compulsory Declaration and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process. g) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer. h) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. i) the tender offer is within a stipulated threshold percentage as stated under contract data
5.8	<p>The number of paper copies of the signed contract to be provided by the employer is one (1).</p>
	<p>The additional conditions of tender are:</p> <p>Compliance with the tender specification and the general conditions of the tender.</p>

Part T2: Returnable documents

T.2.1 List of returnable documents

1 Documentation to demonstrate eligibility to have tenders evaluated

- CIDB certificate
- Certified Original copies of qualifications
- Signed MBD Forms
- Fully completed Form of Offer
- Fully completed BOQs
- Full CSD report and it must not be older than 1/ one month from the date of bid closing

Note: Failure to provide these documents will result in the tender not being evaluated

2 Returnable Schedules required for tender evaluation purposes

The tenderer must complete the following returnable schedules as relevant:

- Record of Addenda to Tender Documents
- Proposed amendments and qualifications
- Compulsory Declaration
- Municipal declaration and returnable documents
- Certificate of Authority for Joint Ventures, if applicable
- Annual Financial Statements Declaration
- Evaluation schedule 1:

3 Returnable Schedules that will be used for tender evaluation purposes and be incorporated into the contract

The tenderer must complete all returnable documents provided i.e.

MBD Forms

C1.1 Offer portion of Form of Offer and Acceptance

C1.2 Contract Data (Part 2)

C2.2 Bill of Quantities

Record of Addenda to tender documents

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:		
	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed

Date

Name

Position

Tenderer

Proposed amendments and qualifications

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

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

Page	Clause or item	Proposal

Signed

Date

Name

Position

Tenderer

Compulsory Declaration

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

Section 1: Enterprise Details

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

Section 2: Particulars of companies and close corporations

Company / Close Corporation registration number	
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Section 3: SARS Information

Tax reference number	
VAT registration number:	<i>State Not Registered if not registered for VAT</i>

Section 4: CIDB registration number

CIDB Registration number (if applicable)	
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Section 5: National Treasury Central Supplier Database

Supplier number	
Unique registration reference number	

Section 6: Particulars of principals

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

Full name of principal	Identity number	Personal tax reference number

Attach separate page if necessary

Section 7: Record in the service of the state

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

- ☐ a member of any municipal council

☐ an employee of any department, national or provincial public entity or constitutional institution within the

- ☐ 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
- meaning of the Public Finance Management Act of 1999 (Act No. 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 principal	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

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

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

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

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

*insert separate page if necessary

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

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

☐ Yes ☐ No (Tick appropriate box)

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

Section 10: Declaration

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

i) neither the name of the tendering entity or any of its principals appears on:

- a) the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004)
- b) National Treasury's Database of Restricted Suppliers (see www.treasury.gov.za)
- ii) neither the tendering entity of any of its principals has within the last five years been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa);
- iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);
- iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers
- v) has not engaged in any prohibited restrictive horizontal practices including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract etc.) or intention to not win a tender;
- vi) has no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- vii) neither the tenderer or any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity and are not in arrears for more than 3 months;
- viii) SARS may, on an on-going basis during the term of the contract, disclose the tenderer's tax compliance status to the Employer and when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by the National Treasury, for SARS to do likewise.

Signed

Date

Name

Position

Enterprise name

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

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

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

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

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

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

Municipal declaration and returnable documents

The following particulars must be furnished in relation to tenders for municipalities and municipal entities where:

- a) consultancy services are required; and
- b) Goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT.

In the case of a joint venture, separate municipal declarations and returnable documents shall be submitted in respect of each partner.

Section 1: Enterprise Details

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

Section 2: Declaration for consultancy services:

The enterprise has been awarded the following consultancy services by an organ of state during the last five years.

Name of organ of state	Estimated number of contracts	Nature of service, e.g, quantity surveying	Service similar to required service (yes / no) ?

Attach separate page as necessary

Section 3 Goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT

I / we certify that

1) *(tick one of the boxes):*

☐ the enterprise **is not** required by law to prepare annual financial statements for auditing

- ☐ the enterprise **is** required by law to have audited annual financial statements and attached the audited financial statements for the past three financial years, or since the establishment as the enterprise was established within the past three years

2) the enterprise and its directors has / have no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days (*ie: all municipal accounts are paid up to date*);

3) source of goods and / or services :

(tick one of the boxes and insert percentages if applicable):

- ☐ goods and / or services are sourced only from within the Republic of South Africa
- ☐ % of the total cost of goods and / or services will be sourced from outside the Republic of South Africa and the percentage of payment from the municipality or municipal entity which is expected to be transferred out of the Republic is . %

I furthermore confirm that the following contracts were awarded to the enterprise by an organ of state during the last five years and attached particulars of any material non-compliance or dispute concerning the execution of such contracts:

Name of organ of state	Estimated number of contracts	Nature of contracts

Attach separate page as necessary

I, the undersigned who warrants that I am duly authorised on behalf of the tendering entity, hereby declare that the contents of this Declaration are within my personal knowledge, and save where stated otherwise are to the best of my belief both true and correct

Annual Financial Statements Declaration

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

- 1) The enterprise's financial year end is
- 2) The enterprise's financial statements have been prepared in accordance with the provisions of the Companies Act of 2008 or the Close Corporation Act of 1984, as applicable
- 3) The enterprise has compiled its financial accounts [tick one box]:

☐ internally

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

☐ enterprise has had its financial statements audited;
name of auditor

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

☐ enterprise has not had its financial statements audited and is not required by law to have an independent review or audit of such statements
- 5) The attached income statement and balance sheet is a true extract from the financial statements complying with applicable legislation for the preceding financial year within 12 months of the financial year end.

[Attach the income statement and the balance sheet contained in the financial statement]
- 6) The annual turnover for the last financial year is R
- 7) The total assets as at the end of the last financial year is R
- 8) The total liabilities as at the end of the financial year is R

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

Signed

Date

.....
Name

.....
Position

.....
Tenderer

.....

Certificate of Authority for Joint Ventures

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are making this submission in Joint Venture and hereby authorise Mr/Ms , authorised signatory of the company , acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORIZED SIGNATORY
Lead partner		Signature. Name Designation
		Signature. Name Designation
		Signature. Name Designation

1. DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

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

3.2 Identity Number:

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

3.4 Company Registration Number:

3.5 Tax Reference Number:.....

3.6 VAT Registration Number:

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

NB: Please mark the applicable answer

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

3.8.1 If yes, furnish particulars.

.....

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

(a) a member of –

- (i) any municipal council;
- (ii) any provincial legislature; or
- (iii) the national Assembly or the national Council of provinces;

(b) a member of the board of directors of any municipal entity;

(c) an official of any municipality or municipal entity;

(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);

(e) a member of the accounting authority of any national or provincial public entity; or

(f) An employee of Parliament or a provincial legislature.

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

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

3.9.1 If yes, furnish particulars.....

.....

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

3.10.1 If yes, furnish particulars.

.....

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

3.11.1 If yes, furnish particulars
.....
.....

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

3.12.1 If yes, furnish particulars.
.....
.....

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

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

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract? **YES / NO**

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

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

Full Name	Identity Number	State Employee Number

.....
Signature

.....
Date

.....
Capacity

.....
Name of Bidder

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

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

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

1. GENERAL CONDITIONS

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

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

1.2 The value of this bid is estimated not to exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) Specific goals

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

	POINTS
PRICE	80
SPECIFIC GOALS OF CONTRIBUTION	20
Total points for Price and Specific Goals must not exceed	100

1.5 Failure of a bidder to submit proof of specific goals claimed will be interpreted to mean that preference points for specific goals are not claimed.

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

2. DEFINITIONS

- (a) **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment

insurance fund contributions and skills development levies;

- (b) **“bid”** 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 and “bid” has a corresponding meaning
- (c) **“comparative price”** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- (d) **“consortium or joint venture”** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
- (e) **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- (f) **“EME”** means an Exempted Micro Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (g) **“Firm price”** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- (h) **“non-firm prices”** means all prices other than “firm” prices;
- (i) **“person”** includes a juristic person;
- (j) **“QSE”** means a Qualifying Small Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (k) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of the tender invitation;
- (l) **“Reconstruction and Development Programme”** the Reconstruction and Development Programme as published in Government Gazette No. 16085 dated 23 November 1994;
- (m) **“specific goals”** means specific goals as contemplated in section 2(1)(d) of the Act which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the implementation of programmes of the Reconstruction and Development Programme as published in Government Gazette No. 16085 dated 23 November 1994;
- (n) **“total revenue”** bears the same meaning assigned to this expression in the Codes of Good Practice;
- (o) **“trust”** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- (p) **“trustee”** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
- (q) **“Disability”** means, in respect of a person, a permanent impairment of a physical, intellectual, or

sensory function, which results in restricted, or lack of, ability to perform an activity in the manner, or within the range, considered normal for a human being.

- (r) **“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.

3. ADJUDICATION USING A POINT SYSTEM

- 3.1 If two or more tenderers score an equal total number of points, the contract must be awarded to the tenderer that scored the highest points for specific goals.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;
- 3.3 Points scored must be rounded off to the nearest 2 decimal places.
- 3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for specific goals.
- 3.5 If two or more tenderers score equal total points in all respects, the award must be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

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

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

80/20	or	90/10
$P_s = 80\{1 - \frac{P_t - P_{min}}{P_{min}}\}$	or	$P_s = 90\{1 - \frac{P_t - P_{min}}{P_{min}}\}$

Where

P_s = Points scored for comparative price of bid under consideration
 P_t = Comparative price of bid under consideration
 P_{min} = Comparative price of lowest acceptable bid

5. POINTS AWARDED FOR LEVEL OF CONTRIBUTION TOWARDS SPECIFIC GOALS

- 5.1 In terms of s2(b)(i) and (ii) of the Preferential Procurement Regulations Policy Framework Act, a preference points system must be followed for contracts with a Rand value above a prescribed amount a maximum of 10 or 20 points may be allocated for specific goals as contemplated in s2(d) of the Act provided that the lowest acceptable tender scores 90 or 80 points for price, respectively, in accordance with the table below:

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.)

80/20 preference point system			
The specific goals allocated points in terms of this tender	Specific Goal Points Allocated (20 points) (To be completed by the Municipality)	Proof required to Claim (20 points) (To be completed by the Municipality)	Number of points Claimed (20 points) (To be completed by the tenderer)
An EME or QSE which is at least 51% owned by black people	20	Fully completed and signed MBD 6.1 and Full Central Supplier Database Report (CSD) not older than one month.	

90/10 preference point system			
The specific goals allocated points in terms of this tender	Specific Goal Points Allocated (10 points) (To be completed by the Municipality)	Proof required to Claim (10 points) (To be completed by the Municipality)	Number of points Claimed (10 points) (To be completed by the Tenderer)

5.2 Bidders must submit valid proof for specific goals

5.3 If the municipality is of the view that a tenderer submitted false information regarding a specific goal, will —

- (a) inform the tenderer accordingly; and
- (b) give the tenderer an opportunity to make representations within 14 days as to why the tender may not be disqualified or, if the tender has already been awarded to the tenderer, the contract should not be terminated in whole or in part.

5.4 After considering the representations referred to in sub regulation (1)(b), the municipality may, if concludes that such information is false—

- (a) disqualify the tenderer or terminate the contract in whole or in part; and
- (b) if applicable, claim damages from the tenderer.

6. SPECIFIC GOALS CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1

Specific goals: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of the required proof of specific goals.

7. SUB-CONTRACTING

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

(***Tick applicable box***)

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

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) Whether the sub-contractor is an EME.

(Tick applicable box)

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

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

8.6 COMPANY CLASSIFICATION

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

[TICK APPLICABLE BOX]

8.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:

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

8.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goal declared in paragraph 6 , indicated in paragraph 7, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in

paragraph 1 of this form;

- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

WITNESSES

- 1.
- 2.

.....
SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS
.....
.....

CONTRACT FORM - PURCHASE OF GOODS/WORKS

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

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution) in accordance with the requirements and specifications stipulated in bid number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
 - (i) Bidding documents, viz
 - Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Technical Specification(s);
 - Preference claims for specific goals in terms of the Preferential Procurement Regulations 2022
 - Declaration of interest;
 - Declaration of bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
 - (ii) General Conditions of Contract; and
 - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.
5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES

1

2

DATE:

CONTRACT FORM - PURCHASE OF GOODS/WORKS**PART 2 (TO BE FILLED IN BY THE PURCHASER)**

1. I..... in my capacity as.....
accept your bid under reference numberdated.....for the supply of
goods/works indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating delivery instructions is forthcoming.
3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions
of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

ITEM NO.	PRICE APPLICABLE (ALL TAXES INCLUDED)	BRAND	DELIVERY PERIOD	SPECIFIC GOALS CLAIMED

4. I confirm that I am duly authorized to sign this contract.

SIGNED AT

ON.....

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES

1.

2.

DATE

8. DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		

Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality, or to any other municipality, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)
 CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.
 I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN
 AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *per se* prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:
 - **Includes price quotations, advertised competitive bids, limited bids and proposals.**
 - **Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.**

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

_____ (Bid Number and Description)
in response to the invitation for the bid made by:

_____ (Mnquma Local Municipality)

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

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

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid;
 or
 - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

THE CONTRACT

Part C1: Agreements and Contract data

MNQUMA LOCAL MUNICIPALITY

ERECTION OF STREET LIGHTS IN EXT 2

CONTRACT

PART 1 (OF 4) : AGREEMENT AND CONTRACT DATA

- C1.1 Form of Offer and Acceptance**
- C1.2 Contract Data**
- C1.3 Form of Guarantee**
- C1.4 Health and Safety Agreement**
- C1.5 Pro Forma Disclosure Statement**
- C1.6 Pro Forma Adjudication Board Member Agreement**

C1.1 : FORM OF OFFER AND ACCEPTANCE

1 OFFER

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

APPOINTMENT OF A CONTRACTOR FOR THE ERECTION OF STREET LIGHTS IN EXT 2

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

By the representative of the tenderer, deemed to be duly 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 terms of the conditions of contract identified in the contract data.

Signature(s) of authorized agents:.....

Name(s) (in block letters)

Capacity of authorized agents:

for and on behalf of the Tenderer
(Name and address of organization)

Witness:(Full name – in block letters – and signature)
(Name)

.....
(Signature)

Date:

CONTRACT
Part C1: Agreement and contract data

C1.1 Form of offer and acceptance

2 ACCEPTANCE

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

The terms of the contract are contained in:

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

Part C2 : Pricing data

Part C3 : Scope of work

Part C4 : Site Information

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

Deviations from and amendments to the documents listed in the tender data and any addenda thereto, as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this 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 deviation (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof 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 the obligations in accordance with those terms shall constitute a repudiation of this agreement.

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

For and on behalf of the Employer:

Signature(s) of authorized agent(s)

Date:.....

Name(s) **Silumko Mahlasela**

Capacity **Municipal Manager**

for the Employer: **Mnquma Local Municipality
P O Box 36, BUTTERWORTH, 4960**

Witness:(Full name – in block letters – and signature)
(Name)

.....
(Signature)

Date:

CONTRACT

Part C1: Agreement and contract data

3 SCHEDULE OF DEVIATIONS

Notes:

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

A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, be the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.

1. Subject
Details
2. Subject
Details
3. Subject
Details
4. Subject
Details
5. Subject
Details

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

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

for and on behalf of the Tenderer
(Name and address of organization)

Witness:(Full name – in block letters – and signature)
(Name)
.....
(Signature)

CONTRACT
Part C1: Agreement and contract data

C1.1 Form of offer and acceptance

Date:

For and on behalf of the Employer:

Signature(s) of authorized agent(s)

Date:.....

Name(s) **Silumko Mahlasela**

Capacity **Municipal Manager**

for the **Employer:** **Mnquma Local Municipality**
P O Box 36, Butterworth 4960

Witness:(Full name – in block letters – and signature)
(Name)

.....
(Signature)

Date:

C1.2: CONTRACT DATA (PART 1)

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

Copies of these conditions of contract may be obtained on the tenderer's own cost from the SAICE Tel: 011-805 5947

PART 1 : CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER

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

No.	Clause	Description
1	1.1.1.13	The Defects Liability Period is Twelve (12) months , measured from the date of the Certificate of Completion.
2	1.1.1.14	The time for achieving Practical Completion is Six (6) Months , calculated from the Commencement Date.
3	1.1.1.15	Name of Employer is: MNQUMA LOCAL MUNICIPALITY
4	1.1.1.16	The Employer's Agent is an employee of the institution, Electrical Services Division, Infrastructural Development
5	1.1.1.26	The pricing strategy is: Re-measurement Contract
6	1.2.1.2	<p>The Employer's address for receipt of communications and notices is :</p> <p>Telephone: (047) 050 1150 Facsimile: (047) 491 0195</p> <p>Address (Postal) : PO Box 36 Address (Physical): Municipal Building, Cnr King</p> <p style="text-align: center;">Butterworth and Mthatha Street, Butterworth</p> <p>The Employer's Agent's address for receipt of communications and notices is :</p> <p>The Electrical Services Division.</p> <p>Telephone: (047) 050 1247 Facsimile: (047) 491 0195</p> <p>Address (Postal) : PO Box 36 Address (Physical): Municipal Building, Cnr King</p> <p style="text-align: center;">Butterworth and Mthatha Street, Butterworth</p>
	2.4.1	<p>"in the event of any ambiguity, conflict or discrepancy between the various contract documents, lists and schedules, the order of precedence (from highest to lowest) shall be as follows:</p> <ul style="list-style-type: none"> • The form of offer and acceptance • Contract forms • The contract data • General conditions of contract (GCC 2015) • Scope of Work • Standard specification Street Lights • Site Information • Bill of quantities • Returnable schedules

No.	Clause	Description
7	3.2.3	<p>The Employer's Agent shall obtain specific approval from the Employer before executing any of his functions or duties according to the following Clauses of the General Condition of Contract:</p> <p>1. New Clause 3.2.3.1 "For expenditure on the Contract to exceed the Contract Price";</p> <p>2. Existing Clauses:</p> <p>3.2.1 - Nomination of person as Employer's Agent's Representative.</p> <p>5.6 – Approval of the programme</p> <p>5.7.2 - Work at night as well as by day</p> <p>5.8 – Non-working times</p> <p>5.12 - Granting of extension of time excluding Clause 5.12.2.2 (Abnormal climatic conditions)</p> <p>5.13 - Reduction of penalty for delay.</p> <p>5.14.2 - The issue of a Certificate of Practical Completion.</p> <p>5.14.4 - The issue of a Certificate of Completion.</p> <p>5.16.1 - The issue of a Final Approval Certificate.</p> <p>6.3 – Variations in respect of Variations which are not small (R30 000)</p> <p>6.6 - Instruction to expend on Provisional and Prime Cost Sums</p> <p>6.11 - Adjustment of General Items & Approval of Claims</p> <p>8.2.2.2 - Order to repair and make good damage arising from any "excepted" risk.</p>
8	3.2.4	<p>Occupational Health, Safety – Public Health and the duly appointed H&S Agent has to be appointed by the contractor as Client's Agent on this contract, in terms of Clause 5(6) of the Construction Regulations, 2014 as promulgated in terms of Section 43 of the Occupational Health and Safety Act, 1993. The Principal Contractor shall perform a preliminary assessment of the project generated H&S plan and submit such to Occupational Health, Safety & Wellness – Public Health for legal compliance reassessment & verification / approval prior to any works commencing. The duly appointed H&S Agent will be responsible for further monitoring and the auditing of the approved H&S plan for legal compliance.</p>

No.	Clause	Description
9	3.4	<p><u>Add the following</u> new Sub-Clause 3.4:</p> <p>The Employer may, at his sole discretion, provide technical support services to the Contractor or Subcontractor(s).</p> <p>The technical team providing such support services will be appointed and remunerated by the Contractor. In the case of EPWP Contractor Learnership Programmes, support services may be provided by the ISD officer appointed by the contractor. The technical team will consist of the Employer's Agent and a person or persons acting as Training, Construction and Materials Managers or Construction Mentor, depending on the services to be provided and the scope of the functions to be executed.</p> <p>3.4.1 In addition to his duties and functions in terms of 3.2.1, the Employer's Agent will co-ordinate the work of the technical team providing the support services.</p> <p>3.4.2 The Project Manager acts as mentor to the Contractor in respect of the following functions, which are described fully in the CESA document, Guideline Contract Specific Data C4- Construction Management Services of the Form of Agreement for Consulting Services for Labour -Intensive Construction Projects:</p> <ul style="list-style-type: none"> i) Programming the execution of the works. ii) Interpretation of drawings, specifications and related contractual matters. iii) Workforce structuring, employment and management. iv) Guidance to expedite work progress/ improve productivity. v) Setting out of works. vi) Safety measures and legislation requirements. vii) Materials handling. viii) Tools and equipment needs. ix) Financial matters. x) Training requirements. xi) Security aspects. xii) Quality control systems. <p>3.4.3 The Materials/ Project Manager is responsible for the following functions which are described fully in the CESA document, <u>Guideline Contract Specific Data C5-Materials Procurement Services of the Form of Agreement for Consulting Services for Labour -Intensive Construction Projects on the Contract</u>:</p> <ul style="list-style-type: none"> i) Establishment of stores. ii) Determination of store administration procedures.

No.	Clause	Description
		<ul style="list-style-type: none"> iii) Determination of requirements of store staff. iv) Employment of store staff. v) Staff guidance, supervision and training. vi) Acquisition of materials. vii) Issue of materials. viii) Upholding of an assets register. ix) Insurance of assets. <p>3.3.4 The main role of the Mentor is to support the Learner Contractor and to impart knowledge that will enable the Contractor to compete independently as soon as possible. The Mentor provides a wide range of support and advice functions, including but not limited to advice with regard to:</p> <ul style="list-style-type: none"> (i) Finance and dealing with banks (ii) Business management (iii) Contract management (iv) Procurement of materials and other required services (v) Technical and engineering (vi) Construction Planning and Management (vii) Fulfilling of statutory and tax obligations (viii) Labour and human resource advice
10	4.3.1	<p><u>Add the following</u> to the clause:</p> <p>“For conventional construction works the Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) shall apply and the minimum employment conditions which will apply shall be guided by the latest Sectorial Determination: Electrical Engineering Sector published from time to time.</p> <p>Compliance with the National Environmental Management Act (NEMA), Act 107 of 1998.</p> <p>Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) as per Government Notice R63 of 25 January 2002, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.”</p> <p>“The Contractor shall comply with the Occupational Health and Safety Specification prepared by the Employer in terms of the Construction Regulations, 2014, Clause 5(1)(b) promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993).</p> <p>Without limiting the Contractor’s obligations in terms of the Contract, the Contractor shall before commencement of the Works or any part thereof, be in the possession of an approved Health and Safety Plan.”</p>

No.	Clause	Description
11	4.3.3	<p>Add the following new clause:</p> <p>“Contractor’s Designer</p> <p>The Contractor and his designer shall accept full responsibility and liability to comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Construction Regulations, 2014 for the design of the Temporary Works and those part of the Permanent Works which the Contractor is responsible to design in terms of the Contract”</p>
12	4.5	<p>Add the following new Sub-Clauses:</p> <p>4.5.5 On the request of the Contractor, the Employer may, at his sole discretion, provide a support service to the Contractor in the giving of notices and in obtaining requisite consents, permissions and permits.</p> <p>4.5.6 On the request of the Contractor and certified by the Employer’s Agent as payable by the Contractor, the Employer may, in his sole discretion, advance funds to the Contractor in the form of a cheque in favour of the relevant institution or body, to facilitate the Contractor in complying with the provisions of this Clause.</p> <p>The Contractor shall provide proof to the Employer’s Agent of all payments effected by him.</p> <p>The Employer will deduct the sums advanced by the Employer and adjusted in accordance with the Contract Price Adjustment Formula or other rise-and-fall provision applicable to the Contract, from future payment certificates of the Contractor, if such sums are payable by the Contractor in the ordinary course of his business.</p> <p>The Employer will not advance funds in respect of cyclic sums payable by the Contractor in the ordinary course of his business.</p>
13	4.11.3	<p>Add the following to Clause 4.11</p> <p>Notwithstanding the wording of this Clause, on request of the Contractor the Employer may at his sole discretion, provide trade-skills training to the Contractor’s employees to improve their competency and efficiency commensurate with the requirements of the Works.</p>
14	5.3.1	<p>The documentation required before Commencement of the Works are:</p> <p>Health and Safety Plan (Refer to Clause 4.3)</p> <p>Initial Programme (Refer to Clause 5.6)</p> <p>Security (Refer to Clause 6.2)</p> <p>Insurance (Refer to Clause 8.6)</p> <p>Project team</p>
15	5.3.2	<p>The Contractor is required, within 14 days of the Commencement Date, to submit the documents listed below to the Employer’s Agent for his approval.</p> <p>Health and Safety Plan The Contractor shall deliver his health and safety plan, in terms of Clause 7.1 of the Construction Regulations (June 2017).</p> <p>Initial Programme The Contractor shall deliver his Initial Programme of work in term of Clause 5.6</p> <p>Security</p>

No.	Clause	Description
		<p>Submit a guarantee of an Insurance Company or Bank to be jointly and severally bound with the Contractor for an amount equal to ten per cent (10%) of the Contract Price. The wording of the Guarantee shall be identical to the pro forma provided in Part C1.3 of this tender document.</p> <p>Insurance</p> <p>Submit copies of receipts of registration, or payment for the premiums for the following insurances, as required by the new Clause 8.6 in this Contact Data.</p> <ul style="list-style-type: none"> (a) Proof of registration with the Department of Labour as an employer, in terms of the Compensation for Occupational Injuries and Diseases Act 1993, as amended (b) Common Law Liability Insurance for the duration of the Contract Period and with a minimum Limit of Indemnity of not less than R1 000 000 for any one accident; (c) Insurance on an All-Risks basis for construction plant, equipment and other things (except those intended to incorporation into the works) brought onto the site to the full value of such construction plant, equipment and other things; (d) Motor Vehicle Liability Insurance, comprising a minimum of Balance of Third-Party motor risks, including Passenger Liability, subject to a minimum limit of R2,5 million; (e) Where the Contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the site, the Contractor shall satisfy the employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication, then such interest shall be noted by endorsement to the Contractor's Policies of Insurance. (f) Imported equipment or component parts or materials to be supplied in terms of this Contract which require any process of assembly or finishing in South Africa prior to delivery to the site are to be insured by the Contractor up to the commencement of transit to site of the assembled or finished equipment, component parts or materials, unless special arrangements are made with the Employer. <p>These insurances shall be maintained in force for the duration of the Contract, including any Defects Liability Period and in respect of Sub-Contractors, the Contractor shall be deemed to have complied with the provisions of the requirements relating to insurance by ensuring that the Sub-Contractors have effected such insurance.</p>
16	5.4.2	<p>The access and possession of Site shall not be exclusive to the Contractor but as set out in the Site Information.</p> <p>The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by him for the purposes of the Works.</p>
17	5.8.1	<p>Delete the words "between sunset and sunrise" in the first line and replace with "outside normal working hours".</p> <p>Normal working hours shall be those as stated in the applicable Sectoral / Ministerial Determination applicable to a 5 (five) day a week</p> <p>Non-working days are Saturdays and Sundays and special non-working days are public holidays and official builder's holidays.</p>
18	5.8.1.5	<p>Add the following additional Clause to Clause 5.8</p> <p>"The cost of supervision by the Employer's Agent or his representatives outside of normal (Monday to Friday) working hours in accordance with this Clause, shall be to the Contractor's account".</p>

No.	Clause	Description
19	5.12.2.2	<p>Add to Clause 5.12.2.2:</p> <p>The time period specified as the time for completion includes allowances for those days on which it is expected that work, on the critical path items of the works, would be prevented due to weather conditions such as wind, rain falling or the subsequent waterlogged condition. Based on average weather conditions of wind, rain and sunshine the allowances are:</p> <ul style="list-style-type: none"> • 3 working days per month for the months of May to October • 4 working days per month for the months of November to April <p>If the Contractor has been prevented by these weather conditions from working on the critical path items of the works, then he must notify the Employer's Agent or MLM Project Manager in writing. The submission shall be made within five calendar days of the resumption of work. The Employer's Agent shall upon considering all the relevant factors determine the extension of time to be granted on the basis that an extension of time to the contract will only be granted if the total number of days upon which work on the critical items was prevented, exceeds the total number of days calculated in terms of the above allowance and considering the official contract period as a whole.</p> <p>The tendered sums of the appropriate time-related items shall be increased to take account of the extensions of time granted.</p>
20	5.12.5	<p><u>Add the following</u> to Clause 5.12</p> <p>5.12.5 Critical Path Provision</p> <p>A delay in so far as extension of time is concerned, will be regarded as a delay only if, on a claim by the Contractor in accordance with the General Conditions of Contract, the Employer's Agent rules that all progress on an item or items of work on the critical path of the approved programme for the execution of the Works by the Contractor, has been brought to a halt. Delays on normal working days only, based on a working week, of five normal working days, will be taken in account for the extension of time.</p>
21	5.13.1	The penalty for failing to complete the Works is R 1500 per calendar day
22	5.16.3	The latent defect period is 2 years.
23	5.14.5.5	Insurance of the works shall continue until the expiration of the Defects Liability Period, in terms of the new Clause 8.6 contained in this Contract Data.
24	6.2.1	<p>The security to be provided by the Contractor shall be:</p> <ul style="list-style-type: none"> • a performance guarantee of ten per cent (10%) of the Contract Sum in the event of submissions or five per cent (5%) in the event of deductions, plus • retention money amounting to ten per cent (10%) of the Contract Price. <p>Retention monies due shall be subjected to Clauses 6.10.1.3 and 6.10.3.</p> <p>The performance guarantee shall be from an approved Insurance Company or Bank to be jointly and severally bound with the Contractor, in accordance with the provisions of the Form of Guarantee. A Retention Money Guarantee is not permitted.</p> <p>The wording of the performance guarantee shall be identical to the pro-forma provided under Clause C1.3: Form of Guarantee of the Contract Data."</p>
25	6.2.2	<p>Replace the entire contents of Clause 6.2.2 with the following:</p> <p>"If the Contractor fails in his obligations to provide the stated security within the period stated in Clause 5.3.2, or if the performance guarantee shall differ from the pro-forma provided under Clause C1.3: Form of Guarantee of the Contract Data, the Employer may terminate the Contract in terms of Clause 9.2."</p>
26	6.2.3	<p>Replace the entire contents of Clause 6.2.3 with the following:</p> <p>"The Contractor shall ensure that the performance guarantee remain valid and enforceable until the issue of the Certificate of Completion."</p>

No.	Clause	Description
27	6.8.2	Contract Price Adjustment will not apply
28	6.10.1.5	The percentage advance on materials on site not yet built into the Permanent Works is 80%.
30	6.10.4	Replace the wordings “within 7 days” and “within 28 days” in Clause 6.10.4 with the wording “within 5 working days: and “within 30 days”.
31	6.10.6.2	<p>Replace Clause 6.10.6.2 with the following new Clause 6.10.6.2:</p> <p>6.10.6.2 No interest shall be payable to the Contractor upon any moneys retained or overdue in terms of the Contract.</p>
32	8.6 8.6.1	<p><u>Delete Clause 8.6. and replace with the following:</u></p> <p>Notwithstanding the provisions contained in the General Conditions of Contract regarding insurance, and without limiting the obligations, liabilities and responsibilities of the Contractor in any way whatsoever and on the understanding that the Contractor is not relieved from his obligations towards the Employer regarding the provision (by the Contractor) of any other insurances, the Employer shall effect and maintain for the duration of the Contract until the expiry of the Defects Liability Period, including initial transit to the Contract site</p> <p style="padding-left: 40px;">⇒ Contract Works Insurance (including SASRIA Insurance) and</p> <p style="padding-left: 40px;">⇒ Public Liability (Third Party) Insurance</p> <p>both in the joint names of the Employer and the Contractor (including all Sub-Contractors whether nominated or otherwise), and those on whose behalf the Employer has authority to arrange insurance. The Contractor shall pay for all deductibles incurred as a result of claims made under the Contract.</p> <p>The Policy will be subject to the normal Terms, Exceptions and Conditions applicable to such insurance and will provide the following cover:</p> <p><u>Section 1 – The Contract Works</u></p> <p>(a) The Contract Works to be undertaken in terms of the Insured Contract, including all temporary works erected or in the course of erection and all materials for incorporation therein.</p> <p>“Temporary Works” shall mean all constructional aids, equipment or structures (not being part of the permanent works) used or intended for use on the Insured Contract and which</p> <p style="padding-left: 40px;">(i) do not comprise mobile plant,</p> <p style="padding-left: 40px;">(ii) the Insured does not intend to remove from the Contract Site on completion of the Contract, and/or</p> <p style="padding-left: 40px;">(iii) have no residual value at the completion of the Contract (other than scrap value) solely due to their specialized nature,</p> <p style="padding-left: 40px;">to the extent that the value has been included in the Contract price.</p> <p>(b) Surrounding property (as defined in the Policy) not included in nor forming part of the property insured under Item 1 above.</p>

No.	Clause	Description						
		<p><u>Section 2 – Contract Liability</u></p> <p>Indemnity against the insured parties legal liability in the event of accidental death of or injury to third party persons and/or accidental loss of or damage to third party property arising directly from the execution of the contract.</p> <p>THE SUMS INSURED/LIMIT OF LIABILITY</p> <p>SECTION 1 – CONTRACT WORKS</p> <p>(a) Property insured under Section 1(a) The Contract Works</p> <p>The Agreed and Accepted Contract Value (subject to a maximum of R100M) in respect of any one Contract plus a maximum of 25% escalation, unless the Insurers' agreement to amend these limits is obtained in writing.</p> <p>(b) Property insured under Section 1(b) Surrounding Property</p> <p>R2,500,000 each and every loss</p> <p>SECTION 2 - CONTRACT LIABILITY</p> <p>Limit of Indemnity R20,000,000 (Twenty Million Rand) for any one occurrence or series of occurrences arising out of one event.</p> <p>EXCLUDED CONTRACTS</p> <p>The following Contracts are specifically excluded from the “blanket” cover arranged by the Employer, and insurance cover will not be arranged by the Employer. The Employer shall arrange with the Insurer for specific insurance cover for these contracts, and shall confirm such arrangement and all specific Terms & Conditions of such policy with the Contractor in writing.</p> <ol style="list-style-type: none"> Any Contract with a Contract Price at award of over R100,000,000 Any Contract with a construction period at award exceeding 24 months Any Contract with a Maintenance or Defects Liability Period exceeding 12 months Any Contract involving <ol style="list-style-type: none"> Underground Mine or Colliery Working' Tunnelling Foul Berthing Stevedoring Work “Wet” work at or about or connected with dams, docks, harbours, piers, breakwaters or otherwise involving construction in water <p>THE DEDUCTIBLES</p> <p>The first amount payable by the Insured in respect of each and every occurrence giving rise to a claim under the Policy shall be as follows:</p> <p>(A) <u>STANDARD BUILDING CONTRACTS</u></p> <table> <tr> <th></th><th>Description</th><th>Excess</th></tr> <tr> <td></td><td></td><td></td></tr> </table>		Description	Excess			
	Description	Excess						

No.	Clause	Description																									
		<table><tr><td>A1</td><td>Contract Value up to R10M</td><td>R 10,000</td></tr><tr><td>A2</td><td>Contract Value above R10M up to R25M</td><td>R15,000</td></tr><tr><td>A3</td><td>Contract Value above R25M</td><td>R25,000</td></tr></table> <p>(B) <u>ELECTRICAL & ALL OTHER CONTRACTS</u></p> <table><tr><td></td><td>Description</td><td>Excess</td></tr><tr><td>B1</td><td>Contract Value up to R1M</td><td>0.25% of claim minimum R10 000</td></tr><tr><td>B2</td><td>Contract Value above R1M up to R5M</td><td>0.25% of claim, minimum R20,000</td></tr><tr><td>B3</td><td>Contract Value above R5M</td><td>0.25% of claim, minimum R50,000</td></tr></table> <p>(C) <u>LIABILITY RISKS</u></p> <p>Liability limit: R20,000,000</p> <table><tr><td>Description</td><td>Excess</td></tr><tr><td>All Contracts</td><td>R25,000 in respect of loss or damage caused by Fire and damage to Underground Services R20 000 in respect of all other losses.</td></tr></table> <p>(D) <u>SASRIA</u></p> <p>Rate : 0.0072%</p> <p>The Employer will pay all premiums in connection with the insurance effected by the Employer.</p> <p>In the event of any occurrence which is likely to give rise to a claim under the insurance arranged by the Employer, the Contractor or sub-Contractor shall</p> <p>(a) in addition to any statutory requirement or other requirements contained in the Conditions of Contract, immediately notify the Employer's Insurance Brokers by telephone or in writing giving the circumstances, nature and an estimate of the loss or damage;</p> <p>(b) complete a Claims Advice Form available from the Insurance Brokers to whom the form shall be returned without delay – a copy shall be sent to the Employer's Agent;</p> <p>(c) Negotiate the settlement of claims with the Insurers through the Employer's Insurance Brokers, subject to the settlement being approved by the Employer.</p> <p>The Employer and Insurers shall have the right to make all and any enquiries, either on the site or elsewhere, as to the cause and results of any such occurrence and the Contractor shall give full facilities for carrying out such enquiries.</p>	A1	Contract Value up to R10M	R 10,000	A2	Contract Value above R10M up to R25M	R15,000	A3	Contract Value above R25M	R25,000		Description	Excess	B1	Contract Value up to R1M	0.25% of claim minimum R10 000	B2	Contract Value above R1M up to R5M	0.25% of claim, minimum R20,000	B3	Contract Value above R5M	0.25% of claim, minimum R50,000	Description	Excess	All Contracts	R25,000 in respect of loss or damage caused by Fire and damage to Underground Services R20 000 in respect of all other losses.
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No.	Clause	Description
	8.6.2	Any amount which becomes payable as a result of a claim by the Contractor under the insurance effected by the Employer shall be paid net of the deductibles to the Employer, who shall pay the said amount to the Contractor upon rectification, repair or reinstatement of the loss or damage, but this provision shall not in any way affect the Contractor's obligations, liabilities and responsibilities in terms of the Contract.
	8.6.3	<p>Submission of a Tender shall be deemed as acceptance by the Contractor that he is satisfied with the scope of the insurances effected by the Employer</p> <p>The Contractor and/or Sub-Contractor shall provide, as a minimum, the following:</p> <ul style="list-style-type: none"> (a) Proof of registration with the Department of Labour as an employer, in terms of the Compensation for Occupational Injuries and Diseases Act 1993, as amended (b) Common Law Liability Insurance for the duration of the Contract Period and with a minimum Limit of Indemnity of not less than R1 000 000 for any one accident; (c) Insurance on an All Risks basis for construction plant, equipment and other things (except those intended to incorporation into the works) brought onto the site to the full value of such construction plant, equipment and other things; (d) Motor Vehicle Liability Insurance, comprising a minimum of Balance of Third Party motor risks, including Passenger Liability, subject to a minimum limit of R2,5 million; (e) Where the Contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the site, the Contractor shall satisfy the employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication, then such interest shall be noted by endorsement to the Contractor's Policies of Insurance. (f) Imported equipment or component parts or materials to be supplied in terms of this Contract which require any process of assembly or finishing in South Africa prior to delivery to the site are to be insured by the Contractor up to the commencement of transit to site of the assembled or finished equipment, component parts or materials, unless special arrangements are made with the Employer.
	8.6.4	<p>These insurances shall be maintained in force for the duration of the Contract, including any Defects Liability Period and in respect of Sub-Contractors, the Contractor shall be deemed to have complied with the provisions of the requirements relating to insurance by ensuring that the Sub-Contractors have effected such insurance.</p> <p>The Contractor may effect, at his own cost, any insurance additional to that effected by the Employer which he deems necessary in his own interests. The Employer reserves the right to call for full information regarding such insurances.</p>
	8.6.5	The insurances to be provided by the Contractor and Sub-Contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and the Contractor shall, if required by the employer, produce to the employer the Policy or Policies of insurance and the receipts for payment of the current premiums.
	8.6.6	
	8.6.7	If the Contractor fails to effect and keep in force the insurances referred to, then the employer may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and, from time to time, deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor.
	8.6.8	<p>where the Contractor is responsible for the appointment of Sub-Contractors, then the Contractor shall</p> <ul style="list-style-type: none"> (a) ensure that potential and appointed Sub-Contractors are aware of the whole content of this Special Conditions of Contract Clause; and

No.	Clause	Description
	8.6.9	(b) ensure the compliance of Sub-Contractors with this Special Conditions of Contract clause, where applicable.
	8.6.10	The Contractor warrants that he shall give all notices and shall observe all the Terms and Conditions and requirements of all insurances applicable to this Contract.
	8.6.11	
33	9.1.4	<p>Replace Clause 9.1.4 with the following:</p> <p>Up to the time of termination of the contract by either party in terms of this Clause, or until the Contractor gives notice in terms of this Clause to terminate the contract and the Contractor is precluded from exercising his right to terminate the contract because the Employer agrees to bear any resultant additional costs provided for in Clause 9.1.2.2 hereof, the Contractor:</p> <p>a) will be entitled to an extension of calendar time for working days lost as may be approved by the Employer's Agent, and</p> <p>b) will be reimbursed the cost of delays per working day, where the number of working days will be determined pro rata the effect the delays have on the progress of the work as agreed with the Employer's Agent. Payment in full and final settlement will be made at the rates tendered for the payment items specially provided in the Bill of Quantities (Items A2.1 to A2.7)</p> <p>Where the circumstances described in Clauses 9.1.1 and 9.1.2 are applicable only to a certain portion of the contract, the Employer's Agent will decide after consulting the Contractor, to what extent the contract as a whole is affected and whether or not a claim in terms of this Clause can be submitted.</p> <p>No payment will be made in terms of this Clause after the expiry of the due completion date.</p>
34	10.1.1.1.1	<p>Add the following to Clause 10.1.1.1</p> <p>Should the claim be related to work stoppages by either the EMEs or the local community, no extension of time will be granted without a South Africa Police Service case number for threats or intimidation against the parties involved.</p>
35	10.3.2	Amicable settlement in terms of Clause 10.4 shall be contemplated for all disputes prior to referring any dispute to adjudication or arbitration.
36	10.5.1	Dispute resolution shall be by ad-hoc adjudication
37	10.5.3	The number of Adjudication Board Members to be appointed one (1).
38	10.7.1	The determination of disputes which are unresolved in terms of Clause 10.5.3 shall be by arbitration.

39	11.	<p>Add the following additional clause:</p> <p>Details to be confidential</p> <p>The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without the prior written consent of the Employer's Agent.</p>
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C1.3 : FORM OF PERFORMANCE GUARANTEE (PRO FORMA)

PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition, (2015).

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor”

means:.....

.....

.....

Physical address:

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“Employer” means:

“Contractor” means:

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“Employer’s Agent” means:

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.....

“Works” means:

.....

.....

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“Site” means:

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

“Contract Sum” means: The accepted amount inclusive of tax of R

Amount in words:

“Guaranteed Sum” means: The maximum aggregate amount of R

Amount in words:

.....

.....

.....

Type of Performance Guarantee: Fixed

“Expiry Date” means: Date of issue of the Certificate of Completion

CONTRACT DETAILS

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

1. FIXED PERFORMANCE GUARANTEE

- 1.1. Where a fixed PERFORMANCE Guarantee has been selected. The Guarantor’s liability shall be limited to the amount of the Guarantee Sum.
- 1.2. The Guarantor’s period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of issue by the Employer’s Agent of the Certificate of Completion of the Works, or the date of payment in full of the Guaranteed Sum, whichever occurs first.
- 1.3. The Employer’s Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

2. CONDITIONS APPLICABLE TO FIXED PERFORMANCES GUARANTEES:

- 2.1. The Guarantor hereby acknowledges that:
 - 2.1.1. Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be constructed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.
 - 2.1.2. Its obligation under this Performance Guarantee is restricted to the payment of money.
- 2.2. Subject to the Guarantor’s maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:

- 2.2.1. A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;
- 2.2.2. A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;
- 2.2.3. A copy of the aforesaid payment which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.
- 2.3. Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 2.3.1. The Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or
 - 2.3.2. A provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and
 - 2.3.3. The aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 2.4. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1
- 2.5. Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of the Performance Guarantee shall bear interest at the prime overdraft rate by the Employer's Bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
- 2.6. Payment by the Guarantor in terms of 3.2 or 3.3 will only be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 2.7. Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 2.8. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have right to claim his from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

- 2.9. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 2.10. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 2.11. This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.
- 2.12. Where the Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the magistrate's Court.

Signed _____ at _____

.....

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Date

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Guarantor's signatory (1)

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.....

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Capacity

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Guarantor's signatory (2)

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.....

Capacity

Witness signatory (1)

.....

Witness signatory (2)

.....

.....

.....

C1.4 : HEALTH AND SAFETY AGREEMENT

**AGREEMENT IN ACCORDANCE WITH
THE
OCCUPATIONAL HEALTH & SAFETY ACT**

SERVICE CONTRACT ENTERED INTO

between

MNQUMA LOCAL MUNICIPALITY
(hereafter referred to as “the Mandator”)

and

.....
(Registration No.:
COIDA No.:.....

(hereafter referred to as “the Mandatary”, represented by
the Chief Executive Officer) In the Agreement entered into
between the Client
(hereafter referred to as “the Mandator”)

PROJECT NAME:

BID NO.:

The parties hereby agree as follows:

1. SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

1.1 That this Agreement constitutes an agreement in terms of Section 37(2) of the Occupational Health and Safety Act, 85 of 1993.

2. COMPLIANCE WITH RELEVANT LEGISLATION

2.1 That the Chief Executive Officer of the Mandatary shall be obliged to ensure, and:

- He/She/ They shall be responsible for ensuring,
- that all employees and/or subcontractors of the Mandatary act, at all times and in all circumstances, strictly in accordance with the Occupational Health and Safety Act, 85 of 1993, the Compensation for Occupational Injuries and Diseases Act, 130 of 1993, as well as any relevant Regulations as may be issued from time to time in terms of the aforesaid legislation.

3. SECTION 16(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

3.1 That, prior to the Mandatary commencing with the rendering of the contractual services, the Chief Executive Officer shall appoint an employee in writing in terms of Section 16(2) of the Occupational Health and Safety Act, which person's particulars are furnished hereunder:

Name:

Identity no:

Address: _____

Tel. no:

(W)

(Cell)

4. SECTIONS 8 AND 9 OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

4.1 That, without in any way derogating from any of the provisions of paragraphs 2 and 3 above, the Mandatary shall, at all times and in all circumstances, be responsible for ensuring that the employees and/or subcontractors of the Mandatary comply with the provisions of Sections 8 and 9 of the Occupational Health and Safety Act.

5. LIABILITY

5.1 That the Mandatary accepts sole liability in respect of any damage and/or loss which may arise out of any intentional and/or negligent non-compliance with any provisions of the aforesaid legislation and/or Regulations by any of the employees and/or subcontractors of the Mandatary.

6. REPORTING OF INCIDENTS AND HAZARDOUS CONDITIONS

6.1 That the person appointed by the Mandatary in terms of paragraph 3 above shall, prior to the end of each shift, be obliged to report, in writing and in the manner prescribed in Annexure 1 of General Administrative Regulation 9, any incidents as specified in Section 24 of the Occupational Health and Safety Act, as well as incidents as specified in General Administrative Regulation 9 of the aforesaid Act, as well as any condition which he/she deems to be unsafe or unhealthy, and shall furthermore hand a copy of the aforesaid document to the Representative of the Mandator.

6.2 That, notwithstanding the aforesaid report, the person indicated in paragraph 6.1 above shall, directly after the occurrence of an incident, or directly after observing a hazardous condition, telephonically notify the Representative of the Mandator thereof.

7. REPRESENTATIVE OF THE MANDATOR

7.1 That the particulars of the Representative of the Mandator are as furnished hereunder:

Name:

ID No. / Passport No:

Address:

Telephone number:

(W):

(Cell):

Thus done and signed at _____ on this ____ day of _____ 20__

The Company Director
(on behalf of the Mandatary)

Witness

The Municipal Manager (on behalf
of the Mandator)

Witness

C1.6 : ADJUDICATION BOARD MEMBER AGREEMENT

PRO FORMA

This Agreement is entered into between:

Adjudication Board Member:

Name: _____

Physical Address: _____

Postal Address: _____

E-mail Address: _____

Facsimile Number: _____

Telephone Number: _____

Mobile Number: _____

Contractor:

Name: _____

Physical Address: _____

Postal Address: _____

E-mail Address: _____

Facsimile Number: _____

Telephone Number: _____

Mobile Number: _____

Employer:

Name: _____

Physical Address: _____

Postal Address: _____

E-mail Address: _____

Facsimile Number: _____

Telephone Number: _____

Mobile Number: _____

The parties entered into a Contract for _____

_____ (name of project) which provides that a dispute under or in connection with the General Conditions of Contract for Construction Works, Second Edition 2010 (GCC), must be referred to **ad-hoc adjudication**.

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

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

Upon submission of an invoice for fees and expenses to the Parties, the **Employer** shall pay the full amount within 28 days of receipt of the invoice and shall be reimbursed by the other Party by half the amount so that fees and expenses are borne equally by the Parties. This Agreement is entered into:

Contractor's signature: _____

Contractor's Name: _____

Place: _____

Date: _____

Employer's signature: _____

Employer's Name: _____

Place: _____

Date: _____

Adjudication Board Member's signature: _____

Adjudication Board Member's Name: _____

Place: _____

Date: _____

C1.7 : CONFIRMATION OF RECEIPT OF CONTRACT (PRO FORMA)

CONFIRMATION OF RECEIPT

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

The (day) of(month) (year)

At(place)

It is hereby agreed that the official commencement date of the contract will be:

The (day) of(month) (year)

SIGNED ON BEHALF OF/BY THE CONTRACTOR:

NAME

SIGNATURE

CAPACITY

SIGNED BY WITNESS:

NAME

SIGNATURE

MNQUMA LOCAL MUNICIPALITY

TENDER NUMBER: MNQ/SCM/19/25-26

ERECTION OF STREET LIGHTS IN EXT 2

CONTRACTPART 2 (OF 4) : PRICING DATA

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

C2.1 : PRICING INSTRUCTIONS

C2.1.1 PREAMBLE TO THE BILL OF QUANTITIES

1) The conditions of contract, the contract data, the specifications (including the project specifications) and the issued drawings shall be read in conjunction with the bill of quantities.

2) The bill comprises items covering the contractor's profit and costs of general liabilities and of the construction of temporary and permanent works.

Although the tenderer is at liberty to insert a rate of his own choosing for each item in the bill, he should note the fact that the contractor is entitled, under various circumstances, to payment for additional work 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 the contractor inserted in the bill. 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 specifications, all set out which ancillary or associated activities are included in the rates for the specified operations.

3) Descriptions in the bill of quantities are abbreviated and may differ from those in the standardized and project specifications. No consideration will be given to any claim by the contractor submitted on such a basis. The bill 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 appropriate standardized or project specification(s) be contrary to the terms of the bill or, when relevant, to the civil engineering quantities, the requirement of the appropriate standardized, project, or particular specification as the case may be, shall prevail.

4) Unless stated to the contrary, items are measured net in accordance with the drawings without any allowance having been made for waste.

5) The amounts and rates to be inserted in the bill of quantities shall be the full inclusive amounts to the employer for the work described under the several items. such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the tender is based.

6) An amount or rate shall be entered against each item in the bill of quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the bill.

The tenderer shall also fill in a rate against the items where the words "rate only" appear in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the tendered rates shall apply should work under these items actually be required.

should the tenderer group a number of items together and tender one sum for such group of items, the single tendered sum shall apply to that group of items and not to each individual item, or should he indicate against any item that full compensation for such item has been included in another item, the rate for the item included in another item shall be deemed to be nil.

The tendered rates, prices and sums shall, subject only to the provisions of the conditions of contract, remain valid irrespective of any change in the quantities during the execution of the contract.

7) The quantities of work as measured and accepted and certified for payment in accordance with the conditions of contract, and not the quantities stated in the bill of quantities, will be used to determine payments to the contractor. The validity of the contract shall in no way be affected by differences between the quantities in the bill of quantities and the quantities certified for payment. Ordering of materials is not to be based on the bill of quantities.

8) For the purposes of this bill of quantities, the following words shall have the meanings hereby assigned to them:

Unit: the unit of measurement for each item of work as defined in the standardized, project or particular specifications

Quantity: the number of units of work for each item

Rate: the payment per unit of work at which the tenderer tenders to do the work

Amount: the quantity of an item multiplied by the tendered rate of the (same) item

Sum: an amount tendered for an item, the extent of which is described in the bill of quantities, the specifications or elsewhere, but of which the quantity of work is not measured in units

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

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1 000 kg)
m ²	=	square metre	No.	=	number
m ² .pass	=	square metre-pass	sum	=	lump sum
ha	=	hectare	MN	=	MegaNewton
m ³	=	cubic metre	MN.m	=	MegaNewton-
metre					
m ³ .km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
ℓ	=	litre	Prov sum	=	Provisional sum
kℓ	=	kilolitre	%	=	per cent

MPa = MegaPascal kW = kilowatt

10) Expanded public works programme (EPWP) implications

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

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

11) The cost of all samples and tests as may be required to ascertain and check the quality of materials and workmanship or any part of the works are deemed to be included in the relevant rates in the bill of quantities. The contractor shall at his/her own expense take levels and prepare cross sections as required for the measurement and computation of excavation and fill quantities etc.

12) Value added tax (vat) shall not be included in the individual rates but is to be added as a total at the end of the summary.

13) All materials to be provided by the contractor will be SABS, ISO OR JASWIC approved where such a specification exists, whether specifically stated in the schedule or not.

14) Where a particular make of item is specified, the words “or similar approved” shall mean approval by the engineer in writing.

15) The quantities set out in the Schedule/Bill of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

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

17) A price or rate is to be entered against each item in the Schedule/Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Schedule.

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

19) All prices or rates inserted in the Bill of Quantities shall be Excluding VAT. Provision has been made on the Summary Page, of the Bill of Quantities, for the addition of VAT.

20) Arithmetical errors of responsive tenders will be corrected in the following manner:

- Where there is a discrepancy between an amount shown in figures, and the corresponding amount stated in words, the amount stated in words shall take preference.
- In the Bill of Quantities, if there is an error in the line-item total resulting from the product of the quantity and the unit rate, the line item total shall govern, and the rate shall be corrected. Where there is a misplacement of the decimal point in the unit rate, the line item total shall govern and the unit rate will be corrected.
- Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates in the Bill of Quantities) to achieve the tendered total of the prices.
- Should a tenderer be unwilling to make the corrections ordered by the Project Engineer, the tender may be disqualified.

21) The quantities set out in the Price Schedule are the estimated quantities of the Works, but the Contractor will be required to undertake whatever quantities as may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

22) A price or rate is to be entered against each item in the Price Schedule, whether the quantities are stated or not. An item against which no price is entered or where a word or phrase such as "included" or "provided elsewhere" will be accepted as a rate of nil (R0,00) having been entered against such items and covered by the other prices or rates in the Schedule.

Note: Any work executed to which such a pay item applies, shall be measured under the appropriate items in the Price Schedule and valued at a rate of nil (R0,00). The rate of nil shall be valid irrespective of any change in the quantities during the execution of the Contract.

Portion of the Works has to be subcontracted to EME's or QSE's OR shall be given to local nominated (EME's) Exempted Micro Enterprises or (QSE's) Qualifying Small Enterprises

CORRECTION OF ENTRIES MADE BY TENDERER

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

NOTE

Tenderers are to refer to the Scope of Works and in particular the Specification Data when pricing the Bills of Quantities. Certain clauses in the Standard Specifications and the Particular Specifications have been omitted, amended or added to and these changes must be taken into account when pricing the tender.

As it is not always practical or possible to cross reference every change to the Specifications, the onus rests on the tenderer to ensure that he is aware of the changes and to structure his rates accordingly.

C2.2: BILL OF QUANTITIES

Is to be in line with the Standard Specifications for Erection of Street Lights in Ext 2.

BILL OF QUANTITIES					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	Bill No. 1 CONTRACTORS P&G'S				
1,1	GENERAL REQUIREMENT AND PROVISIONS				
1.1.1	Community Liason Officer	Months	6	6500	R39 000,00
1.1.3	Remuneration of PSC member to attend the official meetings	Month	6	1500	R9 000,00
1.1.4	Local labour employment for the duration of contract	Prov Sum	1	176000	R176 000,00
1.1.5	Provision of Healthy and Safety Consultant	Prov Sum	1	50000	R50 000,00
1.2	GENERAL REQUIREMENT AND PROVISIONS				
1.2.1	Provision for Enviromental Services Monitoring	Month	6		
1.2.2	Nameboard (2100 X 1900)	No.	1		
1.3	Remove or Clear all vegetation running along the line (Bush Clearing request must be made before any clearing is done)	Prov Sum	1		
1.4	Remove existing on the existing streetlight complete (including, disconnection of supply; overhead or underground and temporary storage and transport to depot	Prov Sum	1		
1.5	Occupational Health & Safety				
1.5.1	Preparation of Site PecificOHS plan and file	Iterm	1		
1.5.2	Principal Contractorinitial Oblogationfor OHS Act & Construction Regulations	Month	6		
1.5.3	Provision of full time Construction and Safety Officer	Month	6		
1.5.4	Cost of Medical Certificates	No	8		
1.6	Contractor Site Establishment and General Obligation				
1.6.1	The contractor General Obligation	Lump Sum	1		
1.6.1.1	Fixed obligation	Lump Sum	1		
1.6.1.2	Value-rated obligation				
1.6.1.3	Time-rated obligation	Months	5		
1.7	Allowance for breaking the drive trough	Sum	1		
1.8	TOTAL CARRIED TO SUMMARY				

CONTRACT:	CARNEGIE STREET				
BILL No. 2	TRENCHING AND EXCAVATION				
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2.1	The excavation, backfill and compact in all material including disposal of unsuitable/suplus material. 500 mm Deep:				
2.1.1	Trenches by hand or machine excavation in soft soil -500mm deep x 450mm wide	m	320		
2.1.2	Backfilling and compaction of trench with rough material - 250mm deep x 450mm wide	m	320		
2.1.3	Excavate hole for street lighting pole, place pole, backfill and compact	No	9		
2.1.4	Supply and install plastic warning sheet in trench 500mm below ground level	m	320		
2.1.5	Supply and install 110mm dia. Sleeve	m	12		
2.1.6	Breaking and reinstating tar	m	12		
2.1.5	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2.2	STREET LIGHTS				
2.2.1	LIGHT FITTINGS				
2.2.1.2	Supply and install Beka 48-LED/108 1N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	9		
2.2.2	STREET LIGHT POLES				
2.2.2.1	Supply and install BEKA 9m M.H. galvanised steel pole with 3m Gooseneck outreach arm with 15 DEG rake and complete with access opening cover, back plate, 10A miniature circuit breaker, all internal 2.5mm sqr Cu PVC wiring and connection with insulated connectors.	No.	9		
	TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY				

2.3	LV CABLING AND KIOSK					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
2.3.1	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches					
2.3.1.1	10mm ²		m	370		
2.3.2	Cable Terminations in Kiosk, Streetlight poles or as required including all lugs, bolts, nuts, heat shrink etc.					
2.3.2.1	Termination for cable in item 2.3.1.1 & 2.3.1.2		No	9		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY						

2.4 SUMMARY PAGE OF BILL OF QUANTITIES OF CARNEGIE STREET			
ITEM	ACTIVITY		TOTAL
2.4.1	Excavations and Backfilling		
2.4.2	Street lights		
2.4.3	LV Cable and Kiosk		
2.4.5	SUBTOTAL		

CONTRACT:	BARSLEY STREET					
BILL No. 3	TRENCHING AND EXCAVATION					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
3.1	The excavation, backfill and compact in all material including disposal of unsuitable/suplus material. 500 mm Deep:					
3.1.1	Trenches by hand or machine excavation in soft soil -500mm deep x 450mm wide		m	240		
3.1.2	Backfilling and compaction of trench with rough material - 250mm deep x 450mm wide		m	240		
3.1.3	Excavate hole for street lighting pole, place pole, backfill and compact		No	7		
3.1.4	Supply and install plastic warning sheet in trench 500mm below ground level		m	240		
3.1.5	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.2	STREET LIGHTS				
3.2.1	LIGHT FITTINGS				
3.2.1.2	Supply and install Beka 48-LED/108 1N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	7		
3.2.2	STREET LIGHT POLES				
3.2.2.1	Supply and install BEKA 9m M.H. galvanised steel pole with 3m Gooseneck outreach arm with 15 DEG rakeand complete with access opening cover, back plate, 10A miniature circuit breaker, all internal 2.5mm sqr Cu PVC wiring and connection with insulated connectors.	No.	7		
TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY					

3.3	LV CABLING AND KIOSK					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
3.3.1	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches					
3.3.1.1	10mm²		m	285		
3.3.1.2	16mm²		m	10		
3,3.2	Cable Terminations in Kiosk, Streetlight poles or as required including all lugs, bolts, nuts, heat shrink etc.					
3.3.2.1	Termination for cable in item 3.3.1.1 & 3.3.1.2		No	7		
3.3.3	KIOSK					
3.3.3.1	3CR12 kiosk, pre-wired, to specification, complete with photocell and LV circuit breakers as specified		No	1		
3,4	STEEL GALVINISED CAGE					
3.4.1	A lockable steel galvanized cage for securing the Kiosk with concrete base		No.	1		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY						

3.4 SUMMARY PAGE OF BILL OF QUANTITIES OF BARSLEY STREET			
ITEM	ACTIVITY		TOTAL
3.4.1	Excavations and Backfilling		
3.4.2	Street lights		
3.4.3	LV Cable and Kiosk		
3.4.4	SUBTOTAL		

CONTRACT:		McCLEANAGHAM STREET					
BILL	4	TRENCHING AND EXCAVATION					
ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
4.1		The excavation, backfill and compact in all material including disposal of unsuitable/suplus material. 500 mm Deep:					
4.1.1		Trenches by hand or machine excavation in soft soil -500mm deep x 450mm wide	m	520			
4.1.2		Backfilling and compaction of trench with rough material - 500mm deep x 450mm wide	m	520			
4.1.3		Excavate hole for street lighting pole, place pole, backfill and compact	No	14			
4.1.4		Supply and install plastic warning sheet in trench 500mm below ground level	m	520			
4.1.5		Supply and install 110mm dia. Sleeve	m	20			
4.1.6		Breaking and reinstating tar	m	20			
4.1.5		TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.2	STREET LIGHTS				
4.2.1	LIGHT FITTINGS				
4.2.1.1	Supply and install 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	14		
4.2.2	STREET LIGHT POLES				
4.2.2.1	Supply and install 9m M.H. galvanised steel pole with 3m Gooseneck outreach arm with 15 DEG rake and complete with access opening cover, back plate, 10A miniature circuit breaker, all internal 2.5mm sqr Cu PVC wiring and connection with insulated connectors.	No	14		
TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY					

4.3	LV CABLING AND KIOSK					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
4.3.1	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches					
4.3.1.1	10mm ²		m	590		
4.3.2	Cable Terminations in Kiosk, Streetlight poles or as required including all lugs, bolts, nuts, heat shrink etc.					
4.3.2.1	Termination for cable in item 4. 3.1.1		No	14		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY						

4.4 SUMMARY PAGE OF BILL OF QUANTITIES OF McCLEANAGHAM STREET		
SECTION	ACTIVITY	TOTAL
4.4.1	Excavations and Backfilling	
4.4.2	Street lights	
4.4.3	LV Cable and Kiosk	
4.4.4	SUBTOTAL	

CONTRACT:	5	ROBINSON A STREET				
5.1	TRENCHING AND EXCAVATION					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
5.1.1	The excavation, backfill and compact in all material including disposal of unsuitable/suplus material. 500 mm Deep:					
5.1.1.1	Trenches by hand or machine excavation in soft soil -500mm deep x 450mm wide		m	490		
5.1.1.2	Backfilling and compaction of trench with rough material - 250mm deep x 450mm wide		m	490		
5.1.1.3	Excavate hole for street lighting pole, place pole, backfill and compact		No	13		
5.1.1.4	Supply and install plastic warning sheet in trench 250mm below ground level		m	490		
5.1.1.5	Supply and install 110mm dia. Sleeve		m	10		
5.1.1.6	Breaking and reinstating tar		m	10		
5.1.1.5	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.2	STREET LIGHTS				
5.2.1	LIGHT FITTINGS				
5.2.1.1	Supply and install 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	13		
5.2.2	STREET LIGHT POLES				
5.2.2.1	Supply and install 9m M.H. galvanised steel pole with 3m Gooseneck outreach arm with 15 DEG rake and complete with access opening cover, back plate, 10A miniature circuit breaker, all internal 2.5mm sqr Cu PVC wiring and connection with insulated connectors.	No	13		
5.2.4	TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY				

5.3	LV CABLING AND KIOSK					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
5.3.1	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches					
5.3.1.1	10mm ²		m	560		
5.3.1.2	16mm ²		m	10		
5.3.2	Cable Terminations in Kiosk, Streetlight poles or as required including all lugs, bolts, nuts, heat shrink etc.					
5.3.2.1	Termination for cable in item 5.3.1.1 & 5.3.1.2		No	13		
5.3.3	KIOSK					
5.3.3.1	3CR12 kiosk, pre-wired, to specification, complete with photocell and LV circuit breakers as specified		No	1		
5.3.4	STEEL GALVINISED CAGE					
5.3.4.1	A lockable steel galvanized cage for securing the Kiosk with concrete base		No.	1		
5.3.5	TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY					

5.4 SUMMARY PAGE OF BILL OF QUANTITIES OF ROBINSON A STREET				
ITEM	ACTIVITY			TOTAL
5.4.1	Excavations and Backfilling			
5.4.2	Street lights			
5.4.3	LV Cable and Kiosk			
5.4.5	SUBTOTAL			

CONTRACT:	6	ROBINSON B STREET				
6.1	TRENCHING AND EXCAVATION					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
6.1.1	Wooden Poles					
6.1.1.1	Supply and install 9 metre pole 160 170 mm top diameter		No.	14		
6.1.1.2	Excavate 1.8 m hole for street lighting pole, place pole, backfill and compact		No	14		
6.1.1.3	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.2	STREET LIGHT AND CONTROL BOX				
6.2.1	LIGHT FITTINGS				
6.2.1.1	Supply and install 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	14		
6.2.2	STREET LIGHT CONTROL BOX				
6.2.2.1	Supply and install street light control box containing a photocell, circuit breaker with its contents	No	1		
6.2.3	STREET LIGHTS BRACKETS				
6.2.3.1	Supply and install 150mm 15 degrees rake galvanised double bracket out reach arms as specified	No.	14		
6.2.4	PG CLAMPS				
6.2.4.1	Supply and install Bimetallic IPC Connectors 4-16 mm ² Cu to twisted pair sizes	No	20		
6.2.5	TERMINATION OF THE STREET LIGHTS				
6.2.5.1	Supply and install PVC gland 4 mm ² illumination cable	No	16		
6.2.3	TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.3	LOW VOLTAGE STRUCTURE				
6.3.1	Supply and install withh all clamps eye nuts bolts ect.				
6.3.1.1	Supply and install Intermediate 0 - 30 degrees	No.	14		
6.3.1.2	Supply and install LV strain clamps	No.	4		
6.3.1.3	Supply nand install ABC Suspension clamps	No.	12		
6.3.2	ABC CONDUCTOR				
6.3.2.1	Supply and install ABC conductor 25mm X 4	m	540		
6.3.3	LOW VOLTAGE ANCHORS				
6.3.3.4	Supply and install Stay complete	No.	2		
6.3.4	PIGTAIL BOLT				
6.3.4.1	Supply and install Pigtail bolt and nut	No.	14		
6,3.5	EYE NUT				
6,3.5.1	Supply and install eye nut	No.	2		
6.3.6	CABLE				
6.3.6.1	Supply and install 2,5 mm Twin and Earth	m	100		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY					

6.4 SUMMARY PAGE OF BILL OF QUANTITIES FOR ROBINSON B STREET		
	ACTIVITY	TOTAL
6.4.1	TRENCHING AND EXCAVATION	
6.4.2	STREET LIGHT AND CONTROL BOX	
6.4.3	LOW VOLTAGE STRUCTURE	
6.4.4	SUBTOTAL	

CONTRACT:		ACADEMY STREET					
ITEM	DESCRIPTION			UNIT	QTY	RATE	AMOUNT
BILL 7	TRENCHING AND EXCAVATION						
7.1	The excavation, backfill and compact in all material including disposal of unsuitable/suplus material. 500 mm Deep:						
7.1.1	Trenches by hand or machine excavation in soft soil -250mm deep x 450mm wide			m	270		
7.1.2	Backfilling and compaction of trench with rough material - 250mm deep x 450mm wide			m	270		
7.1.3	Excavate hole for street lighting pole, place pole, backfill and compact			No	8		
7.1.4	Supply and install plastic warning sheet in trench 500mm below ground level			m	270		
7.1.5	Supply and install 110mm dia. Sleeve			m	30		
7.1.6	Breaking and reinstating paving			m	30		
7.1.7	TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7.2	STREET LIGHTS				
7.2.1	LIGHT FITTINGS				
7.2.1.1	Supply and install Beka 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	8		
7.2.2	STREET LIGHT POLES				
7.2.2.1	Supply and install BEKA 9m M.H. galvanised steel pole with 3m Gooseneck outreach arm with 15 DEG rakeand complete with access opening cover, back plate, 10A miniature circuit breaker, all internal 2.5mm sqr Cu PVC wiring and connection with insulated connectors.	No	8		
7.2.4	TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY				

ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
7.3	LV CABLING AND KIOSK					
7.3.1	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches					
7.3.1.1	10mm ²		m	360		
7.3.2	Cable Terminations in Kiosk, Streetlight poles or as required including all lugs, bolts, nuts, heat shrink etc.					
7.3.2.1	Termination for cable in item 7.3.1.1 & 7.3.1.2		No	8		
7.3.3	TOTAL CARRIED FORWARD TO SUMMARY					

7.4 SUMMARY PAGE OF BILL OF QUANTITIES OF HANLEY AND POINTSETTIA		
ITEM	ACTIVITY	TOTAL
7.4.1	Excavations and Backfilling	
7.4.2	Street lights	
7.4.3	LV Cable and Kiosk	
7.4.4	SUBTOTAL	

CONTRACT:		BILL NO. 8 STANFORD STREET					
ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
8.1		TRENCHING AND EXCAVATION					
8.1.1		The excavation, backfill and compact in all material including disposal of unsuitable/suplus material. 500 mm Deep:					
8.1.2		Trenches by hand or machine excavation in soft soil -500mm deep x 450mm wide	m	730			
8.1.3		Backfilling and compaction of trench with rough material - 250mm deep x 450mm wide	m	730			
8.1.4		Excavate hole for street lighting pole, place pole, backfill and compact	No	12			
8.1.5		Supply and install plastic warning sheet in trench 500mm below ground level	m	730			
8.1.6		Supply and install 110mm dia. Sleeve	m	60			
8.1.7		Breaking and reinstating tar	m	60			
TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY							

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
8.2	STREET LIGHTS				
8.2.1	LIGHT FITTINGS				
8.2.1.1	Supply and install 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	12		
8.2.2	STREET LIGHT POLES				
8.2.2.1	Supply and install 9m M.H. galvanised steel pole with 3m Gooseneck outreach arm with 15 DEG rake and complete with access opening cover, back plate, 10A miniature circuit breaker, all internal 2.5mm sqr Cu PVC wiring and connection with insulated connectors.	No	12		
TOTAL FOR SECTION CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
8.3	LV CABLING AND KIOSK					
8.3.1	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches					
8.3.1.1	10mm ²		m	840		
8.3.2	Cable Terminations in Kiosk, Streetlight poles or as required including all lugs, bolts, nuts, heat shrink etc.					
8.3.2.1	Termination for cable in item 8.1.1 & 8.1.2		No	12		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY						

8.4 SUMMARY PAGE OF BILL OF QUANTITIES OF CROSSBOW & BOUNDARY STREET		
	ACTIVITY	TOTAL
8.4.1	Excavations and Backfilling	
8.4.2	Street lights	
8.4.3	LV Cable and Kiosk	
8.4.4	SUBTOTAL	

CONTRACT:	9	BROWNLEE STREET				
9.1	TRENCHING AND EXCAVATION					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
9.1.1	The excavation, backfill and compact in all material including disposal of unsuitable/suplus material. 500 mm Deep:					
9.1.1.1	Trenches by hand or machine excavation in soft soil -500mm deep x 450mm wide		m	430		
9.1.1.2	Backfilling and compaction of trench with rough material - 250mm deep x 450mm wide		m	430		
9.1.1.3	Excavate hole for street lighting pole, place pole, backfill and compact		No	11		
9.1.1.4	Supply and install plastic warning sheet in trench 250mm below ground level		m	430		
9.1.1.5	Supply and install 110mm dia. Sleeve		m	60		
9.1.1.6	Breaking and reinstating tar		m	60		
9.1.1.5	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
9.2	STREET LIGHTS				
9.2.1	LIGHT FITTINGS				
9.2.1.1	Supply and install 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	11		
9.2.2	STREET LIGHT POLES				
9.2.2.1	Supply and install 9m M.H. galvanised steel pole with 3m Gooseneck outreach arm with 15 DEG rake and complete with access opening cover, back plate, 10A miniature circuit breaker, all internal 2.5mm sq Cu PVC wiring and connection with insulated connectors.	No	11		
9.2.4	TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY				

9.3	LV CABLING AND KIOSK					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
9.3.1	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches					
9.3.1.1	10mm²		m	490		
9.3.1.2	16mm²		m	10		
9.3.2	Cable Terminations in Kiosk, Streetlight poles or as required including all lugs, bolts, nuts, heat shrink etc.					
9.3.2.1	Termination for cable in item 9.3.1.1 & 9.3.1.2		No	11		
9.3.3	KIOSK					
9.3.3.1	3CR12 kiosk, pre-wired, to specification, complete with photocell and LV circuit breakers as specified		No	1		
9.3.4	STEEL GALVINISED CAGE					
9.3.4.1	A lockable steel galvanized cage for securing the Kiosk with concrete base		No.	1		
9.4	SUMMARY PAGE OF BILL OF QUANTITIES OF BROWNLEE STREET					

ITEM	ACTIVITY			TOTAL		
9.4.1	Excavations and Backfilling					
9.4.2	Street lights					
9.4.3	LV Cable and Kiosk					
9.4.5	SUBTOTAL					

CONTRACT:	10	GEACH AND HOSPITAL STREET				
10.1	TRENCHING AND EXCAVATION					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
10.1.1	Wooden Poles					
10.1.1.1	Supply and install 9 metre pole 160 170 mm top diameter		No.	15		
10.1.1.2	Excavate 1.8 m hole for street lighting pole, place pole, backfill and compact		No	15		
10.1.3	KIOSK					
10.1.3.1	3CR12 kiosk, pre-wired, to specification, complete with photocell and LV circuit breakers as specified		No	1		
10.1.4	STEEL GALVINISED CAGE					
10.1.4.1	A lockable steel galvanized cage for securing the Kiosk with concrete base		No.	1		
10.1.1.3	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
10.3	LOW VOLTAGE STRUCTURE				
10.3.1	Supply and install withh all clamps eye nuts bolts ect.				
10.3.1.1	Supply and install Intermediate 0 - 30 degrees	No.	15		
10.3.1.2	Supply and install LV strain clamps	No.	6		
10.3.1.3	Supply nand install ABC Suspension clamps	No.	14		
10.3.2	ABC CONDUCTOR				
10.3.2.1	Supply and install ABC conductor 25mm X 4	m	570		
10.3.3	LOW VOLTAGE ANCHORS				
10.3.3.4	Supply and install Stay complete	No.	7		
10.3.4	PIGTAIL BOLT				
10.3.4.1	Supply and install Pigtail bolt and nut	No.	16		
10.3.5	EYE NUT				
10.3.5.1	Supply and install eye nut	No.	7		
10.3.6	CABLE				
10.3.6.1	Supply and install 2,5 mm Twin and Earth	m	100		
10.3.7	Supply and install 4-core 600/1000V PVC/PVC/SWA/PVC ECC Cable in trenches				
10.3.7.1	16mm ²	m	10		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY					

10.4 SUMMARY PAGE OF BILL OF QUANTITIES FOR GEACH AND HOSPITAL STREET						
	ACTIVITY			TOTAL		
10.4.1	TRENCHING AND EXCAVATION					
10.4.2	STREET LIGHT AND CONTROL BOX					
10.4.3	LOW VOLTAGE STRUCTURE					
10.4.4	SUBTOTAL					

CONTRACT:	11	DALY & FULLER STREETS				
11.1	TRENCHING AND EXCAVATION					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
11.1.1	Wooden Poles					
11.1.1.1	Supply and install 9 metre pole 160 170 mm top diameter		No.	13		
11.1.1.2	Excavate 1.8 m hole for street lighting pole, place pole, backfill and compact		No	13		
11.1.5	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
11.2	STREET LIGHT AND CONTROL BOX				
11.2.1	LIGHT FITTINGS				
11.2.1.1	Supply and install 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	13		
11.2.2	STREET LIGHTS BRACKETS				
11.2.2.1	Supply and install 150mm 15 degrees rake galvanised double bracket out reach arms as specified	No.	13		
11.2.3	PG CLAMPS				
11.2.3.1	Supply and install Bimetallic IPC Connectors 4-16 mm2 Cu to twisted pair sizes	No	30		
11.2.4	TERMINATION OF THE STREET LIGHTS				
11.2.4.1	Supply and install PVC gland 4 mm2 illumination cable	No	14		
11.2.3	TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
11.3	LOW VOLTAGE STRUCTURE				
11.3.1	Supply and install withh all clamps eye nuts bolts ect.				
11.3.1.1	Supply and install Intermediate 0 - 30 degrees	No.	13		
11.3.1.2	Supply and install LV strain clamps	No.	3		
11.3.1.3	Supply nand install ABC Suspension clamps	No.	10		
11.3.2	ABC CONDUCTOR				
11.3.2.1	Supply and install ABC conductor 25mm X 4	m	250		
11.3.3	LOW VOLTAGE ANCHORS				
11.3.3.4	Supply and install Stay complete	No.	3		
11.3.4	PIGTAIL BOLT				
11.3.4.1	Supply and install Pigtail bolt and nut	No.	16		
11,3.5	EYE NUT				
11,3.5.1	Supply and install eye nut	No.	3		
11.3.6	CABLE				
11.3.6.1	Supply and install 2,5 mm Twin and Earth	m	100		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY					

11.4 SUMMARY PAGE OF BILL OF QUANTITIES FOR DALY AND FULLER STREET

	ACTIVITY	TOTAL
11.4.1	TRENCHING AND EXCAVATION	
11.4.2	STREETLIGHT AND CONTROL BOX	
11.4.3	LOW VOLTAGE STRUCTURE	
11.4.4	SUBTOTAL	

CONTRACT:	12	BELL STREETS				
12.1	TRENCHING AND EXCAVATION					
ITEM	DESCRIPTION		UNIT	QTY	RATE	AMOUNT
12.1.1	Wooden Poles					
12.1.1.1	Supply and install 9 metre pole 160 170 mm top diameter		No.	6		
12.1.1.2	Excavate 1.8 m hole for street lighting pole, place pole, backfill and compact		No	6		
12.1.5	TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
12.2	STREET LIGHT AND CONTROL BOX				
12.2.1	LIGHT FITTINGS				
12.2.1.1	Supply and install 48-LED/1081N LED Lume Maxi optic 5136 - 4DOOK Luminaire / Side Entry or equivalent approved	No	6		
12.2.2	STREET LIGHTS BRACKETS				
12.2.2.1	Supply and install 150mm 15 degrees rake galvanised double bracket out reach arms as specified	No.	6		
12.2.3	PG CLAMPS				
12.2.3.1	Supply and install Bimetallic IPC Connectors 4-16 mm ² Cu to twisted pair sizes	No	14		
12.2.4	TERMINATION OF THE STREET LIGHTS				
12.2.4.1	Supply and install PVC gland 4 mm ² illumination cable	No	6		
12.2.3	TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
12.3	LOW VOLTAGE STRUCTURE				
12.3.1	Supply and install withh all clamps eye nuts bolts ect.				
12.3.1.1	Supply and install Intermediate 0 - 30 degrees	No.	6		
12.3.1.2	Supply and install LV strain clamps	No.	2		
12.3.1.3	Supply nand install ABC Suspension clamps	No.	4		
12.3.2	ABC CONDUCTOR				
12.3.2.1	Supply and install ABC conductor 25mm X 4	m	272		
12.3.3	LOW VOLTAGE ANCHORS				
12.3.3.4	Supply and install Stay complete	No.	2		
12.3.4	PIGTAIL BOLT				
12.3.4.1	Supply and install Pigtail bolt and nut	No.	6		
12,3.5	EYE NUT				
12,3.5.1	Supply and install eye nut	No.	2		
12.3.6	CABLE				
12.3.6.1	Supply and install 2,5 mm Twin and Earth	m	50		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY					

12.4 SUMMARY PAGE OF BILL OF QUANTITIES FOR BELL STREET		
	ACTIVITY	TOTAL
12.4.1	TRENCHING AND EXCAVATION	
12.4.2	STREET LIGHT AND CONTROL BOX	
12.4.3	LOW VOLTAGE STRUCTURE	
12.4.4	SUBTOTAL	

BILL	ACTIVITY	TOTAL
1	PRELIMINARY AND GENERAL	
2	CARNEGE STREET	
3	BARSELY STREET	
4	McCLEANAGHAM STREET	
5	ROBINSON A STREET	
6	ROBINSON B STREET	
7	ACADEMY STREET	
8	STANFORD STREET	
9	BROWNLEE STREET	
10	GEACH AND HOSPITAL	
11	DALY AND FULLER STREET	
12	BELL STREET	
13	SUB TOTAL 1	
14	CONTINGENCIES 5%	
15	SUBTOTAL 2 (SUB TOTAL 1 + 5%)	
16	VAT 15%	
17	GRAND TOTAL (SUBTOTAL 2 + VAT 15%)	

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

Signed Date

Name Position

Tenderer

MNQUMA LOCAL MUNICIPALITY

ERECTION OF STREET LIGHTS IN EXT 2

PART 3 (OF 5): SCOPE OF WORK

CONTENTS

C3.1	Description of the Works
C3.2	Engineering
C3.3	Procurement
C3.4	Construction
C3.5	Management
C3.6	Health and Safety Requirements and Procedures

SCOPE OF WORK

The proposed erection/refurbishment comprises the following scope of work;

- Site establishment.
- Erection of name board.
- Excavation and trenching
- Supply, delivery and planting of street lights pole.
- Supply, delivery and laying of cabling.
- Building of overhead line
- Supply, delivery and installation of LED street lights pole..
- Test and commission
- Close out

C3.1 : DESCRIPTION OF THE WORKS
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STREET LIGHTING

TABLE OF CONTENTS

C1 AUTHORITY

C2 GENERAL PARTICULARS OF ELECTRICITY SUPPLY SYSTEM

C3 CONTRACTORS RESPONSIBILITY

C4 WORK BY OTHERS

C5 DELIVERY AND STORAGE

C6 INSPECTION AND TESTS

C7 EARTHING

C8 LV DISTRIBUTION AND STREET LIGHTING CABLES

C9 LV CONTROL KIOSKS

C10 LAYING CABLES

C11 EXCAVATION AND TRENCHING

C12 DUCTS

C13 COVERING, BACKFILLING AND REINSTATEMENT OF TRENCHES

C14 REMOVAL/RELOCATION OF EXISTING STREET LIGHT POLES

C15 STREET LIGHTING

C16 GALVANIZED STEEL POLES

C17 TESTS, RECORDS AND RECORD DRAWINGS

C1 SUPPLY AUTHORITY

The Electricity Supply Authority is ESKOM

C2 GENERAL PARTICULARS OF ELECTRICITY SUPPLY SYSTEM

The electricity system is a 22/11 kv: 400V/230V Three/Single phase, 50 Hz 4 wire system with neutrals solidly earthed at the transformers.

The phase rotation is standard anticlockwise and shall be maintained on all cables transformers, switchgear and distribution equipment.

C3 CONTRACTORS RESPONSIBILITY

C3.1 The works

The Contractor shall be responsible for the supply, factory testing, delivery to site, offloading, storage until required, installation, erection, site testing, commissioning and handing over in working order the electrical reticulation system detailed by this Specification and the accompanying drawings. The Contractor shall provide all materials, equipment and services necessary for the complete, safe and efficient progress and completion of the Contract.

C3.2 Isolation of electrical services

The Contractor shall arrange timeously with the Supply Authority for the isolation and earthing of the existing electrical services as and when required.

The Contractor shall ensure that the unnecessary interrupting of electrical services is avoided and shall schedule the work to minimise power outages.

The Contractor shall draw up and submit to the Main Contractor a programme of works. Where applicable the programme of works shall be drawn up in close collaboration with the Main Contractor. Liaison with the Main Contractor shall be the responsibility of the Electrical Contractor.

Should the programme be altered for any reason prior to completion of the Contract then the Contractor shall submit the revised programme to the Main Contractor.

C4 WORK BY OTHERS

None.

C5 DELIVERY AND STORAGE

The Contractor shall make his own arrangements for the provision, transport, offloading and storage of materials and shall provide his own handling plant. Under no circumstances shall he expect or request the Supply Authority or the Employer to provide, take delivery of or to store materials on his behalf.

C6 INSPECTION AND TESTS

The Engineer reserves the right to inspect any equipment being manufactured in terms of the Contract, and to require that up to 5% of such equipment be subjected to such tests as may be defined in writing by the Engineer prior to delivery to site of the said equipment. All such tests shall be carried out in the presence of the Engineer.

Any waiving of this right does not relieve the Contractor of supplying and installing equipment in full accordance with the Contract and to the approval of the Engineer. In the event of inspection and testing being required the detail of this requirement will be conveyed in writing.

C7 EARTHING

C7.1 General

All accessible conductors, portions of electrical plant or apparatus which do not form part of an electrical circuit and which become alive accidentally, shall be bonded to earth.

The LV distribution system shall be earthed in accordance with the TN-C-S earthing system.

C8 LV DISTRIBUTION AND STREET LIGHTING CABLES

C8.1 Feeder Cables

Cables PVC/SWA/PVC/PVC Cu 4-Core to SABS 1507/1990.

LV cables shall be terminated by means of tinned crimped lugs. The shank of the cable lugs shall be sealed and insulated by means of colour coded SPO tubing.

Joints shall only be made at full drum length intervals.

Orange PVC warning sheet shall be laid along the entire LV cable routes at 300 mm above the cable or duct as may be the case.

The Contractor shall provide test certificates for the insulation of the installed cables ie "Megger" test for all LV cables.

C8.2 Street Light Cabling

The Contractor shall install LV cabling in accordance with the requirements depicted on the drawings and as specified elsewhere herein.

Street lighting cables shall be 4-core PVC/PVC/SWA/PVC Cu to SABS 1507/1990 sized as shown on the drawings.

LV cables shall be laid in trenches and ducts.

Where bolted connections are used, lighting cables shall be terminated by means of tinned crimped lugs. The shank of the cable lugs shall be sealed and insulated by means of colour coded SPO tubing.

Joints shall only be made at full drum length intervals.

Orange PVC warning sheet shall be laid along the entire LV cables routes. These sheets shall be installed at minimum 300 mm above the cable.

The Contractor shall supply test certificates for the insulation of the installed cables i.e. "Megger" test for all LV cables.

C8.3 Measurement

Measurement of cable length shall be made from centre of cable joints and to the cable ends and will exclude any wastage due to jointing and terminating.

The rate for the installation of cables shall include the installation of cables in trenches, ducts, cable trenches and inside street lighting poles.

The unit of measurement shall be meter of cable supply and installed in prepared trenches or cable ducts or as required.

The unit for cable terminations shall be the number of cable terminations supplied and installed per cable of specific size.

The unit of measurement for cable joints shall be the number of cable joints supplied and installed per cable type.

The unit of measurement for cable end-caps and seals shall be the number of end-caps supplied and installed per cable size provided.

The measurement shall include all testing and commissioning as described elsewhere in the specification.

C9 LV CONTROL KIOSKS

C9.1 Compartments

The low voltage kiosks shall be suitable for the housing of electrical equipment. The kiosks shall have three sections (compartments) as follows, except pole mounted and distribution kiosks.

- One section (back) containing all the incoming and outgoing switchgear and cables.
- The second compartment (front) containing the kWh, pre-paid and maximum demand meters.
- The third compartment (top) containing the relevant circuit breakers with steel flash barriers.

C9.2 Construction

- The kiosk shall be completely manufactured of **1,5mm 3CR12 Stainless Steel** plate, dip pickled and passivated after welding, and Powder coated (60-80 microns paint thickness) (interior and exterior) in color specified by electrical Engineer.
- The units shall be properly ventilated (100mm X 50mm louver type slots, on fixed sides of m/box) against overheating and adequate measures shall be taken to prevent condensation.

- The units shall be completely weather proof, vermin and insect proofed (stainless steel grid). It shall be of a neat and esthetical design. The kiosks will be designed in such a way that no dust will be collected on switchgear.
- All kiosks will be equipped with a covered, tamper free replaceable **Risi** locking system (290mm for S/L & 1PH3W M/Boxes and 420mm for 1PH6W to 1PH12W M/Boxes as well as all 3 Phase and Maximum Demand M/Boxes) that only the Municipality have access to. All kiosks will also be equipped with a covered tamper free, lock system for padlock that cannot be cut by bolt cutter.
- All windows of the kiosks will be polycarb type, and not Perspex or plastic, and be pop-riveted onto the kiosk on all four corners of the windows. No windows to be installed on pole mounted type boxes.
- Circuit breaker trays/racks on top of meter boxes must be installed at 45-degree angle in order for circuit breaker to operate hydraulically and mechanically. All circuit breakers will be well covered against any flash, blanks to be installed where provision is provided.
- All kiosks will be manufactured to accommodate any type/size of meter (kWh or pre- paid). Kiosks will be threaded inserts for meter mounting complete with screws.
- A busbar flash barrier (polycarb) must be installed in all kiosks with back compartments (sliding plates), of which the barrier must have its own sliding slot.

NOTE: All steelwork shall be machine punched and drilled to suit no modifications or alterations due to non-alignment of equipment including panels. Non-threaded blind-rivets (Head size 16mm, shaft length 20mm and shaft thickness 10mm) to be used as hinges on horizontal laying type doors.

C9.3 Finish and Painting

- All metal work that is to be painted shall be finished neatly and shall be of good workmanship. The corners must be squared and rounded, neatly bent and welding must be free of welding grain and sharp points – it must be grinded where required.
- The preparation for painting must be done strictly in accordance with the directions of SANS 064. All surfaces must be cleaned thoroughly and all rust, grease, scale or other foreign objects must be removed with a wire brush, sandblasting/or any other approved process.
- All internal indoor surfaces shall be treated within 8 hours after cleaning with prime coat of high grade zinc chromate and two layers of white baked enamel unless otherwise specified in the detail specification. No holes to be made in material after process have taken place.
- Color of meter boxes must be “light Pastel Grey” (SANS 1091 – 1975 CODE G69), only streetlight meter kiosk’s sliding doors will be electric orange.
- A 10mm Red indication line must be painted in the centre of the ground plate indicating the planting depth of the kiosk.

C9.4 Labelling Details

- A unique label shall be assigned to each kiosk and shall have white lettering on a red background.
- The white colour shall be Cloud White G80 and the red colour shall be Signal Red A11 as in National Colour Standard for paint SABS 1091/1975.
- All characters shall be in white and shall be +/- 50mm high. Lettering shall be uppercase.
- Labels shall be fixed on the road access side of the equipment.
- The rectangular celeron label, white lettering on red background, shall be secured using stainless steel 'blind' pop rivets and shall be fixed in the middle of the stubby towards the top section against the vertical side, as well as on the inside busbar shroud.
- Internal labelling consists of three components:
 - Erf or unit label must be engraved celeron or similar material, 5 mm block lettering on white background. Erf number to be pop riveted above MCB on busbar shroud.
 - Erf number corresponding to abovementioned consumer circuit breaker by way of Bowthorpe Hellerman strap, fastened on service cable just above base of distribution stubby.
 - Bowthorpe Hellerman straps, indicating size and destination or/and source of associated feeder cables. Connected to one of four cores, so that marking is visible to service operator after opening stubby for future maintenance, eg 50-4C-Cu-K1.
 - Engraved Celeron labels or similar material (10 mm black lettering on white background) with source and destination information for respectively incoming and outgoing feeder cables fixed on cable gland plate at back of kiosk with suitable adhesive.

C9.5 General

- Danger signs must be shown on front and rear sides of the kiosk. All danger signs will be steel type and pop-riveted onto the kiosk with four pop-rivets (on all corners of plate). All danger signs must be approved by the Municipality before installation on meter boxes.
- No company name will be displayed/advertised on the outside of the kiosk. Only the Municipality's details must be printed on the danger plates. All company details must be placed on the inside of the top cover/door of the kiosk or the inside of the front doors in cases of pole mounted or distribution kiosks, in order for municipality to identify the manufacturer.
- One kiosks of each type, to be installed or supplied will be inspected and approved by the Electrical Engineer, before manufacturing can continue. The inspection of these kiosks

must be arranged to be either at the factory or kiosks must be brought to the Municipality. Drawings for these meter boxes must also be provided for approval.

- On pre-wiring, only one connecting point will be allowed per stud on the bus bars.
- All internal wiring must be 10mm² PVC Insolated Cu Conductor, according to phase coloring.

C9.6 Measurements

The unit of measurement shall be the number of specific equipment items per description noted.

Where the unit of measurement is indicated as sum, the measurement shall be deemed to include all provisions for the completion of the specific item.

The measurement shall include all testing and commissioning as described elsewhere in the specification.

C10 LAYING CABLES

C10.1 In Prepared Trenches

Before the cables are laid, the bottom of the trench shall be covered with a 75 mm layer of earth which shall have been passed through a sieve with a maximum mesh of 12 mm. The Electrical Contractor shall lay the cables on the prepared bed carefully to avoid cuts and damage. Cable rollers shall be used.

The trench shall be back-filled with clean builder's sand to provide 150 mm of cover as soon as possible after the cable has been laid. To prevent theft and possible damage, long lengths of cable shall not be left exposed in an open trench overnight. The trench shall be back-filled and compacted in layers to achieve the required compaction.

Water shall not be allowed to accumulate at any part of any works. The Electrical Contractor will therefore ensure that no cable laying is carried out until the trenches are free from water.

The minimum cover over the cables shall be 675 mm for LV and 1 000 mm for MV cables. All side channels, sumps or temporary excavations for dewatering purposes shall be filled in after use.

C10.2 In Ducts

Before cable installation the ducts shall be inspected to determine their suitability and to ensure it is clean and shall not cause damage to the cables.

The cables shall be neatly placed and cross-overs avoided.

C11 EXCAVATION AND TRENCHING

C11.1 Route Survey Pre-Installation

The Contractor shall prior to work commencement, carry out a pre-installation route survey which shall include digging test holes and guided by the drawings and wayleave information determine a suitable route. The Contractor will be required to liaise with the supply Authority and other relevant role players to obtain positions of existing underground services.

The final route shall be agreed with the Engineer or his nominated representative.

Post Installation

After completion of all cable laying and jointing and before commissioning of any cable the Contractor shall carry out a final "as-built" survey of the cable routes.

Accurate indication of the position of each cable joint by indicating two distances to each joint from permanent structures on site.

C11.2 Excavation

The Electrical Contractor's rates for excavation shall include for the following:

- Any shoring which may be required to prevent the collapse of trench walls before cable and conductor laying and danger tape laying are completed.
- Any pumping which may be required to remove water from the trenches before cable and conductor laying and marker tape laying are complete.
- Extra over cost for excavations in intermediate soil, as described in the contract document. The Engineer in conjunction with the successful Contractor shall agree the soil classification.
- When trenching the Contractor shall take all necessary precautions to prevent damage to underground services.
- On encountering any uncharted service, the Contractor shall promptly advise the Engineer who will give the necessary instructions. Additional excavations shall be paid for at scheduled rates.
- Should any underground service, water mains, road pavement, drainage system, building or any other structure be damaged by the Contractor's staff, it shall be reported immediately to the Engineer. The Contractor shall be responsible for the cost of repairs. The removal of obstructions along the cable routes shall be subject to the approval of the Engineer and shall be paid for at the agreed rates.
- Trenches across roads, access ways or foot-paths shall not be left open. If trenching, cable laying and backfilling cannot be done during the same shift, the portion of trench across the full width of the road etc, must be temporarily backfilled and consolidated sufficiently to carry the traffic concerned without subsidence. Alternatively, adequately strong cover plates shall be laid across the trench.

- Power driven mechanical excavators may be used for trenching operations. The Client shall not be responsible for any damage to other services in close proximity when using mechanical excavators.
- Trenches shall be as straight as possible and the bottom of each cable trench shall be firm and of smooth contour without sharp dips or rises which may cause tensile forces in the cable during backfilling.
- Trenches shall have no sharp objects which may cause damage to the cable during laying or backfilling.
- The unfinished depth of trenches unless otherwise stated shall be as follows:
 - HV cables associated pilot cables (where applicable) = 1 000mm
 - LV cables = 750 mm
- The width of the trench unless otherwise stated shall be 450 mm for one or two HV cables and associated cables.
- The width of the trench at any bend or places where cable slack is required, shall be such that the bending radius of the cable shall not be less than that specified for the particular cable as per specification SANS 150, SANS 97 and SANS 1339.
- The material excavated from each trench shall be placed in such a manner as to prevent nuisance or damage to adjacent ditches, drains, gateways and other properties and shall not interfere with traffic.
- Where, owing to certain considerations, this is not possible the excavated materials shall be removed from site and be returned for refilling the trench on completion of laying.
- Removal of accumulated water or other liquid from trenches shall be done by the Contractor at his expense. The Contractor shall provide all pumps and appliances required to carry out this operation. Water of any other liquid removed shall be disposed of without creating any nuisance or hazard.
- The Engineer reserves the right to alter any cable route or portion thereof prior to cable laying. Payment in respect of any additional work shall be at scheduled rates.

C11.3 Measurement

Determination of trench quantities for measurement purposes shall be based on measured length and specific width and depth. No allowance for additional widenings at cable joints or pole excavations.

Soil classification shall be as described in the Main Contract Document.

The unit for extra over measurement shall be the volume in cubic metre of the specific soil type noted.

The measurement for the excavation of holes shall be the number of holes excavated to the required depth to achieve the required pole planting depth. The rate shall include the reinstatement of the hole and compaction of the back filled material to the required dry density.

The measurement for the excavation and repair of existing asphalt surface to accommodate trenches or ducts shall be metre of asphalt excavated and repaired. The rate shall include trenching to the required depth and reinstatement.

C12 DUCTS

C12.1 Equipment

- 110 mm inner diameter to SABS 1601: Class 400 CORFLO
- 160 mm inner diameter to SABS 1601 : Class 400 CORFLO

C12.2 Installation

Only one MV and two LV cables are allowed per single duct and a maximum of four street lighting cables are allowed in a single duct. A spare duct should be laid at each crossing position of MV- & LV feeder cables, excluding street lighting cables.

Ends must be sealed with polyurethane plugs or double layer of warning tape bound with wire at each end to prevent backfill entering the pipe prior to and after installation. Also a galvanised draw-wire of 2.5mm in diameter should be left in the spare ducts. Provision of spare ducts at crossing positions of only service and/or street-lighting cables cross is unnecessary.

The spacing of parallel pipes shall be at least that of the spacing of the cables in the ground (300mm).

Cable sleeves shall be installed at a depth of 750 mm for 110 mm Ø and 1 000 mm for 160 mm Ø sleeves with 100 mm sand bedding around ducts. All sleeves shall extend 1 m beyond the road kerb.

The pipes must be plugged Pre-cleaning of pipes, use of bellmouths, rubber grommets, lubricants and well positioned rollers may be required to prevent the cable from being damaged during installation. Separate lengths of pipe shall be properly jointed.

C11.3 Measurement

Determination of duct quantities for measurement purposes shall be based on measured length and specific size provided.

The unit of measurement shall be metre of duct installed that is backfilled and compacted to the required compaction level as described on the detail drawings.

The measurement for the installation of sleeves by means of thrust boring shall be the length of sleeves installed of the specified size. The rate shall be deemed to include all costs associated with this activity, inclusive of, but not limited to site establishment, take-off pits, receiving pits, sleeves and reinstatement.

C13 COVERING, BACKFILLING AND REINSTATEMENT OF TRENCHES

C13.1 Filling

Filling of trenches shall not commence before the Engineer or his authorised representative has inspected and approved the cables and cable joints in situ in the section of trench concerned. Topsoil shall be saved on excavation and replaced as topsoil after backfilling.

C13.2 Backfilling

One 75 mm thick layer of soil sifted through a 12 mm mesh shall be laid directly under a 150 mm thick layer of sifted soil (12mm mesh) directly over the cables respectively and consolidated by hand ramming only.

No rocks or boulders shall be used for backfilling of trenches.

When necessary imported fill shall be arranged by the Contractor and paid for at scheduled rates.

The minimum dry densities of backfilling after compaction shall be not less than 1 600 kg/cubic metre.

All excavations made (whether for the purpose of cable laying, joint bays or trial holes) shall be backfilled in 150 mm layers, the earth in each layer being well rammed and consolidated and sufficient allowance being made for settlement. The backfilling shall be completed to the satisfaction of the Engineer. If necessary water shall be used to obtain the specified compacted density. Any cable damaged during backfilling shall be replaced by the Contractor at his own expense.

Backfilling at pipe entries shall be such as not to stress or damage the cable during compaction from the top.

A continuous plastic cable warning tape shall be laid at 300 mm above each cable and run for the full length of the cable before completing the backfilling.

The backfilled trench shall be maintained in a thoroughly safe condition by the Contractor for the duration of the contract.

All backfilling shall be mechanically rammed.

C14 REMOVAL/RELOCATION OF EXISTING STREET LIGHT POLES

Where the tender show luminaires to be "removed/relocated", tenders shall allow at least the following:

- Excavation around the existing pole to loosen it.
- Mechanical means to secure the pole.
- Disconnection of the electrical supply.
- Excavation of new hole for the pole.
- Mechanical means to remove- and re-plant existing poles (13.5 m long pole) and out- reach arms.

- Reconnection/termination of the supply cable.
- Compaction of soil around the pole, to fully secure it after planting.
- Re-instatement of the existing pole hole, to match or better its surrounding area.
- Transport and off-load existing pole at local municipal stores.

C15 STREET LIGHTING

C15.1 Scope of Specification

This specification covers the detail requirements for the manufacture, supply and delivery of lighting luminaires for this project.

C15.2 Street Lighting infrastructure will be installed as per Mngquma Local Municipalities specification and will be maintained by them.

C15.3 Street lighting Supply and Control

The street lighting circuits will be supplied from and controlled at street lighting control kiosks. These kiosks will be positioned at existing LV supply positions. The electrical supplies to the kiosks will be supplied from “Red Spot” fuses or large frame Circuit Breakers (to be advised), installed in the mini-sub connected to the mini-sub’s LV busbar.

C15.4 Luminaires and Internal Wiring

The following standards contain provisions which, through reference in this text, constitute requirements of this specification.

1.	IEC 60598-1	Luminaires - Part 1: General requirements and tests
2	IEC 60598-2-3	Luminaires - Part 2: Particular requirements - Section 3: Luminaires for road and street lighting
3	ISO 4762	Hexagon socket head cap screws
4	SANS 529	Heat-resisting wiring cables
5	SANS 121	Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods.
6	SANS 1088	Luminaire entries and spigots
7	SANS 60529	Degrees of protection provided by enclosures (IP Code)
8	SANS 1507	Electric cables with extruded solid dielectric insulation for fixed installations (300/500V to 1 900/3 300V) Part 3: PVC Distribution cables
9	SANS 1574	Electric flexible cores, cords and cables with solid extruded dielectric insulation Part 3: PVC-insulated cores and cables
10	SANS ARP 035:2014	Guidelines for the installation and maintenance of street lighting
11	SANS 61000-3-2	Electromagnetic compatibility (EMC) Part 3-2: Limits — Limits for harmonic current emissions (equipment input current 16 A per phase)
12	OHSACT (Act 85 of 1993)	Occupational Health and Safety Act and Regulations

- The luminaires shall be Class 1 of IEC 60598-1 and be of the totally enclosed type. Luminaires shall be delivered completely assembled with housing, driver, LED module and protector lens.
- The luminaire output shall be provided as nominal flux at Tq of 35 °C.
- The colour temperature of the luminaires shall be neutral white, 4000K and a colour rendering index of 70 (minimum).
- The luminaires shall deliver 80% of the initial lumens, when installed for a minimum of 60 000 hours. The bidder shall provide a lumen depreciation graph by means of the IES LM 80-08 data of the LEDs. The LED light source test data shall provide the expected data for at least 25% of rated LED light source lifetime, i.e. 15 000 hours.

The following information and conditions shall be met:

- The LED light source(s) have been tested according to LM-80-08.
- The LED drive current specified by the luminaire manufacturer is less than or equal to the drive current specified in the LM-80 test report.
- The LED light source(s) manufacturer shall indicate a temperature measurement point (Ts) on the light source(s).
- The Ts is accessible to allow temporary attachment of a thermocouple for measurement of in-situ temperature. Access via a temporary hole in the housing, tightly resealed during testing with a flexible sealant is allowable.
- For the hottest LED light source in the luminaire, the temperature measured at the Ts is less than or equal to the temperature specified in the LM-80 test report for the corresponding drive current.
- The LED module or array shall be designed in such a manner that the failure of one LED shall not cause additional LED's to switch-off. Documentary evidence of this shall be submitted.
- Temperature sensors shall be fitted as protection devices to the luminaire, placed directly next to the LEDs. These shall not switch off the luminaire completely. Full details of how the luminaire manages its temperature, through the use of sensors and the effect on lumen maintenance, shall be supplied.
- The entire assembly and testing of the complete LED luminaire shall be undertaken within an ISO 9001 certified factory, within South Africa.

C15.5 IP Rating

The luminaires shall have minimum rating of IP 66 in accordance with SANS 60529 for both the driver and LED module compartments, when normally mounted as per SANS 475.

C15.6 Construction of Luminaires

- Luminaires shall be suitable for operation at an ambient temperature, T_a , of 35° C. Fixing devices, junctions, lips and the like shall be designed to shed water. Pockets and ledges in which condensation may accumulate shall be avoided.
- The luminaires shall contain a heat sink with no fans, pumps or liquids, and the design thereof on the external surfaces shall prevent the accumulation of dirt and nesting of insects or ants, thus ensuring continuous effective cooling. Heat from the LED source should take the shortest path to the exterior by direct conduction or any other reliable form of cooling that will not compromise the useful life of the LEDs.
- The luminaires shall have aluminium housings of grade EN1706 AC-44300 (or higher) aluminium alloy. This shall be substantiated by an independent metallurgical report confirming the grade of aluminium for the luminaires offered.
- Luminaires shall be supplied in raw aluminium and shall not be powder coated.
- Ferrous components shall be hot-dip galvanised and shall withstand the test specified in the current edition of SANS 121 for heavy duty application.
- External small components (such as toggle clips, bolts, screws, nuts, washers) shall be stainless steel (grade 304 or better).
- Due attention shall be paid to the accessibility of parts and to other requirements necessary for efficient maintenance and cleaning, where required. If screws are used to secure covers, they shall be held captive when opened.
- The upgrading and/or service of the LED unit and the driver/power supply shall be possible without removing the whole luminaire but by means of replacing only the optical/gear compartment by means of a hinging mechanism.
- Various items/components such as the aluminium housings, printed circuit boards (PCB's), glass protectors, silicon gaskets and stainless steel latches/clips shall be manufactured (not simply assembled) in South Africa.

C15.7 Mounting

- Spigot entries shall be designed to fit easily over the bracket pipe and shall be truly parallel to the fitting axis and shall comply with Table 1 of SANS 1088:1990
- Attachment of the luminaire base casting to its bracket arm should be by means of at least two stainless steel M8 grub screws into stainless steel sockets or any other methods to prevent cathodic corrosion between stainless steel and aluminium. The attachment of the luminaire should be designed to withstand wind speeds of up to 150 km/hour on the projected surface of the luminaire, without due deflection.

C15.8 Optics

- The luminaire shall be able to be equipped with a variety of lenses, providing the desired light distribution, ensuring a great diversity of light distributions for different applications.
- Luminaires should be photometered according to the C-Gamma system as detailed in CIE Publication No. 27.

- For LED luminaires with non-replaceable LED modules, the intensity values shall be given in candela. The results should be published in an intensity distribution table, indicating the intensity in cd/klm at each horizontal and vertical angle. This intensity distribution table should be converted by an accredited test facility and/or luminaire supplier into a suitable electronic format for use with any of the commercially available lighting computer programs.

C15.9 Protector

- The protector shall be high-impact, toughened, clear flat glass.
- The protector shall form a seal completely preventing the entry of moisture, dust and insects into the lamp housing.
- A one-piece gasket, made of silicon sponge material, shall be fitted into a groove in the housing and shall be seated in a manner ensuring the integrity of the IP66 rating and shall not work loose during maintenance of the luminaire.

C15.10 Power Supply or Driver Requirements

- LED module(s) drivers shall be housed fully within the sealed body of the luminaire.
- The output frequency of the drivers shall be 100 Hz or greater, to avoid visible flicker. The harmonic distortion levels of the LED module driver(s) shall comply with the limits as stipulated in SANS 61000-3-2.
- The LED module driver(s) shall operate at a power factor of 0, 95 or greater, and the harmonic distortion levels shall be limited so as to not cause interference on the electrical network.
- The power supply or driver compartment shall be sealed in the same manner as described in “construction of luminaires”.
- The power supply or driver compartment shall be so designed that there is sufficient space to permit replacement of components or repairs and reassembly without difficulty and without the removal of the luminaire from its mounting.
- The power supply or driver shall be able to withstand surges of up to 10kV/10kA by means of an external inline fused surge protection device mounted inside the gear compartment. This surge protection shall be easily replaceable.

The power supply or driver should incorporate a thermal switch to prevent exceeding the case temperature for maximum life time of equipment.

The lifetime of the power supply or driver shall be 100 000hrs with 90% survival over the lifetime.

C15.11 Earthing

The luminaire shall be earthed in accordance with Clause 13 of the Electrical Machinery Regulations of the OHSACT (Act 85 of 1993).

Metal parts of luminaires which may become alive in the event of insulation fault and which are not accessible when the luminaire is mounted, but liable to come into contact with the supporting surface, shall be permanently and reliably connected to an earthing terminal and shall withstand the test specified in IEC 60598-2-3.

Earthing terminals shall comply with sub-clause 7.2 of IEC 60598-1. All parts of an earth terminal shall be made of brass or other corrosion resistant metal and the contact surfaces shall be bare metal and not painted or varnished surfaces.

- Earth connections shall be effected by means of suitable lugs in a manner avoiding all possibility of electrolytic corrosion.

C15.12 Wiring

- The internal wiring of the luminaires shall be flexible and suitably insulated to withstand the voltage and the temperature encountered in service.
- Wiring to the LED module compartment shall be suitably grommited, ensuring a perfect seal between compartments.
- The supply terminals shall accept 4mm² wires and be easily accessible. No part of the cover shall damage the supply wires when closed.

G17.13 Guarantee

- All luminaires offered shall have a minimum guarantee period of five years.
- The scope of this guarantee includes the LED module drivers, luminaire housing, LED module(s), brackets and protector.
- If luminaires are found to have failed within this period as a result of poor manufacturing processes and/or poor materials it shall be replaced free of charge by the manufacturer.

C15.14 Measurement

The unit of measurement shall be the number of light fittings to be supplied and installed. The rate shall be all inclusive to complete this activity.

The unit of measurement shall be the number of light fittings to be supplied and delivered into the municipalities stock for future maintenance.

C16 GALVANIZED STEEL POLES

All steel poles shall be designed to withstand static and dynamic loads on the poles, fittings and cross arms with a minimum factor of safety of 2.5 and a wind speed of 120 km/h with gusts. (wind pressure ± 1.2 kPa).

All materials used shall be new material and shall be free from cracks, laminations and other defects.

The poles will be used for carrying street lighting luminaires each having a mass of 15kg and a maximum projected area 0.2m^2 on the respective double or single outreach arms.

The steel used in the manufacture of the poles shall have an ultimate tensile strength of not less than 370 MPa and an elongation of not less than 15% on a 50mm test piece.

The table below indicates minimum criteria to be considered in the design of the poles when assembled, with single or double outreach arms and luminaires mounted respectively:

Description	Particulars
	Length: 10.4m
1. Straightness	10mm/6m
2. Maximum permissible deflection under design loads	
2.1 Horizontal mm	400
2.2 Vertical mm	150

The poles shall have a safety factor of 2.5 times the ultimate tensile strength of the steel from which they are made.

The minimum thickness of steel used shall be as stated on the design calculation drawing to be submitted before construction commences. Any deviation from the minimum requirement as indicated on the accompanying detailed drawings will be for the account of the Contractor.

Cross-section dimensions shall comply strictly with the drawings. Poles of reduced cross-section at the access opening will not be considered.

The poles shall be hot dipped galvanized and not be painted.

To allow interchangeability between polystems and outreach arms, the outreach arms shall be manufactured exactly to the dimensions specified on the respective drawings. Any that do not comply shall not be accepted.

Any entry hole shall be provided so that 3 off 16 mm^2 x 4 core conductor PVC insulated SWA cables shall fit through.

A 10A, 2.5 kA special street lighting miniature circuit breaker shall be mounted on the hardwood backboard behind the access opening.

Wiring from the circuit breaker to the luminaire shall be affected using 2 x 2.5 mm^2 PVC insulated copped conductors and from the earth stud using 1 off 2.5 mm^2 PVC insulated copper earth conductor.

All luminaires, steelwork and poles shall be properly earthed.

The poles shall be installed by direct burial into the ground. The tenders shall allow for all types of soil conditions to be encountered. All poles shall be provided complete outreach arm to facilitate the installing of a "back-entry" luminaire.

C16.1 Reference Specifications

The street lighting poles shall be in accordance with the requirements of the following latest version standard specifications:

SANS 657 -Tubular steel

SANS 10064-Preparation of steel surfaces for coating

SANS 5121-Hot-dip galvanizing

SANS 1088-Luminaire entries and spigots

BS 5649-Street lighting poles

(BS 5135) SANS 1044-Welding

SANS 10160-Loading

SANS 10225-The design and construction of lighting masts

C16.2 Standard Components

The streetlight installation shall consist of a combination of the poles and outreach arms as shown in the illustrations that forms part of this document.

C16.3 Access Openings, Covers, etc

Each pole shall have an access opening as detailed on the respective drawing.

The pole shall be installed as per the detail drawings.

A shaped galvanized steel cover secured to the pole by means of two electroplated or suitably protected 6 mm diameter Allen type countersunk screws shall be provided to close the access opening. A 3mm thick synthetic rubber gasket shall be fixed to the cover. Details are shown on the drawings.

A hardwood backboard shall be fixed inside each pole opposite the opening. One of the bolts used to fix the backboard to the pole shall be extended to act as an earthing stud and to be provided with a washer and two nuts as shown on the drawings.

C16.4 Baseplates

Where justified, no baseplates are required. The use of baseplates or not are to be cleared with the Engineer during tender stage.

C16.5 Galvanizing

All material covered in this section shall be hot-dip galvanized in accordance with the latest edition of SANS 121:2001. Before galvanizing, all fabrication is to be complete, which will include completion of cutting, drilling, bending, punching, forming and welding and the cleaning of welding slag and burs.

In the event that the proposed components cannot comply with all provisions of specification SANS 121, detail of departures are to be provided and approved by the Manager: Public Lighting.

The quality of the galvanizing shall be tested in accordance with SANS 121.

The poles shall be checked for the formation of white rust before installation and shall be rejected should white rust have occurred in the period before delivery to site.

C16.6 Inspection and tests

During manufacture and prior to dispatch, all poles will be inspected at the manufacturer's works. Up to 5% of such poles are subject to tests, which shall include the following, where applicable:

(a) Bending test

Poles shall be subjected to a bending test to be conducted in accordance with Clause 5 of BS 5649: Part 8, and shall be agreed upon by the supplier and the Engineer.

For convenience in testing, the pole may be fixed horizontally with the test load applied vertically.

(b) Straightness

The poles must be straight and true to within 10 mm in 6 m lengths.

(c) Rejection

In the event of any pole failing any of the above-mentioned tests, a further 5% of the poles shall be subjected to tests. Should any further failure occur, the whole lot from which the poles have been selected may be rejected.

C16.7 General

- The masts shall be suitable for use at a mean altitude of 0 – 1800m above sea level in an environment subject to sea air and heavy industrial pollution at ambient temperatures of - 15°C to 65°C.
- The masts shall be designed, approved and certified by an individual who is professionally registered with the South African Engineering Council as a structural Engineer in accordance with SABS 0225 and manufactured for new materials.
- The design of each mast shall be accompanied by comprehensive strength calculations certified by a qualified professional structural Engineer.
- Suitable for use at a mean altitude of 0 – 1800m above sea level in an environment subject to sea air and heavy industrial pollution at ambient temperatures of - 15°C to 65°C.

C16.8 Measurement

The unit of measurement for this item shall be the number of street lighting poles to be supplied and installed in the positions as shown on the tender drawings. The rate shall include all components (wiring, circuit breaker etc) as described in this section.

C17 TESTS, RECORDS AND RECORD DRAWINGS

C17.1 Definitions

Commissioning procedures:

The documented method whereby the Contractor shall ensure that the installation is constructed in accordance with the requirements of the applicable manufacturers' specifications, the Engineer 's specification and design, regulations and codes of practice.

Performance tests:

The physical testing in the manufacturing works or on site of the equipment or systems as needed to demonstrate the ability to reach the performance levels specified or required.

Acceptance tests:

The physical testing and inspection on site of the system or sub-system to show that it is supplied, installed and operates generally in accordance with the specifications, design and regulations.

C17.2 Commissioning

The Contractor shall supply, as part of the contract documentation and for approval before implementation, the commissioning procedures to be used on the project.

The commissioning procedure will cover in detail all the major items of equipment and sub- systems of the works.

The procedures must allow for the recording in writing and the signing off by a qualified person in terms of applicable regulations for any inspections or tests made in accordance with the procedures. The records and signed documents will form part of the as-built records.

C17.3 Performance Tests

Where required in terms of the commissioning procedure, specification or an instruction, a supplier or Contractor shall carry out on site or at the manufacturer's premises, performance tests on selected equipment or portions of the works. Type test certificates in accordance with appropriate standard specifications will be accepted as performance tests unless otherwise specified.

On-site performance tests will always be carried out on the following:

- Voltage withstand tests of all cabling, wiring and distribution boards.
- The mechanical operation and tripping and control of all LV circuit breakers and all MV switchgear and control gear.
- Earth continuity and resistance.
- Polarity and phase rotation of three phase circuits.
- Rigidity of all fastenings.
- The results of all tests shall be recorded in writing by the Contractor.
- Only a representative sample of performance tests on site will be witnessed.

C17.4 Acceptance Tests

Acceptance tests will be carried out in terms of the commissioning procedure and in particular the following:

- All switching procedures.
- Repetition of selected performance tests on a random basis.
- Operation of the most important control, protection and emergency systems.

On completion of acceptance tests, a test certificate shall be signed by the Contractor and taking-over authority to the effect that the tests specified on the certificate have been completed successfully.

C17.5 Responsibility of Contractor

The Contractor shall provide not less than seven days' notice in writing of all performance and acceptance tests so that they may be witnessed if considered necessary.

Notwithstanding the attendance at or failure to attend performance or acceptance tests by any witness, the Contractor is responsible for the correctness of the installation in terms of the manufacturers' requirements, the design and specification and applicable regulations and for the preparation of a written record of the tests and test results.

C17.6 Record Drawings

The Contractor shall supply, after approval of the works, three bound sets of operating instructions, parts lists and maintenance manuals covering all items of equipment forming part of the contract.

The Contractor shall supply two bound copies of the records of all inspections and tests carried out in accordance with the commissioning procedures, performance tests and acceptance tests, not later than two weeks after completion of the acceptance tests.

The Contractor shall supply marked up original size, transparency drawings of the as-built installation. The original drawings may be used as the basis for the as-built record provided that the marking up is neat and clearly understandable.

C17.7 Measurement

The unit of measurement for this item shall be the all-inclusive cost to perform the required testing and commissioning test described above. The rate shall be deemed to be exhaustive and no additional cost shall be entertained. The rate shall include the provision of all documentation as described above.

The rate provided shall exclude the Contractor's on site testing, which is deemed to be included in the installation rate of individual equipment

C3.2 : ENGINEERING

C3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX

The responsibility for the design of the works is set out below:

Concept, feasibility and overall process	Electrical Services
Basic engineering and detail layout to tender stage	Electrical Services
Final design of civil works for construction stage	Electrical Services
Temporary works	Contractor
Preparation of drawings	Contractor
As build drawings	Contractor

C3.2.2 DESIGN BRIEF

The Contractor is responsible for the design of all temporary works required for the construction of the permanent works – all to the approval of the Employers Agent and Employer before the award of the tender.

C3.2.3 DESIGN PROCEDURES

Where drawings of the structures have been prepared by the Employer's Agent, the Contractor shall base their drawings on the Employers Agents drawings and shall check that their equipment fits into and can operate satisfactorily within the structures shown on the Employers Agents drawings. Drawings, dimensions and details of existing infrastructure and equipment are supplied to the Contractor in good faith, however, the Contractor shall base the design of their infrastructure and equipment on actual dimensions and details measured/recorded on Site by them and approved by the Employers Agent. Any inconsistencies, including any conflict between the Employers Agents drawings and the actual dimensions measured on site, shall immediately be drawn to the attention of the Employers Agent, in writing.

Note that all designs are subject to the approval of the Employers Agent, this does not relieve the Contractor of his design responsibility nor accountability. The professional responsibility for such design shall remain with the Contractor and his design Employers Agent.

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

The Contractor shall record all construction data to enable the Employers Agent to compile the 'As-built' plans at the end of the contract.

The above summary is not necessarily complete and shall not limit the work to be carried out.

C3.2.4 DRAWINGS

All necessary drawings/information relating to this contract shall be provided at the project inception stage

Should any difference or contradictions exist in the documents or dimensions or quantities used in the documents, the Contractor shall be responsible to obtain clarification, thereof from the Employer. Such clarification shall be in writing and shall be final and binding.

Should the Contractor fail to seek clarification of any differences or contradictions, the Contractor shall be solely liable for any costs that may arise due to his failure in this regard.

Only figured dimensions may be used, and the drawings shall not be scaled unless the Contractor is so instructed by the Employers in writing. The Employers will upon written request provide any dimensions that may have not been clarified.

It is the Contractor's responsibility to ensure that work is carried out in accordance with the legislated construction standards.

C3.2.4.1 Record Drawings ('As-built')

The Contractor shall mark up and provide the employer with exact positions and details of all infrastructures, pipelines and the like constructed under this contract. The recorded positions shall be handed to the Employer monthly as the work progress. The Certificate of Completion shall not be issued before the Employer is in receipt of all recoded as-built information.

C3.2.5 CONSTRUCTION METHODS

Construction methods used shall be environmentally friendly as far as possible. No construction methods that will result in long term or permanent damage to the surrounding natural environment shall be allowed.

Care shall be taken when mixing, transporting and placing concrete to avoid spillage and wastage.

All construction work shall be undertaken in accordance with the Occupational Health and Safety Act and Construction Regulations.

C3.2.6 SERVICES KNOWN TO BE IN THE VICINITY OF THE WORKS SITE

Many known services cross the site of the works. These are shown on the drawings as far as possible. Before any work commences the exact positions of all services must be located and the services identified, marked and recorded on plan for inclusion in the as-built drawing.

The Contractor, shall however, ensure that prior to construction all the necessary Record Drawings and Way-leaves for all services have been obtained and verified on site by the relevant service providers in his presence. The Contractor must request in writing the relevant official to indicate the said services within 48 hours prior to the commencement of the work, after which the responsibility rests with the service department if the services are not indicated to the Contractor as requested.

The Contractor shall take whatever extra precautions are required to protect all existing services from damage during the period of the Contract. Any damage to existing services indicated by the relevant service providers or other damage as a result thereof, shall be for the Main Contractors account.

C3.4 : CONSTRUCTION

C3.4.1 Applicable standard: GCC

C3.4.2 Particular Specification

Particular specifications included with the document at the end of section C3.7 are as follows:

SPEC OHS: Occupational Health & Safety
SPEC ENV: Environmental Management

C3.4.1 Materials and Samples

Where materials to be used on this contract are specified to comply with the requirements of a South African National Standard Specification and such material is available with the official SANS (SABS) mark, the material shall bear the official mark.

Materials or work which does not conform to the approved samples submitted in terms of Sub clause 7.4.1 of the Conditions of Contract, will be rejected. The Engineer reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such tests conducted by or on behalf of the Engineer, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Sub clause 7.4.4 of the Conditions of Contract, be for the Contractor's account.

Construction Plant

All construction plant and equipment used on this contract shall be in good working order, well maintained, of adequate size and fit for purpose. No machinery that leaks oil, fuel or hydraulic fluids may be used on the Site. Any plant or equipment that, in the opinion of the Engineer, is not of adequate size or fit for use shall be removed from the Site on instruction from the Engineer and replaced with acceptable plant or equipment, all at the Contractor's cost.

Drip trays with absorbent material such as sand, shall be placed under all static plant and equipment at all times, whether such plant is in operation or not.

C3.4.2 Known services

Various services are known to exist within the vicinity of the Works. Their approximate positions are shown on the drawings but, although based on the best information available, the accuracy of their positions cannot be guaranteed. It is likely that other services not shown on the drawings also exist within the vicinity of the Works.

The contractor shall take full responsibility to ensure that existing services are not damaged during construction.

C3.4.3 *Treatment of existing services*

Before commencing with any excavation the Contractor shall confirm the name and telephone number of the relevant official(s) directly concerned with the known or suspected services, shall acquaint himself with the relevant positions of the control points of the services and shall have readily available the equipment necessary to shut-off and isolate any such service. The Contractor shall liaise closely with the relevant authorities or controlling bodies for the necessary temporary closure of any service during construction.

In addition to the requirements of Sub clause 5.4 of SANS 1200A, the Contractor shall deal with the crossing of known existing services by the pipeline by:

- i. Notifying the Employer's representative and the relevant authority at least 48 hours prior to executing the work.
- ii. Serving notice on the resident, occupier and / or owner of every affected property at least 36 hours in advance of any temporary disconnection, advising the nature, time and duration of the disconnection.
- iii. Excavating carefully by hand under the supervision of the Engineer's representative and / or the authority involved, on the line of the trench up to 2m, or such distance as may be necessary, in both directions from the indicated position to locate the exact position of the existing service(s).

C3.4.4 *Continuance of Operation of Existing Services*

All existing services shall be maintained in operation, unless prior arrangements have been made with the relevant authority and written permission for an interruption of the service has been granted and adequate notice, as set out in C3.4.7 above, has been given to the affected residents.

Connecting into the existing water reticulation and sewer network may only be undertaken after the Employer has received 72 hours prior written notice of the date and times that the Contractor intends to carry out the work.

C3.4.5 *Damage to services*

In the event that the Contractor damages an existing service, he shall immediately notify the relevant authority and arrange for the service to be isolated.

Once isolated, the Contractor shall arrange with the relevant authority for the repair of the damaged service. In the case of pipelines, the Contractor shall repair the service himself. In the case of damaged electric or communication cables, the Contractor shall arrange for the relevant authority to repair the damaged service.

In the case of known existing services, or services whose presence could be reasonably deducted on site, the cost of the repair of the service will be for the Contractor's account. In the case of unknown services, the Contractor will pay the relevant authority for the cost of repairing the damaged service and claim the actual cost of repair plus a maximum mark-up of 10% from the Employer. No payment for damaged unknown services will be made without an invoice or receipt of payment for the cost of the damage from the relevant authority.

C3.4.6 *Service and facilities provided by the employer*

Source of Water Supply

The Contractor may make application to the Municipality's Water Division for a clean water supply point, and shall bear all the costs for the installation of such supply point. Water used by the Contractor from the Employer's mains will be charged for at the tariffs ruling at the time of use.

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

The Employer accepts no responsibility for the shortage of water due to any cause whatsoever, nor additional costs incurred by the Contractor as a result of such shortage.

The Contractor shall take note that no direct payment will be made for any costs incurred for the provision of a water supply point nor for the cost of water drawn. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

Source of Power Supply

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

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's tendered rates and prices.

Location of Camp and Materials storage area

The camp site and storage area will be indicated to tenderers at the site inspection for the contract.

The Contractor shall confine his camp and storage of materials to the areas designated. On completion of the construction works the surface of the areas utilised shall be re-instated.

C3.4.7 **Facilities provided by the contractor**

Temporary Offices

Site meetings will be held in the Contractor's site office.

Sanitary Facilities

The Contractor shall supply an adequate number of chemical toilets for the use of his workforce. The number of toilets shall be based on one (1) toilet per fifteen personnel on site. Separate toilets shall be provided for males and females.

Toilets shall be positioned such that no member of the workforce is further than a maximum of 100m walking distance from a toilet. Under no circumstances may the surrounding area or bush be used as a toilet.

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the responsible health authorities in the area of the Site and the Engineer. All such excrement shall be removed from the Site and shall not be disposed of by the Contractor on the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this sub clause and the costs thereof shall be deemed to be included within the Contractor's tendered Preliminary and General items.

Telephone Facilities

A site telephone will not be required by the Engineer, but the time-related tendered rate for the Contractor's telephone shall include for local official calls by the Engineer or his Representative.

Survey Equipment and Assistants

The Contractor shall, for the duration of the Contract, provide the following survey equipment for the exclusive use of the Engineer and his staff:

- 1 upright reading automatic level with tripod;
- 1 metric levelling staff with protective cover bag;
- 6 ranging rods;
- 1 x 100 metre Stilon tape measure;
- 1 ± 2 kg hammer.

All such survey equipment provided by the Contractor shall be in good condition, properly calibrated and fit for the purpose and shall be kept fully serviceable at all times by the Contractor at his own cost. The Contractor shall have any defective equipment repaired or replaced at his own cost within 12 hours after notification by the Engineer's staff.

Where required by the Engineer, the Contractor shall at his own cost, promptly arrange for the recalibration of survey equipment provided.

Site Instruction Book

The Contractor shall keep a triplicate book for site instructions on Site at all times.

C3.4.8 *Site Usage*

The Contractor shall confine his activities to the site of the Works and to the area allocated to him for his site offices and materials storage. The Contractor may not use or damage in any way any area that falls outside the boundaries of the Site. Any area outside of the Site boundaries damaged by the Contractor shall be rehabilitated to the satisfaction of the Engineer at the Contractor's expense.

C3.4.9 *Water for Construction Purposes*

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

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Engineer, produce proof of such compliance. The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract. The Contractor shall, whenever reasonably required by the Engineer, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of water, the costs of which will be deemed to be included in the Contractor's tendered rates.

C3.4.10 *Survey Control and Setting Out of the Works*

Before commencement of work, the Contractor is to liaise with the Engineer to establish exactly the status of all boundary pegs in the Township. The position of all erf pegs found will be recorded on a marked-up print of the Township.

On completion of the Contract the pegs that have been unavoidably disturbed will be replaced by the Employer. Pegs which have, in the opinion of the Engineer, been disturbed due to the negligence of the Contractor will be replaced at the Contractor's cost.

C3.4.11 *Site Maintenance*

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

C3.4.12 *Testing and Quality Control*

a) Contractor to engage services of an independent laboratory

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

the specifications indicate that the said testing is to be carried out by the Engineer or by the Contractor.

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

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

b) Additional testing required by the Engineer

In addition to the provisions of sub clause C3.4.19 (a): Contractor to engage services of an independent laboratory, the Engineer shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in sub clause C3.4.19 (a) at such times and at such locations in the Works as the Engineer shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Engineer, and copies of the test results shall be promptly submitted to the Engineer.

c)

Costs of testing

i. Tests in terms of sub clause C3.4.19 (a)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of sub clause C3.4.19 (a), above shall be borne by the Contractor and shall be deemed to be included in the tendered rates and prices for the respective items of work as listed in the Bill of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of sub clause C3.4.19 (a).

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

ii. Additional tests required by the Engineer

The costs of any additional tests required by the Engineer in terms of sub clause C3.4.19(b): Additional testing required by the Engineer, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Bill of Quantities; provided always that the costs of any such additional tests ordered by the Engineer, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

C3.4.13 *Access to Properties*

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 8.1.2 of the Conditions of Contract.

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

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

C3.4.14 *Employment of Local Labour*

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

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

The minimum wages for local labour shall be those prescribed by SAFCEC for the area in which the Works falls.

C3.4.15 *Monthly Statement and Payment Certificates*

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

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

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal workings days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

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

C3.4.16 *Construction in Restricted Areas*

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

C3.4.17 *Workmanship and Quality Control*

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

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

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

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

PSA GENERAL

PSA 2 INTERPRETATIONS

PSA 2.2 Applicable edition of standards

Add the following at the beginning of the clause:

“Unless a specific edition is specified (see the List of Applicable Specifications),.....”

PSA2.3 Definitions

The terms “GPO”, “P&T” and “Department of Posts and Telecommunications” shall mean “Telkom SA Limited”.

Except for references to “the (official) SABS mark”, the term “SABS” shall mean “SANS”.

PSA2.4 Abbreviations

Add to Sub-clause 2.4(b) :

“MAMDD : Modified AASHTO maximum dry density”.

PSA2.8.1 Items in Schedule of Quantities

In the fourth line of Sub-clause 2.8.1, after the word “specification”, add: “or in the measurement and payment clause of the standard specification, particular specification or project specification”.

PSA 3 MATERIALS

PSA 3.1 Quality

Where applicable, materials shall bear an official standardization mark.

Add the following:

“Where proprietary materials are specified it is to indicate the quality or type of materials or articles required, and where the terms ‘or other approved’ or ‘or approved equivalent’ are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Engineer.”

PSA 4 PLANT

PSA 4.2 Latrine facilities

The toilet facilities to be provided and maintained by the Contractor for all his workers shall be of the chemical type and these shall be readily accessible to workers at all areas of both sites.

PSA 5 CONSTRUCTION

PSA 5.1.1 Setting out of the works

The works are to be set out by the Contractor using the co-ordinates provided and verified

with the control pegs and bench marks.

The Contractor shall check all control pegs and bench marks well before he intends constructing any portion of the Works influenced thereby. Should any peg have been disturbed or any discrepancy in the positions or levels be discovered, the Engineer shall be informed as soon as possible in writing, but in any event at least 7 days before such construction is due to start. If no written statement is received from the Contractor it will be held that the Contractor has satisfied himself that the positions and levels of the control pegs and bench marks are correct.

Co-ordinates are based on WGS84 and reduced levels on M.S.L.

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

Delete from the seventh line "Before the commencement to the tenth line apparently in their correct positions" and replace with the following:

"Immediately on taking over the site, the Contractor, under the direction of the Engineer, shall search for all pegs and the Contractor shall compile a list of pegs that are apparently in their correct position."

Add the following:

"(c)* pegs in close proximity to the works which would unavoidably be removed, subject to the Engineer's approval being given to remove such pegs."

Any erf boundary pegs disturbed by the Contractor during the Contract will be replaced by a Land Surveyor after the completion of all operations. Any costs in connection with the replacement of pegs for which the Contractor is responsible in terms of Sub-clause 5.1.2 will be recoverable from the Contractor by deduction from the monthly certificate of payment.

PSA 5.2 Watching, Barricading and Lighting and Traffic Crossings

Add the following

"The Contractor shall comply in all aspects with the requirements of the Occupational Health and Safety Act (Act 85 of 1993) and the Construction Regulation of 2003 (notice no R1010, dated 18 July 2003) to the Act".

PSA 5.4 Protection of Overhead and Underground Services

The drawings show the position of existing services, based on the best information available but, though these are presented in good faith, their accuracy cannot be guaranteed. The Contractor shall verify the positions of all services including cables, overhead lines, manholes, survey beacons and other obstacles or existing works that may occur on the site of the Works.

At least three weeks in advance of commencing work in any particular area, the Contractor shall expose by hand excavation in all existing underground services either crossing or adjacent to the works. He shall accurately record the position and level of the service and immediately forward this information to the Engineer, to enable timeous amendments to be carried out to design, should this prove necessary. On completion of recording the above information, the Contractor shall immediately backfill and reinstate the trial holes.

“PSA 5.9* Maintaining services to occupied erven

The Contractor shall take note that he shall not cut off any existing services in use without the prior approval of the Engineer and the knowledge of the residents. Further, no existing service in use shall remain cut off for more than 8 hours or overnight.

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

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

“PSA 5.10* Accommodation of other contractors

The Contractor may be required to accommodate other contractors on the site of the works during the Contract period.

Adequate access to the site of their works shall be given the above stated contractors at all times.

No direct payment will be made for the cost of providing adequate access and accommodating the stated contractors on the site of the works, as well as the cost of any inconvenience or disruption experienced in attending to the aforementioned. Payment shall be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the Contract.

“PSA 5.11* Accommodation of Traffic

The Contractor shall at all times ensure that adequate traffic accommodation measures are put in place so as to ensure public and traffic safety. All roads and lanes, including driveways and access to properties, shall remain fully operational throughout the contract period.

The Contractor shall at all times ensure that adequate traffic accommodation measures are put in place so as to ensure public and traffic safety.

Temporary traffic signs shall be erected at all diversions.

The **number** and **layout** of the traffic signs shall comply with the Site Manual entitled “**Safety at Roadworks in Urban Areas**”, as published by the Department of Transport. Traffic signs shall have a yellow background with either a red or black border.

Prior to construction commencing the contractor is to liaise with the Chief Traffic Officer of Port Elizabeth and ensure that all works are conducted to conform with the set requirements and procedures. Payment for the accommodation of traffic, including the supply, maintenance and movement of signage, will be made in accordance with PSA 8.8.2.”

“PSA 5.12* EME Construction Manager

The Contractor shall employ on a monthly basis, in addition to Clause 4.4 of the General Conditions of Contract (2015) an EME Construction manager on the Contract who will guide,

assist manage and mentor all EME's appointed on the contract, and report on progress at the contract site meetings. Such an EME Construction Manager must be adequately experienced with EME work and the development thereof and will be subject to the approval of the Employer. The assistance rendered by the EME Construction Manager, shall *inter alia*:

- (i) Be given at a level and to the extent which is commensurate with the expertise and resources of the EME,
- (ii) Be given in a manner which is neither prescriptive, dictatorial, nor coercive towards the EME;
- (iii) Not be utilized by the Contractor to manipulate the rates and prices submitted, to his advantage, and
- (iv) Be given in a manner which does not unfairly prejudice or favour any particular EME.

The EME Construction Manager will work with and manage the EME Subcontractors throughout the Contract but will only be on site during times when EME subcontractors are performing work.

The EME construction manager shall be a dedicated resource whose only responsibility is to manage the EME subcontractors and as such shall not be the site agent or any other person employed on the contract for other purposes.

PSA 7 TESTING

PSA 7.2 Approved laboratories

Add after "Engineer" in the third line "or any laboratory designated by the Engineer".

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1.2.1 Contents

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

"The 'duration of construction' applicable to a time-related item shall be the tendered Contract period for the total works, plus as applicable the period over the Christmas shutdown equalling 15 working days and all gazetted paid holidays for the Civil Engineering Industry."

PSA 8.2.2 Time-related items

Replace the contents of this sub clause with the following:

"Subject to the provisions of 8.2.3 and 8.2.4, payment for each time-related item will be made monthly in equal amounts, calculated by dividing the sum tendered for each item by the duration of construction as defined in PSA 8.1.2.1 in months, until the sum tendered has been paid in full, provided always that the total of the monthly amounts so paid for each item is not more than in proportion to the progress of the work as a whole.

Should the Engineer grant an extension of time for the completion of the total works, the Contractor will be entitled to an increase in the sums tendered for time-related items, which

increase shall be in the same proportion to the original tendered sums, as the extension of time is to the duration of construction as defined in PSA 8.1.2.1. The Contractor shall however note that the aforementioned will not apply to extensions of time granted in terms of PSA 8.4.6.

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

PSA 8.3.1 Contractual requirements.....Unit : Sum

Add the following:

"The sum tendered shall include for the cost of providing and maintaining the special risks insurance stipulated in the appendix to the tender." "In addition, the sum tendered shall cover all initial costs incurred in complying with the requirements of the Special Conditions of Contract.

PSA 8.3.2.1 Facilities for Engineer

Replace the contents of this sub clause with the following:

"(a) Furnished office (1 No).....Unit : Sum

(b) Name boards (2 No).....Unit : Sum"

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

PSA 8.3.2.2 Facilities for Contractor.....Unit : Sum

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

PSA 8.3.4 Removal of site establishment.....Unit : Sum

Add to Sub-clause 8.3.4

"The amount shall also cover the cost of complying with the requirements of Clause 5.15 of the General Conditions of Contract."

PSA 8.4 **Scheduled Time-Related Items**

PSA 8.4.1 Contractual Requirements

Add the following :

"The Contractor shall tender a lump sum in the Bill of Quantities to cover his time-related establishment costs. The amount tendered and paid shall be full compensation to the Contractor for :

(i) The maintenance of his whole organisation as established for this Contract.

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

The Contractor shall tender a lump sum for the abovementioned items.

Payment of the lump sum shall be made monthly in compliance with the method laid down in Sub-clause 8.2.2 of SABS 1200:A.

The Contractor will not be paid Time-Related Preliminary and General charges for any Special Non-Working Days, as stipulated in the Appendix, which shall be deemed to have been allowed for in his rates.”

PSA 8.4.2 Adjusted Payment for Time-Related Items

Add the following:

“The payment to the Contractor for Time-Related items shall be such proven additional cost (in accordance with clause 5.12.3 as amended in the Contract Data) in the event of the Contract being extended.

Cost means all expenditure reasonable incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit. Typical examples: Extension of guarantee and insurances, cost for labour, plant, equipment and tools.

In the case of contracts subject to Contract Price Adjustment the amount by which the time-related item is adjusted shall be subject to the Contract Price Adjustment formula.”

PSA 8.4.3 Adjusted Payment for Time-Related Items

Add the following:

Provide the Engineer with a breakdown upon request.

PSA PAYMENT CLAUSES

PSA 8.4.5 Other Time-related Obligations

“PSA 8.4.5.1* Provision of Security PersonnelUnit: month

This item shall cover the cost of providing such security personnel the Contractor deems appropriate, taking cognizance of the location of the site and the historical record of incidents of crime in the area.

PSA 8.5 Sums Stated Provisionally by Engineer

PSA 8.5.1 Additional Testing required by the EngineerUnit: Provisional Sum

The provisional sum provided in the Bill of Quantities is to cover the payment of the SANAS registered soils laboratory to conduct any additional tests as directed by the Engineer.

PSA 8.5.2 Overhead, charges, profit etc. on item PSA 8.5.1 Unit: %

The percentage tendered shall be paid to the Contractor on the actual amount paid to the soils laboratory and shall cover the following:

- All costs involved in arranging the tests with the laboratory.
- Setting out the positions for the tests to be taken by the laboratory as indicated by the Engineer.
- Making good all test holes.
- The cost of all overheads, charges and profits.

“PSA 8.5.3* Relocation of municipal servicesUnit: Provisional Sum

The provincial sum is to cover the costs payable by the contractor to service providers, on the engineer’s instruction only, for the relocation of existing services which impede construction activities.

“PSA 8.5.4* Overhead charges, profit, etc on item PSA 8.5.3U
nit: %.....

The percentage tendered shall be paid to the contractor on the actual amount paid to the service provider and shall cover the cost of contacting the service provider and arranging for the relocation of the services, as well as briefing the service provider on the presence of other underground services which may affect their work, ensuring that the service providers workmen are correctly inducted on site and maintaining a competent supervisory presence whilst relocating work takes place.

PSA 8.5.5 Engineer’s cellular phone costs Unit: Provisional
Sum

The provisional sum is to cover the costs payable by the contractor, to the Engineer’s cellular network provider, for the engineer’s cellular use during the contract.

PSA 8.5.6 Overhead charges, profit, etc on item PSA 8.5.5 Unit: %

The percentage tendered shall cover the costs of the contractor settling the engineer’s monthly cellular bill with the cellular network, in full and timeously as required by the terms and conditions of the cellular contract.

“PSA 8.5.7* Community Liaison Officer (CLO) remuneration Unit: Provisional Sum

The provisional sum is to cover the cost of the CLO’s monthly salary for the duration of the contract.

The percentage tendered shall cover the office administration of the CLO's employment contract as well as on site management of the CLO, for the duration of the contract.

The contractor shall employ an EME construction manager who will manage the EME's and report on progress at the contract site meetings. Such Construction Manager must be adequately experienced with EME work and the development thereof and will be subject to the approval of the Employer.

The EME construction manager shall be a dedicated resource whose only responsibility is to manage the EME subcontractors and as such shall not be the site agent or any other person employed on the contract for other purposes.

- a) Be given at a level and to the extent which is commensurate with the expertise and resources of the EME,
- b) Be given in a manner which is neither prescriptive, dictatorial, nor coercive towards the EME;
- c) Not be utilized by the Contractor to manipulate the rates and prices submitted, to his advantage, and
- d) Be given in a manner which does not unfairly prejudice or favour any particular EME.

The EME Construction Manager will work with and manage the EME Subcontractors throughout their involvement on the contract, but may only be on site during times when EME subcontractors are performing work. During the time that EME subcontractors are performing work, the EME Construction Manager shall be available on site during normal working hours.

Provisional sums have been allowed for reserved work packages for work awarded to subcontractors selected in consultation with the Employer in accordance with Clause C3.3.2. The sum paid shall be as certified by the Engineer for work completed by the EME Sub-Contractor(s).

The percentage tendered shall cover all costs including but not limited to management, administration, overheads, finance costs, risk and profit on the value of the work awarded for EME subcontract packages under PSA 8.5.10

"PSA 8.9* Compliance with OHS Act and Construction Regulations
(Including The Construction Regulations 2014)..... Unit: sum

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2014) at all times for the full duration of the Contract, as described in PS 8.7 of Portion 1 of the Project Specifications. The successful tenderer shall provide the Engineer with a complete breakdown of this tendered sum.

"PSA 8.10* Assist Emerging Contractor with upgrading of CIDB registration..... Unit: sum

This sum will be paid to the contractor once all of the EME that would like to upgrade their CIDB rating have done so.

PSA 8.12 PROVISIONAL SUM FOR ACCREDITED TRAINING

Add the following payment items:

Accredited training by the Department of Labour or other service providers Prov. sum
Handling costs and charges for the contractor Percentage (%) The contractor will liaise with the Engineer and the Community Liaison Officer (CLO) for the training requirements of targeted labour local labour (includes local labour used by EME's if applicable) and arrange for formal training with the local Department of Labour, or other accredited training service providers.

PSC SITE CLEARANCE

PSC 3 MATERIALS

PSC 3.1 Disposal of Material

Delete the first two sentences of this clause and replace with:

"Debris arising from clearing and grubbing or from the demolition of structures on site shall be removed by the Contractor and disposed of at the local tip site or alternate approved tip site. The tendered rate shall also cover the cost of loading, transporting rubble and car wrecks encountered in the road reserves or along the line of the pipe.

The rate tendered shall allow for any fees to be paid at the tip site.

PSC 5.5 Clearing of Vegetation

Add the following:

"Except if otherwise agreed, where areas have to be re-cleared on the written instruction of the Engineer, such re-clearing shall be carried out at the Contractor's own cost and the Contractor is advised therefore, not to clear areas at such an early stage that re-clearing may become necessary."

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.2.1 Clear and grub.....Unit : m/ha

Delete "(Except where 8.2.9 is applicable)" in the seventh line of this sub-clause.

Add after "transporting" in the seventh line:

"to the Mnquma Local Municipality tip site or alternate approved site"

PSC 8.2.2 Remove and grub large trees and tree stumps of girth.....Unit : No

Add the following:

"Notwithstanding the contents of this clause it must be noted that only the tree stumps remain and the Contractor shall note this when pricing this item."

"PSC 8.2.11* Remove and dispose of existing kerbing and concrete channelling.....Unit : m"

The sum tendered shall cover the provision of all labour and equipment to remove and dispose of existing kerbing and concrete channelling, regardless of volume, at the designated tip site.

"PSC 8.2.12* Saw-cut asphalt surfacing.....Unit : m"

The sum tendered shall cover the provision of all labour and equipment to saw-cut asphalt surfacing.

"PSC 8.2.13* Remove and dispose of asphalt surfacing.....Unit : m²"

The sum tendered shall cover the provision of all labour and equipment to remove and dispose of asphalt surfacing (saw-cutting will be compensated for under item PSC 8.2.12).

PSD EARTHWORKS

PSD 3 MATERIALS

PSD 3.1 Classification For Excavation Purposes

Delete SABS 1200:D Clause 3.1 and replace with the following:

PSD 3.1.1 Method of Classifying

The Contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Engineer or his Representative will decide on the classification of materials. In the first instance classification will be based on inspection of the material to be excavated and on the criteria given in PSD 3.1.2(a) and (b).

PSD 3.1.2 Classes of Excavation

All materials encountered in any excavation for any purpose including restricted excavation will be classified as follows:

(a) Hard rock excavation

Hard rock excavation shall be excavation in material (including undecomposed boulders exceeding 0.17 cubic metres in individual volume) that cannot be efficiently removed without blasting, wedging and splitting, or hydraulic hammers.

This classification includes materials such as:

- solid unfractured rock occurring in bulk
- solid ledges thicker than 200mm
- igneous rock intrusions
- cemented sedimentary rocks.

(b) Soft Excavation

Any material which can be removed by bulldozers or backhoes, shall be classified as soft excavation.

Soft excavation shall be material not falling into the category of hard rock excavation.

PSDM 5.2.1.2 Conservation Of Topsoil

Add the following to Clause 5.2.1.2:

“Topsoil shall not be stockpiled higher than 2,0m. Care shall be exercised to prevent the compaction of topsoil in any way especially by vehicles travelling over such material.”

PSDM EARTHWORKS (ROADS, SUBGRADE)

PSDM 3 MATERIALS

PSDM 3.1 Classification of Excavation

Clause PSDB 3.1 will apply for this clause.

PSDM 5 CONSTRUCTION

PSDM 5.2.3.3 Treatment of Road Bed

(a) Preparation and Compaction of Road Bed

Add the following:

“Where road bed preparation takes place in sand the in-situ sand layer is to be watered and compacted to 100% Mod. AASHTO density. The surface of the in-situ sand layer is to be firm and smooth in order to receive the subsequent S.S.G. or subbase layer, as the case may be. To this end the Engineer may order that unnecessary construction traffic remain off the finished in-situ sand layer until the subsequent layer has been completed.”

PSDM 5.2.9 Trimming and Grading of Verges

(New Clause)

During the initial earthworks the verge width shall be cut or filled to approximately the final level and shall be kept trimmed and tidy during construction of the works. After completion of the road layers, including the premix surface, and after construction of the necessary kerbs, including the satisfactory backfilling behind the kerb, the verge shall be finished off to the lines and levels shown on the drawings or as specified.

The verge material shall consist of that material which would normally be occurring at that position or depth when in cut and shall not be contaminated by foreign materials such as bricks, base course material, horticultural inferior materials from trench excavations, etc. Verges in fill conditions are to consist of the material as specified for the fills and similarly not be contaminated with foreign materials.

Over those sections of verge where grass is to be planted or where the Engineer deems it necessary to spread topsoil, he may instruct the Contractor at the stage of the major earthworks operation to work to levels altered from those shown on the drawings.

Topsoil may be provided from stockpiles on site in which case the Contractor shall load, transport and spread as ordered by the Engineer. In the case of topsoil provided and imported by the Contractor the quality of the topsoil shall be approved of by the Engineer beforehand.

The Contractor shall be responsible for taking the necessary precautions and measures to control the dust nuisance which may arise due to his operations on the verge, whether from the natural ground surface or topsoil layer, until the verge is accepted by the Engineer.

PSDM 5.2.10 Dimension and Level Control and Process Control

(New Clause)

The Contractor shall submit to the Engineer records of dimension and level control and/or process control prior to requesting the Engineer to carry out any routine tests and/or inspections.

PSDM 5.2.11 Requesting of Tests

(New Clause)

Tests and Inspections of the works will only be carried out by the Engineer once the appropriate test/inspection request forms have been fully completed. Test/inspection request forms can be obtained from the Engineer.

PSDM 8 **MEASUREMENT AND PAYMENT**

PSDM8.3.4(a) Cut to Fill, Borrow to Fill

Add to Clause 8.3.4(1) the following:

“Where fill material is borrowed from trench excavations the rate shall include the selection from the sides of trenches, transporting, if necessary, stockpiling, preparing, processing, shaping (including forming side channels and benching if applicable), watering, mixing, compacting to the densities specified and finishing the slopes of fills.”

PSDM 8.3.13 Surface Finishes

Add to Clause 8.3.13 the following Clause (c):

“The major earthworks required to bring the verge to the required level and the additional depth of excavation or reduction in fill height as ordered for the topsoil operation shall be measured and paid for under the appropriate excavation item.

Only the following verge item will be measured and paid for separately.

The unit of measurement for trimming and grading of verges shall be per square metre.

The rate tendered for the above item shall include for all things necessary to complete the work as specified.”

PSDM 8.3.17 Construct Selected Layers using Imported Material Compacted to 93% Mod. AASHTO

(New Clause)

The rate shall cover the cost of locating the source, complying with all the relevant precautions required in terms of Clause 5.1, SABS 1200 D, procuring the material, basic selection, transporting from source to point of deposition on the road, spreading, watering, compacting, final grading and complying with the tolerances and testing.

PSGA CONCRETE (SMALL WORKS)**PSGA 3 MATERIALS****PSGA 3.2.1 Applicable specifications**

Add the following to this sub-clause:

"Where reference is made in this specification or the standard specifications to the cement specifications, e.g. SABS 471: Portland cement and rapid hardening Portland cement, it shall be replaced with the new specification:

SABS ENV 197-1 "Cement composition, specifications and conformity criteria Part 1: Common cements."

Furthermore, where reference is made in this specification or the standard specification to a different cement type, the following names will apply and the Engineer will confirm the relevant new name from the table below:

Cement Grade	Cement Type	Approximate old product name	Holcim	New Blue Circle	New NPC	New PPC	New Slag-cement
52,5	CEM 1	Rapid hardening	Rapid Hard	Duracast	Eagle Super	-	-
42,5 R	CEM 1	Rapid hardening	-	-	-	Rapo	-
42,5	CEM 1	OPC *	Portland Cement	Duratech	-	OPC	-
	CEM 1	LASRC	-	-	-	LASRC	-
	CEM II A-S	PC 15SL	-	-	Eagle Plus	-	-
	CEM II B-S	RH30SL	-	-	Eagle Plus	-	-
32,5R	-	-	-	-	-	-	-
32,5	CEM II A-V	PC 15FA	All Purpose Cement	-	-	Surebuild	-
	CEM II A-W	PC 15FA	-	-	-	Surebuild	-
	CEM II A-L	-	All purpose cement	-	-	Surebuild	-
	CEM II B-V or W	PC25FA/PFA C**	-	Structrete	-	Surecrete	-
	CEM III A	PBFC	-	BFC	Eagle Pro	-	PBFC
	CEM IIIA	RHSL	-	-	-	-	RHSL
22,5	MC 22.5X	PFAC ***	Multi purpose cement	Durabuild	-	-	-
	MC22.5X	PFAC***	-	Buildcrete	-	-	-
12,5	MC 12,5	Walcrete	Mortar Cement	Wallcrete	-	Masonry	-
	MC 12,5	Mortacem	-	-	-	-	-

Notes: * OPC cements previously performed approximately as CEM 1 32,5R products
** PC25FA cements under the old standards achieved lower compressive strengths than the OPC's of the time
*** Some PFAC cements meet the new standard for MC 22,5X. Others required modification before meeting the requirements for MC 22,5X"
**** Sure build cement will not be allowed to be used on this project.

"PSGA 3.8* Curing compound

Curing compound shall be white pigmented natural resin based liquid curing compound complying with ASTM C 309-74."

PSGA 4 PLANT

PSGA 4.2 Mixing Plant

Add the following:

"All site mixed concrete shall be mixed in a rotary type mixer and the minimum size of mixer that may be used shall have the capacity to mix a batch comprising one standard 50kg bag of cement."

PSGA 4.4.2 Finish

The finish to all exposed concrete shall be smooth and that to buried or backfilled surfaces, rough.

PSGA 5 CONSTRUCTION

PSGA 5.4.1.5 Strength concrete

Add the following:

"The Contractor shall, when requesting approval of a mix design, submit the constituent proportions of the proposed mix together with the results of compressive strength tests carried out. Reliable test records of concrete made from the same materials and mix proportions will, without prejudicing the requirements of this sub-clause, be accepted as a basis for approving a mix design."

PSGA 5.4.2 Batching

Notwithstanding the requirements of this sub-clause, the method of batching shall be subject to approval. If volume batching is allowed only full standard 50kg bags of cement may be used to make up a batch.

PSGA 5.4.6 Compaction

Replace "or (if approved) forking" in the first sentence of sub-clause 5.4.6.3. with "using approved vibrators".

PSGA 5.4.7 Curing and protection

Notwithstanding the provisions of this sub-clause, all cast in situ concrete shall, except where otherwise authorised, be cured in accordance with the requirements of sub-clause (c) using curing compound of the type specified in PSGA 3.8.

PSGA 5.4.8 Concrete surfaces

All unformed concrete surfaces shall, except where otherwise ordered, be given a wood float finish.

PSGA 7 TESTS

PSGA 7.1.2 Frequency and sampling

Notwithstanding the requirements of this sub-clause, the Contractor shall take note that he is responsible for taking an adequate number of tests to ensure that the concrete being used complies with the specification. The Engineer will only carry out such check testing as he requires.

PSGA 8 MEASUREMENT AND PAYMENT

PSGA 8.1.2 Reinforcement.....Unit : (t)

Replace the contents of this clause with the following:

“The unit of measurement for steel bars shall be the ton of reinforcement in place in accordance with the drawings or as authorised by the Engineer.

The unit of measurement for welded steel fabric shall be the square metre of fabric reinforcement in place and the quantity shall be calculated from the nett area covered by the mesh, excluding laps.

Clips, ties, separators, stools and other steel used for positioning reinforcement shall not be measured unless shown on the bending schedules.

The rate tendered shall cover the cost of the supply, delivery, cutting, bending, placing and fixing of the steel reinforcement, including all tying wire, stools, supports and waste.”

PSGA 8.1.3 Concrete

Delete all references to “intermediate excavation” throughout this sub-clause.

Add after “testing” in the second line of sub-clause 8.1.3.3(a) “including transport to an approved laboratory”.

C3.5 : MANAGEMENT

APPLICABLE SANS 1921 STANDARDS

The following parts of SANS 1921 (Construction and management requirements for construction works) and associated specifications are applicable:

SANS 1921-1: General engineering and construction works
 SANS 1921-2: Accommodation of traffic on public roads occupied by the contractor
 SANS 1921-3: Structural steelwork
 SANS 1921-4: Third party management support in works contracts
 SANS 1921-5: Earthworks activities, which are to be performed by hand
 SANS 1921-6: HIV / AIDS awareness

SANS 1921-1: General engineering and construction works	
Clause No	Specification data
4.1.7	<p>The requirements for drawings, information and calculations for which the contractor is responsible are:</p> <p>.....</p> <p>.....</p> <p>.....</p>
4.2.1	The responsibility strategy assigned to the contractor for the works is: State A, B or C
4.2.2	The structural engineer is:
4.2.3	Drawings and other information are to be submitted in accordance with the contractor's programme.
4.3	<p>The Contractor shall submit within the period stated in the Contract Data a suitable and realistic construction programme for the consideration of the Engineer.</p> <p>The programme shall be in the form of a Gant Chart and shall include the following details:</p> <ul style="list-style-type: none"> • A work breakdown structure, identifying the major activity groups. • For each activity group further details shall be provided with regard to the scheduled start and end dates of individual activities. • The linkages between activities shall be clearly indicated and the logical network upon which the programme is based should be separately submitted to the engineer if requested. Any constraints shall be classified as being time-related or resource-related.

SANS 1921-1: General engineering and construction works

Clause No	Specification data
	<ul style="list-style-type: none">• The critical path(s) shall be clearly indicated and floats on non-critical activities shall be shown.• The Contractor shall indicate the working hours per day, night, week and month allowed for in the programme.• Where relevant the Contractor shall state the production rates for key activities, e.g. earthworks, etc.• Together with the programme as detailed above the contractor shall submit to the engineer a cash flow projection, indicating projected monthly invoice amounts. The cash flow projection shall be updated at monthly intervals to reflect actual payments to date and anticipated further payments.• The programme shall be reviewed at the monthly site meetings at which the Contractor shall provide sufficient detail that will allow the comparison of completed work per activity that has fallen behind. The updated programme shall be submitted to the Engineer at least two days prior to the monthly meetings.• If the programme has to be revised by reason of the Contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the Works within the time for completion as defined in the General Conditions of Contract or any granted extension of time. Any proposal to increase the tempo of work shall be accompanied by positive steps to increase production by providing more labour and plant on site, or by using the available labour and plant on site, or by using the available labour and plant in a more efficient manner.• Failure on the part of the Contractor to submit the programme or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided in the General Conditions of Contract.• The approval by the Engineer of any programme shall have no contractual significance other than that the Engineer will be satisfied 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. It shall not limit the right of the Engineer to instruct the Contractor to vary the programme if required by circumstances. The Contractor is also referred to

SANS 1921-1: General engineering and construction works	
Clause No	Specification data
	<p>the applicable clauses of the General Conditions of Contract when drawing up his programme.</p> <ul style="list-style-type: none"> The planning, program and method statements are to comply with the following: <ul style="list-style-type: none"> Microsoft Project format
4.12.2	<p>The samples of materials, workmanship and finishes that the contractor is to provide and deliver to the employer are:</p> <p>.....</p> <p>.....</p> <p>.....</p>
4.12.2	<p>The fabrication drawings which the contractor is to provide and deliver to the client are:</p> <p>.....</p> <p>.....</p> <p>.....</p>
4.14.3	<p>The office accommodation, equipment, accommodation for site meetings and other facilities for the use by the employer and his agents are:</p> <ul style="list-style-type: none"> Site office complete with desk, 3 chairs, 2 filing cabinets and plan layout table. Such an office shall be minimum 12m² in area with a hard floor, ceiling 3m in height, well ventilated with good lamination to provide sound proofing Site meeting room complete with conference table and 10 chairs. Such an office shall be minimum 20m² in area with a hard floor, ceiling 3m in height, well ventilated with good lamination to provide sound proofing. Electric lighting and power points in above rooms 2 Carports Cell phone and/or telephone and fax facilities Ablution facilities for the Engineer and his staff. Laboratory facilities
4.14.6	<p>The requirements for the provision and erection of sign boards are:</p> <p>.....</p>

SANS 1921-1: General engineering and construction works	
Clause No	Specification data

4.17.1	<p>The requirements for the termination, diversion or maintenance of existing services are:</p> <p>.....</p> <p>.....</p>
4.17.3	Services that are known to exist on the site are shown on the drawings
4.17.4	<p>The requirements for the detection apparatus are:</p> <p>.....</p> <p>.....</p> <p>.....</p>
4.18	<p>The additional health and safety requirements are:</p> <p>.....</p> <p>.....</p>
4.22	<p>The works to be undertaken by nominated and selected subcontractors comprise:</p> <p>.....</p> <p>.....</p>
Variations:	
4.1.10	Degree of accuracy II shall be applicable unless stated otherwise in the drawings or specification.
4.2.4	The time frame for acceptance is 10 working days

SANS 1921-1: General engineering and construction works	
Clause No	Specification data
Additional clauses:	
4.1.1 p)	<p>Add this new clause:</p> <p>“Appoint a Community liaison officer (CLO) to assist with the community liaison with the beneficiary community.”</p>
4.23	<p>Add this new clause:</p> <p>“4.23 Community participation”</p> <p>Community participation consists of engagement of Project Steering Committees (PSC).</p> <p>A PSC will be established for the project, by the Ward Councillor.</p> <p>The functions of the PSC will be to:</p> <ul style="list-style-type: none"> • Assist in monitoring the project. • Ensure that the community provide assistance to the contractor to ensure that he can execute the contract in accordance with the specifications and within time. • Encourage the community to participate in the Labour Intensive construction. • Identify skills, skilled personnel and suppliers in the towns. <p>The PSC will not have the power to:</p> <ul style="list-style-type: none"> • Give any instructions to the contractor, except through the engineer. • Become involved in the daily operations of the contractor or interfere with the contract works. <p>A monthly meeting will be held with the PSC to discuss relevant matters. The site agent and resident engineer will attend the meetings. The contractor will have to report on progress, deviations from the programme, financial matters community related aspects, general problems and co-operation at the meeting. The PSC members will not receive any remuneration for attending, and they must provide their own transport.”</p>

SANS 1921-2: Accommodation of traffic on public roads occupied by the contractor	
Clause No	Specification data
4.3.2	The contractor shall design all the temporary culverts
4.6.1	The length of half-width roads under construction shall not exceed 5m
4.6.3	The length of road shall be limited to 5 km
4.10.1	<p>The contractor shall provide the following traffic control facilities:</p> <ul style="list-style-type: none"> • Traffic-control devices such as flagmen, STOP and GO signs, traffic signals. • Statuary permanent and temporary road signs and barricades. • Channelization devices and barricades including delineators, cones, road studs, road marking, etc. • Barriers such as New Jersey, plastic movable barriers, etc. • Warning Devices on plant and construction vehicles. • Road markings.
Variations:	
Additional clauses:	
4.1.4	<p>Add this new clause:</p> <p>“Failure to maintain road signs, warning signs, etc, in a good condition shall constitute ample reason for the engineer to bring the works to a stop until the road signs, etc, have been repaired to his satisfaction.</p> <p>The contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual Volume 2 Chapter 13.</p> <p>The contractor shall submit proposals in connection with directional signs to the engineer for approval prior to construction.”</p>

SANS 1921-3 Structural steelwork	
Clause No	Specification data
4.2.1	The responsibility strategy assigned to the steelwork contractor for the work is: specify A, B or C.
4.2.2	The steelwork structural engineer is.
4.3.2.1	The site will be ready for steelwork to commence on
4.3.2.1	<p>The requirements for sequencing of the works are:</p> <p>.....</p> <p>.....</p> <p>The times for completing of the sections are:</p> <p>.....</p> <p>.....</p> <p>The procedures to be followed are:</p> <p>.....</p> <p>.....</p> <p>Matters that affect the program are:</p> <p>.....</p> <p>.....</p>
4.3.3.2	The steelwork contractor is required to provide the steelwork structural engineer with a detailed method statement for the erection of each structure at least 2 weeks before construction commences.
4.4.2.4	<p>The steelwork contractor is required to provide the following facilities for test purposes:</p> <p>.....</p> <p>.....</p> <p>.....</p>
4.4.3.4	The following items and procedures need to be tested / certified by a recognized body:

SANS 1921-3 Structural steelwork	
Clause No	Specification data
	<p>.....</p> <p>.....</p> <p>.....</p>
4.5.1.1	<p>Information, drawings and calculations provided to the steelwork contractor will be provided in the following format:</p> <p>.....</p> <p>and on the following media:</p> <p>.....</p>
4.5.1.2	<p>The steelwork contractor is to provide information in the following format:</p> <p style="padding-left: 40px;">Drawings in AutoCAD <i>.dwg</i> format</p> <p style="padding-left: 40px;">Programmes in Microsoft Project format</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>Data will be supplied on paper and on DVD / CD media.</p>
4.5.3.1 or 4.5.3.2	<p>Drawings and other information are to be submitted in accordance with the steelwork contractor's accepted programme.</p>
4.5.3.4	<p>The steelwork contractor is required to submit the following additional information with general arrangement drawings to the employer for approval:</p> <p>.....</p> <p>.....</p> <p>.....</p>
4.5.3.6	<p>The steelwork contractor is required to submit "as erected " drawings</p>
4.7.6	<p>The steelwork contractor is required to make his own arrangements for the provision of the following services:</p> <p>Water</p>

SANS 1921-3 Structural steelwork	
Clause No	Specification data
	Electricity Sanitary services
4.7.9	The requirements for the provision and erection of sign boards are:
4.10.2	The requirements for the protection, termination, diversion or maintenance of existing services are:
4.10.4	Services which are known to exist on site are:
4.11.1	The specific health and safety requirements are:
4.11.3	The steelwork contractor is required to submit a report on the assessment and management of risk.
4.11.4	The steelwork contractor is required to enclose the steelwork for the protection of the public and others.
Variations:	

SANS 1921-3 Structural steelwork	
Clause No	Specification data
Additional clauses:	
SANS 1921-4: Third –party management support in works contracts	
Clause No	Specification Data
5.1.1(b)	The construction Manager is required to arrange for the supply of mechanical equipment and the supply and delivery of materials to site
5.1.1(i)	<p>The construction manager is required to provide the following site facilities:</p> <p>.....</p> <p>.....</p> <p>.....</p>
5.1.1(b)	<p>The employer's policy pertaining to conditions of employment is as follows:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
5.1.1(h)	<p>The following name boards are required:</p> <p>.....</p> <p>.....</p> <p>.....</p>
Variations:	

SANS 1921-3 Structural steelwork	
Clause No	Specification data
Additional clauses:	
SANS 1921-5: Earthworks activities that are to be performed by hand	
Clause No	Specification Data
5.1	The depth of the trenches to be excavated by hand is 1,5m.
Variations:	State variations, if any, for example specific compaction requirements
Additional clauses	

SANS 1921-6: HIV / AIDS awareness				
Clause No	Specification Data			
4.2.1(a)	A qualified service provider is a service provider that is accredited by The NMBM Health and Social Development and appears on the list of recognized service providers Of the NMBM Health and Social Development.			
	The contact particulars of qualified service providers are as follows:			
	Name	Tel	Fax	e-mail
4.2.1 (a)	Apart for the initial programme, the HIV / AIDS awareness programme is to be repeated at 4-month intervals throughout the duration of the contract			
Variations:				
Additional clauses:				

MANAGEMENT OF THE WORKS

Applicable SANS Standards

The following SANS Standardized Specifications for Civil Engineering Construction Contracts are applicable:

- i. SANS 1200 A :General
- ii. SANS 1200 AB :
- iii. Engineer's Office

The provisions of SANS 1200 A and SANS 1200 AB take precedent over the provision of any part of SANS 2001 that is applicable to the Contract. The variations and additions to these specifications are described in Section C3.4.

Further to the above, the SANS 1200 Standardized specifications listed in C3.4 are applicable.

Particular or Generic Specifications

Refer to Clause C3.4.1

Planning, Programming and Cash Flow

Programming and Cash Flow

Clause 5.6 of the General Conditions of Contract (GCC 2015) requires the Contractor to submit a programme for the execution of the works. The programme shall be presented in the form of a Gantt Chart.

In addition to the requirements of Clause 5.6, the format and information shown shall comply with the following:

- The various stages of work planned to be completed per month in sufficient detail to be able to assess construction progress,
- Sequence of work,
- Resources intended to be utilized,
- The interdependence between resources and sequence of work,
- Clear indication of the critical path activities and their dependencies,
- Key dates in respect of information to be provided by the Employers Agent and/or others,
- Labour resources schedule which must distinguish between the Contractors permanent labour and the temporary employed labour from the local ward,
- The lead time for training of labour from the local ward.

If any change to the critical path occurs, the Contractor shall as soon as is practicable notify the Employers Agent in writing.

When drawing up the programme the Contractor shall, among other issues, take into consideration and make allowance for:

- Expected weather conditions and their effects,
- Known physical conditions or artificial obstructions,
- Searching for, dealing with and carrying out alterations to the existing services,
- The procurement process of EME's in accordance with section C3.3,

- The provision and implementation of the Environmental Management Plan (EMP) in terms of the Environmental Management Specification and Environmental Impact Assessment (EIA) conditions,
- The restrictions on the length of trench open at any one time as specified,
- The accommodation and safeguarding of public access and traffic,
- The lead time required for compliance with the Site Specific Health and Safety Specification and Site Specific Baseline Risk Assessment (annexure C & D respectively),
- Provision and implementation of the Health and Safety Plan in terms of the 2014 Construction regulations and the Occupational Health and Safety Act (1993)
- Election day,
- Official builders break,
- Special non-working days, and
- Non-working days.

Failure to produce a detailed programme may prejudice the Contractor in any claim for an extension of time.

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

Employers Agent Inspection and Approval of the Works

The Contractor shall allow reasonable time in his programme for the Employers Agent to carry out examination of the work before covering up. Requests for inspections should be made in writing to the Employers Agent at least 24 hours before such inspections are required. Requests for inspections should coincide with the Employers Agent Representative daily site visit.

If the Employers Agent attends with the purpose of examining any part or materials of the works at the date and time agreed on with the Contractor and it is found that the works or materials are not ready for inspection, the Contractor shall be responsible for the cost of that visit by the Engineer.

The Employers Agent Representative will visit the site approximately daily for the purpose of supervision of the Contract and inspection and approval of completed work. The Contractor shall therefore arrange his working programme in such a way that all work is inspected and approved at the required time. Under no circumstances shall he proceed with any activity that covers up previous work before the previous work has been approved in writing (e.g. no trench shall be backfilled until the laid pipes and bedding have been inspected and approved).

C3.5.2.4.1 Review of Progress

The Contractor shall review his progress each month and should progress lag behind the latest accepted programme by more than two (2) weeks, he shall submit a revised programme and method statement of how he proposes making up lost time. If, in the opinion of the Employers Agent, such revised programme will not make up lost time, the Employers Agent shall have the right to request the Contractor to reorganize his work in a manner which will ensure an acceptable programme. Claims for additional payments to meet any cost incurred due to such reorganization will not be accepted.

The Contractor is required together with his monthly updated programme to submit a cash flow indicating the anticipated total and monthly expenditure value for the contract at the monthly site/progress meetings.

With reference to paragraph 56 of the Contract Data the programme and cash flow will be reviewed at the monthly site meetings at which time the contractor shall provide sufficient detail that will allow a comparison of completed work per activity against the original approved programme. The Contractor shall indicate what resources and programme changes he intends to implement in order to remedy any activity that has fallen behind. The Employers Agent may demand from the contractor a major revision of the programme. Such a revision shall be submitted for approval within fourteen (14) days of the demand.

SEQUENCE OF THE WORKS

The Contractor may elect to undertake the work in any sequence he chooses, unless prior arrangements are made between the Employer, Employer's Agent and the Contractor.

The Contractor shall submit to the Employers Agent for approval at the start of the contract a detailed plan of action that set out the sequence of construction of the works. The approved plan of action shall be amended in consultation with the Employers Agent.

SOFTWARE APPLICATION FOR PROGRAMMING

Microsoft Project format.

METHODS AND PROCEDURES

C3.5.6.1 Safeguarding & protection of excavations

Portions of the work will be carried out within residential areas. Excavations will be barricaded off, at all times, with clearly visible protection measures. Where deep excavations exist, the barricading shall be adequate to prevent accidental entry.

C3.5.6.3 Disposal of excess material

The designated spoil sites may be used for this Contract, will only be the one identified by the Municipality. Disposal slips as proof of disposal will be provided to the Employers Agent as part of Environmental Management, monitoring and compliance.

C3.5.6.4 Giving notice of work to be covered up

The Contractor shall give the Employers Agent reasonable time to accommodate examinations in his programme, in which case times for inspection can be agreed on. Requests for examination of work shall be made in the site request book at least 24 hours before the examination is required.

C3.5.6.5 Cost of test specimens and tests

The Contractor must make allowance in his Tender for all such services and tests required from him. It is the duty of the Contractor to, at his own cost and by means of the necessary tests, prove to the Employers Agent or his representative that the works and compaction where prescribed, comply with the specification.

C3.5.6.6 Progress Photographs

The Contractor shall set up a system of taking digital photographs on site on a weekly basis to monitor the progress of works. This digital photography shall be labelled with the date, location and description of the photograph and a copy handed to the Employers Agent on a

CD or other storage medium on a weekly basis for safe storage. The format shall be JPG, BMP or any other common format.

C3.5.6.7 Materials handling, use and storage

All materials shall be stored in the designated Contractor's camp area or as indicated by the Employers Agent. Any material to be stored and handled must be done in such a way as not to endanger any person on site or cause damage to the environment. The Contractor shall also ensure that all suppliers or delivery vehicles abide by all restrictions and procedures (speed limits, dust control, "no-go areas" etc.).

QUALITY PLANS AND CONTROL

Quality Control Plans, methods and testing shall be as specified in the contract.

Environmental

The Contractor shall prior to the commencement of any construction prepare and submit an Environmental Management Plan (EMP), for approval by the Employers Agent.

The EMP shall clearly demonstrate how the Contractor intends mitigating damage to the environment, as a result of their construction activities.

The Contractor shall further appoint a competent Environmental Control Officer (ECO), who shall inspect all construction related activities, who will be responsible for monitoring the Contractor's operations on site, as well as compliance with regard to the EMP and associated legislation and who shall report on non-compliance items.

No additional payment will be made in this regard.

Further, the ECO will submit his/her Environmental Audits at monthly site meetings, for discussion by all role players.

The Contractor will be liable to pay the fines as indicated in the Contract Data paragraph 35 and 51 for recurring non-compliances.

a) Sand and dust control

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

b) Environmental Management

The Contractor will be required to compile a comprehensive EMP, which should address the management and monitoring of environmental impacts related to this contract.

The EMP should therefore identify potential environmental impacts and should further demonstrate how they would be mitigated and controlled.

c) Environmental Impact

The Contractor shall, for the duration of the Contract, ensure that good housekeeping practices are adhered to by all his staff and that of his subcontractors (including EME's).

d) Environmental Methods and Procedures

The following together with the Construction Environmental Management Programme, shall be applied with regard to the operation and maintenance of the site:

- The site shall at all times be kept in a neat and tidy condition. Papers and packaging shall be binned and removed from site and waste stockpiles shall be properly demarcated and the water removed at regular intervals and disposed of at a registered waste disposal site.
- Natural vegetation shall not be damaged unnecessarily and the working areas of the site be kept to the minimum reasonable possible for construction. An environmental awareness training programme for the construction staff should be implemented by the Contractor/Subcontractor(s) and all workers made aware of the recommended mitigation measures to be implemented.
- No wild animal (birds, snakes, lizards, game etc.) domestic stock or indigenous plants are to be disturbed unnecessarily in any way by the construction activities or by the construction staff.
- All topsoil (containing indigenous plant seeds, rootstock etc.) removed – that may be required in future rehabilitation – should be carefully stockpiled for later rehabilitation.
- Measures need to be taken to ensure that contamination from the work camp and laydown site does not pollute adjacent areas. This should include the diversion of natural run-off away from the works and the containment thereof in drainage retention areas, where applicable.
- Water from dewatering operations shall be disposed of so as not to return to the working area nor the cause to damage or erosion to surrounding areas.
- Dust from stockpiles and access roads shall be controlled by watering.
- Precautions need to be taken against oil spillage from heavy equipment through the use of sand or sawdust drip trays. All material (including soil) contaminated with hydrocarbons should be disposed of as hazardous waste at a registered waste disposal site.
- Any object of historical interest may be uncovered in the course of the works shall immediately be protected and reported to the Employers Agent for further action. There is a legal requirement to report any archaeological site of cultural significance to the National Monuments Council, according to the National Heritage Act (Act 25 of 1999).
- Access to the site shall be given to all sub-contractors and other contractors who may be appointed from time to time to allow them to complete their portion of the works.
- The contractor shall check and supervise his own work and the work of his subcontractors to ensure that all work is carried out to the specified time schedule, safety and quality standards.
- The contractor is responsible for the care, safekeeping and security of the works including all plant and materials whether in store, on site or already installed.
- Site records – the Contractor shall maintain a diary reporting the daily progress referencing the area of work, any problems experienced, weather, plant complement and labour complement.
- Final audit: On completion of the work, but before the construction site is handed back to the Employer, a thorough environmental inspection or audit impacted by the construction activities shall be carried out and any 'problematic' or damaged areas shall be made good or rehabilitated to the satisfaction of all parties.

e) Fires and Burning Vegetation

Under no circumstances whatsoever may fires be lit at the site of the works.

f) Preservation of Flora and Fauna and Soil Conservation

The Contractor shall:

- a. Take all precautions to prevent:
 - i. any damage to trees, shrubs and the surrounding natural environment,
 - ii. fires,
 - iii. loss or injury to domestic or wild animals from any lands used or occupied by the Contractor
- b. Refrain from destroying, removing or clearing trees, timber and scrub to any extent greater than is absolutely necessary for the execution of the contract
- c. Ensure that no vegetation, trees or shrubs outside the site boundaries are disturbed, damaged or destroyed. A penalty of R1 000.00 per incident will be charged to the Contractor. Refer to paragraph 54 of the Contract Data.
- d. Take care to cause the minimum disturbance to fauna and flora
- e. Take measures as to ensure that his employees are aware of and abide by all laws and restrictions governing the hunting, disturbing, capturing or destroying of animals and birds in the vicinity of the camp and the works or the taking of fish from water, and
- f. Prohibit all firearms from the site and temporary camps.

g) Protection of Trees, Shrubs and Surrounding Environment

The Contractor shall ensure that no trees, shrubs or surrounding natural environment outside the site boundaries are disturbed, damaged or destroyed. A penalty of R1 000.00 per tree or shrub damaged or destroyed or for damage to the surrounding environment will be charged to the Contractor. The Employer's Agent shall have the right to permanently exclude any person from the site who causes damage to the natural environment.

h) Prevention of Poaching

The Contractor shall ensure that none of his employees partake in any poaching activities of any nature during the duration of the contract.

Any person caught poaching shall be banned from the site of the works and shall be prosecuted under the relevant laws.

The Contractor shall be liable for a fine of R20 000.00 (refer to paragraph 53 of the Contract data) for every poaching incident committed by any of his employees (permanent or temporary employed), whether the employee is prosecuted or not. Repeated incidents may be considered as cause for cancellation of the contract in terms of clause 9.2.1.3.6 of the GCC 2010.

ACCOMMODATION OF TRAFFIC ON PUBLIC ROADS OCCUPIED BY THE CONTRACTOR

The operation of construction vehicles on existing roads shall be limited to traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof.

If the Contractor uses existing roads for the hauling of materials to or from site, he shall be held responsible to clear any spillage caused by his activities on or near the roads by whatever

means necessary and immediately. No additional payment will be made for the clearance of spillage and all other relevant costs.

Where work is to be executed close to existing residential properties, the Contractor shall ensure that at all times pedestrian and vehicle access are provided for house owners to their properties. Where crossing of existing driveways are to be done, the Contractor must liaise with the relevant property owners regarding the time and period when such access will not be available. However, access shall be made available between 17:00 and 07:00 on weekdays and on Saturdays and Sundays.

TESTING, COMPLETION, COMMISSIONING, AND CORRECTION OF DEFECTS

Practical completion of the works will only be considered once the connections to the existing mains are completed and all lines and manhole structures are completed, tested and approved.

FORMAT OF COMMUNICATION

Throughout the construction period, the Contractor shall supply and maintain the following documentation that shall be kept on site, accessible to both the Contractor and the Employers Agent or representative at all times:

a) Site Request / Instruction book:

For the Contractor to provide the Employers Agent or Representative with information required, for giving notification in writing of inspections, drawings, etc., required by the Contractor, and for use by the Employers Agent or Representative for the purpose of writing day-to-day instructions or confirming verbal information or instructions given to the Contractor.

b) Health and Safety File

Containing the site and safety hierarchy, contact details, safety plan, audits, safety equipment, safety training, injuries log, inspections and all other relevant safety data

c) Quality Control File

Containing Quality Assurance and Quality Control Forms to be operated and maintained by the Contractor.

d) Measurement File

Containing records of work measurement and calculations

e) Daily Register

Listing labour and plant status. A complete record of staff employed on the Contract is to be kept on site for use by the Employers Agent.

f) Daily Contract Diary

For recording the work carried out on site each day – shall reference the specific area of work and shall be signed by the Construction Manager and the Employers Agents Representative.

g) Monthly Labour Return Schedule

h) One full set of contract drawings and contract documents.

i) Construction Programme

The site diary shall record the following:

- Progress of works
- Contractors and subcontractors personnel on site
- Delays, possible delays and inclement weather
- Delivery of materials to site
- Plant and equipment on site

All communications regarding the contract shall be channelled through the Employers Agent and/or his authorised representative.

A site book in triplicate will be provided by the Contractor in which relevant matters shall be recorded and signed by the Employers Agent and the Construction Manager.

All communication shall be noted and recorded in the minutes of the monthly progress meetings.

WEATHER CONDITIONS

Recording of weather

The Contractor shall provide and erect a rain gauge on site. All rainfall and other adverse weather conditions affecting the contractual time for completion in terms of GCC 2015 shall be recorded in the site diary.

The site diary shall be handed to the Employers Agent Representative for his signature no later than 7 days after rain that is considered to justify an extension of time that may occur.

Extension of Time Resulting from Abnormal Rainfall

Extension of time will not be considered for normal rainfall but only abnormal rainfall or saturated conditions and will be calculated in accordance with the following method:

- a) The Contractor shall, in his Programme, allow for the anticipated number of working days on which work could be delayed- as given in the Contract Data.
- b) Extension of time will be calculated for each calendar month or part thereof over the full period for the completion of the Work, plus any approved extension thereof, as follows:
 - i) A delay caused by abnormal rainfall will only be accepted for extension of time if, in the opinion of the Employers Agent, it delays an item or items which lie on the critical path determined by the Contractor's Programme. Only delays on normal working days will be considered.
 - ii) Abnormal rainfall will be considered to be days, as approved, on which rain delayed operations, less the anticipated number of days given in the Schedule as found in the Contract Data.
 - iii) The net extension of time determined for each month, which may be negative, shall accumulate algebraically to determine the net number of days for extension of time due to abnormal rainfall, but a negative total at the end of the construction period will not be taken into account.

- iv) Where a portion of a month is involved, a pro rata number of days shall be calculated.

KEY PERSONNEL AND SUPERVISION

A schedule of key personnel to be used on site, including contact particulars, is to be provided to the Employers Agent before commencement of works.

The Key Personnel presented as part of the tender submission in returnable schedule T2.2.8 : Organogram and T2.2.9 : Key Personnel as listed in paragraph 41s) of the Tender Data shall apply. If the personnel indicated are no longer available, personnel with similar or better qualifications and experience shall be presented to the Employers Agent for approval.

NORMAL WORKING HOURS

Normal working hours shall be those as stated in the Government Gazette for Civil Engineering and Road making Industries as applicable to a 5 (five) day week, Monday's to Friday's.

MANAGEMENT MEETING

The Employers Agent, Contractors designated representative(s), Employer and other Agents/Consultants/Subcontractors as required shall hold meetings related to the progress of the works, technical issues, quality, health and safety and environmental compliance and subcontractor co-ordination matters at regular intervals not exceeding 4 weeks, or at such other times may be necessary. The representatives of the Employers Agent, Contractor and Employer and their delegated authority will be confirmed at the Inaugural Site meeting.

The Contractor shall attend all progress/site meetings and ensure that all persons under his jurisdiction are notified timeously of all progress/site meetings should their attendance be required. All persons attending progress/site meetings are to have the necessary delegated authority in respect of aspects such as planning, change managements, health and safety and environmental.

ELECTRONIC PAYMENTS

The Contractor will be responsible for supplying correct bank details to the employer for electronic payments and the Employer will not be held responsible for any incorrect bank details supplied by the Contractor.

The Contractors tax invoice shall contain the following information as a minimum:

- Contract number and description
- Date of invoice
- Invoice number
- Clearly stipulate the words "Tax Invoice"
- Be addressed to the MBDA
- Contain the details of the MBDA
- Contain the banking details, Vat number
- Contain the logo of the contractor or contractors in the case of a joint venture

BONDS AND GUARANTEES

The Contractor shall deliver to the Employer the original fixed performance guarantee before commencement of works. The guarantee shall be held by the Employer for safekeeping until completion of the work.

No bonds are accepted.

Payment Certificates

Payment certificates are to be agreed upon by the Contractor and Employer's Representative (project manager) and signed by them and submitted to the Manager Building & Housing by the 15th day of each month.

Payment certificates shall be submitted in the form of the Bill of Quantities. Columns shall be provided showing the previous quantity, current quantity and total quantity claimed under each item. Calculations to substantiate the quantities claimed must be submitted with each monthly claim. A declaration of ownership of unused materials must be submitted together with any claim made for payment of unused materials on site. No payment for materials on site will be made without such a declaration. A pro forma declaration of ownership is included in this document.

Payment certificates are to be agreed upon by the Construction Manager and Employers Agent Representative. Once agreed, the Contractor is to submit a signed payment certificate to the Employers Agent for certification including a signed tax invoice addressed to the MBDA.

INSURANCE PROVIDED BY THE EMPLOYER

Copies of the insurance may be obtained from the Employer, if required. Refer to the Contract Data for full details of the insurance provided by the Employer.

NEATNESS OF THE SITE

Progressive and systematic finishing and tidying will form part of this contract. Spoil, rubble, materials, equipment or unfinished operations shall not be allowed to accumulate unnecessarily and in the event of this happening, the Employers Agent shall have the right to withhold payment for as long as the condition prevails in respect of the relevant works in the area(s) concerned.

The general neatness and tidiness of the site is of particular concern. The Contractor shall therefore, on a day-to-day basis, keep the Works in a condition acceptable to the Employers Agent.

MAINTENANCE OF ACCESS AND STREETS

The operation of construction vehicles on existing roads or streets shall be limited to traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof.

All access roads used by the Contractor shall be maintained for the duration of the contract and shall be rehabilitated to their original condition on completion of the contract. The Contractor must note that no additional payment will be made for construction, maintenance and rehabilitation of any access roads to the site.

PROTECTING THE SITE

The Contractor shall be solely responsible for the protection of the Site against all damage to property, services, terrain, trees etc. If in the normal execution of this Contract, disturbance to the Site of the Works is necessary, the Contractor shall obtain the prior permission of the Employers Agent. After completion of this work, the Contractor shall reinstate the area concerned to its original condition at his own cost or as covered under the rates in the Bill of

Quantities. The Employers Agent ruling of what was the original condition of the Site or part thereof shall be final.

If the Contractor fails to reinstate the Site, the Employer shall do the reinstatement and the Employers Agent shall establish the extent of the work as well as its costs. The Employers Agent ruling shall be final and payment for the work will be deducted from the Contractor's monthly certificate.

The Contractor shall ensure that his actions do not cause any nuisance to the public. Should spillages occur, the Contractor must adequately disinfect the work site, including the container area.

Protection of the Works against Flooding

The Contractor shall provide sumps, pumps, furrows, berms and/or coffer dams to divert water flow away from construction activities; and any other temporary measure/works as may be necessary to minimise damage, inconvenience or interference, for 24 hours a day 7 days a week throughout the period of construction, to adequately protect the works from flooding and damage.

The Contractors programme must include and item and information regarding the dealing with water.

Landowners

The Contractor is to ensure that all landowners are notified 1 month prior to construction commencing in their properties. The Contractor shall submit copies of the notification to the Employers Agent.

The Contractor is to minimise disruption and ensure access and security for the landowners are maintained at all times. The following measures are to be adhered to for the duration of the contract:

- The construction of activities should proceed as discussed with the landowner and Employers Representative
- Landowner to have access to his property at all times
- Temporary fences to be installed as required by the Contractor without limiting access to the landowner
- Tidying up, removing temporary fencing, reinstating existing fencing and opening the existing access to be performed before completion of the contract

Forms for contract administration

Pro forma approval forms to be used on this contract shall be provided by the Employers Agent at the inaugural meeting.

Forms for reporting on employment of local labour (EPWP) are attached as annexure E to this document. These reports shall be submitted monthly to the Employers Agent in accordance with the stipulated requirements.

Proof of Compliance with the Law

Refer to clause 4.3.1 (paragraph 13) of the Contract Data.



OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION FOR CONSTRUCTION WORK CONTRACTS

1. INTRODUCTION

This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993). No single Act or its set of Regulations can be read in isolation, furthermore, although the definition of Health and Safety Specifications stipulates 'a site, activity or project specific document pertaining to all health and safety requirements related to construction work which is included in the contractor's contract with the employer or an order issued in terms of framework agreement' it is required that the entire scope of the Labour legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this requirement is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in.

1.1 PURPOSE

1.1.1 The purpose of the occupational health and safety specification document is to provide the relevant Principal Contractor with any information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; and to protect persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work during the carrying out of construction work for Mnquma Local Municipality.

1.1.2 To inform the Principal Contractor that the Occupational Health and Safety Act, 1993 (Act 85 of 1993) shall apply to the contract to which this specification document applies. The Construction Regulations shall apply to any person involved in construction work pertaining to this project, as will the Act.

1.2 SCOPE

This health and safety specification in respect of a construction work contract:

- a) provides the overarching framework within which the contractor is required to demonstrate compliance with certain requirements for occupation health and safety established by the Occupational Health and Safety Act of 1993 during construction;
- b) establishes the manner in which the contractor is to manage the risk of health and safety incidents in during the construction; and
- c) establishes the manner in which the employer's health and safety agent will interact with the contractor.

Note 1. This specification establishes generic requirements to enable the employer and the contractor to satisfy aspects of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Construction Regulations, 2014. The contractor is required to develop, implement and maintain package specific health and safety plans. The employer is required to provide certain package specific information to the contractor or a health and safety specification for the works to enable such plans to be formulated. Accordingly, this generic specification on its own cannot ensure compliance with the requirements of the aforementioned Act (See Annexure A).

Note 2. The Construction Regulations, 2014, require an employer to stop any contractor from executing construction work which is not in accordance with the contractor's health and safety plan for the site or which poses to be a threat to the health and safety of persons.

Note 3. This specification establishes generic health and safety requirements. Site specific requirements for health and safety are stated in the scope of work associated with a contract (see Annexure A).

Note 4. The South African Council for the Project and Construction Management Professions has established the following specified categories of registration in terms of the Project and Construction Management Professions Act of 2000 (Act No. 48 of 2000):

- a) A Construction Health and Safety Agent who may be appointed by an employer to act as his agent in terms of the Occupational Health and Safety Act of 1993 and the Construction Regulations issued in terms of that Act;

- b) A Construction Health and Safety Manager who may be appointed by an employer to complement his professional team or by a contractor to manage company or project health and safety performance and compliance in accordance with the Occupational Health and Safety Act and Regulations; and
- c) A Construction Health and Safety Officers who may be appointed by an employer to mitigate the risk on a project or by a contractor to monitor and assist on-site health and safety performance and compliance in accordance with the Occupational Health and Safety Act and Regulations and services.

2. DEFINITIONS

The most important definitions in the Act and Regulations pertaining to this specification document are hereby extracted.

Act: the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

contractor: person or organization that contracts to provide the work covered by the contract

contract manager: person appointed by the employer to administer the contract on his behalf

competent person: any person who:

- a) has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications specific to that work or task; and
- b) is familiar with the Act and applicable regulations made in terms of the Act

Note: The Regulations stipulate that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act of 2000, those qualifications and training must be regarded as the required qualifications and training.

Site: the area in the possession of the Principal Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Principal Contractor and approved for such use by the Engineer.

danger: anything which may cause injury or damage to persons or property

employer: person or organisation that enters into a contract with the contractor for the provision of the work covered by the contract

client: means any person for whom construction work is performed

employer's health and safety agent: the person appointed as agent by the employer in terms of Regulation 5(6) of the Construction regulations and named in the contract data as the being the employer's agent responsible for health and safety matters

ergonomics: the application of scientific information concerning humans to the design of objects, systems and the environment for human use in order to optimise human well-being and overall system performance

hazard: a source of or exposure to danger

hazard identification: the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed

health and safety plan: a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified

health and safety specification: a site, activity or project specific document pertaining to all health and safety requirements related to construction work which is included in the contractor's contract with the employer or an order issued in terms of framework agreement

healthy: free from illness or injury attributable to occupational causes

incident: an event or occurrence occurring at work or arising out of or in connection with the activities of persons at work, or in connection with the use of plant or machinery, in which, or in consequence of which:

- a) any person dies, becomes unconscious, suffers the loss of a limb or part of a limb or is otherwise injured or becomes ill to such a degree that he is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or to continue with the activity for which he was employed or is usually employed;
- b) a major incident occurred; or
- c) the health or safety of any person was endangered and where:
 - i) a dangerous substance was spilled;
 - ii) the uncontrolled release of any substance under pressure took place;
 - iii) machinery or any part thereof fractured or failed resulting in flying, falling or uncontrolled moving objects; or machinery ran out of control

inspector: a person designated as such under section 28 the Act

major incident: an occurrence of catastrophic proportions, resulting from the use of plant or machinery, or from activities at a workplace

reasonably practicable: practicable having regard to:

- a) the severity and scope of the hazard or risk concerned;
- b) the state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk;
- c) the availability and suitability of means to remove or mitigate that hazard or risk; and
- d) the cost of removing or mitigating that hazard or risk in relation to the benefits deriving therefrom;

risk: the probability that injury or damage will occur

safe: free from any hazard

scaffold: any temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both

structure:

- a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- c) any false work, scaffold or other structure designed or used to provide support or means of access during construction work; or
- c) any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling

construction work: any work in connection with;

- a) the construction, erection, alterations, renovation, repair, demolition or dismantling of or an addition to a building or any similar structure; or
- b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work.

substance: any solid, liquid, vapour, gas or aerosol, or combination thereof

suitable: capable of fulfilling or having fulfilled the intended function or fit for its intended purpose

temporary works: any false work, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction

workplace: any premises or place where a person performs work in the course of his employment

3. INTERPRETATION

3.1 The Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this specification.

3.2 Compliance with the requirements of this specification does not necessarily result in compliance with the provisions of the Act.

Note: The Principal Contractor has to take full responsibility for the health and safety on the site of the relevant project / contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site. This has to feature clearly in the Principal Contractor's Health and Safety Plan.

4. REQUIREMENTS

4.1 General requirement

The contractor shall:

- a) create and maintain as reasonably practicable a safe and healthy work environment,
- b) execute the work in a manner that complies with all the requirements of the Act and all its associated regulations, and in so doing, minimize the risk of incidents occurring;
- c) conspicuously display any site specific number assigned to the construction site in terms of the Construction Regulations 2014 at the main entrance to the site; and
- d) respond to the notices issued by the employer's health and safety agent as follows:
 - 1) Improvement Notice: improve health and safety performance over time so that repeat notices are not issued;
 - 2) Contravention Notice: rectify contravention as soon as possible;
 - 3) Prohibition Notice: terminate affected activities with immediate effect and only recommence activities when it is safe to do so.

Note: Financial penalties can be applied should Contravention Notices be issued. This should be dealt with in the Contract Data.

4.2 Administration

4.2.1 Notification of intention to commence construction work

4.2.1.1 The contractor shall on sites where no construction work permit has been issued by the Provincial Director of the Department of Labour notify such director in writing using a form similar to that contained in **Annexure 2** of the Construction Regulations issued in terms of the Act, in the relevant geographic location of intention to commence work before construction work commences and retain proof of such notification in the health and safety file where the work includes:

- a) excavation work;

- b) working at height where there is a risk of falling;
- c) the demolition of a structure;
- d) the use of explosives; or
- e) a single storey dwelling for a client who is going

4.2.1.2 The contractor shall ensure that no work commences on an electrical installation which requires a new supply or an increase in electricity supply before the person who supplies or contracts or agrees to supply electricity to that electrical installation has been notified of such work.

4.2.1.3 The contractor shall ensure that no asbestos work is carried out before the Provincial Director of the Department of Labour has been notified in writing.

4.2.1.4 Application for Construction Work Permit

A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work if the intended construction work starts from the 7th August 2018 and will -

1. exceed 365 days and will involve more than 3600 person days of construction work; or
2. the tender value limit is grade 7, 8 or 9 of the Construction Industry Development Board (CIDB) grading.

4.2.2 Copy of the Act

The contractor shall ensure that a copy of the Act and relevant regulations is available on site for inspection by any person engaged in any activity on the site.

4.2.3 Good standing with the compensation fund or a licensed compensation insurer

The contractor shall before commencing with any work on the site provide the employer's health and safety representative with proof of good standing with the compensation fund or with a licensed compensation insurer

4.2.4 Emergency procedures

4.2.4.1 The contractor shall submit for acceptance to the employer's health and safety agent an emergency procedure which include but are not limited to fire, spills, accidents to employees, exposure to hazardous substances, which:

- a) identifies the key personnel who are to be notified of any emergency;
- b) sets out details including contact particulars of available emergency services; and
- c) the actions or steps which are to be taken during an emergency.

4.2.4.2 The contractor shall within 24 hours of an emergency taking place notify the employer's health and safety agent in writing of the emergency and briefly outline what happened and how it was dealt with.

4.2.4.3 A contact list of all service providers (Police, Fire department, Ambulance, Medical and Clinic, etc.) must be maintained and available to site personnel.

4.2.5 Health and safety file

4.2.5.1 The contractor shall establish and submit a health and safety file which contains copies, as relevant of:

- a) the following documents which shall be placed in the file prior to commencing with physical construction activities
 - 1) copy of the contraction work permit issued in terms of the Construction Regulations 2014;
 - 2) the contractor's health and safety policy, signed by the chief executive officer, which outlines the contractor's objectives and how they will be achieved and implemented by the contractor;
 - 3) copies of all risk assessments that were conducted
 - 4) the notification made to the Provincial Director of Labour, and if relevant, the notification of the person who supplies or contracts or agrees to supply electricity to that electrical installation;
 - 5) the letters of appointment, as relevant, together with a brief curriculum vita (CV) of:
 - the construction manager and any assistant construction managers;
 - the construction health and safety manager
 - the construction health and safety officer
 - the risk assessor who is tasked to perform the risk assessments; and
 - the registered person responsible for the electrical installation covered by the Electrical Installations Regulations;
 - the authorised persons responsible for gas appliances, gas system gas reticulation system covered by the Pressure Equipment Regulations;

- 6) a copy of the certificate of registration of the registered person responsible for the electrical installation covered by the Electrical Installations Regulations;
 - 7) the approval of the design of the part of an electrical installation which has a voltage in excess of 1 kV by a person deemed competent in terms of the Electrical Installations Regulations;
 - 8) proof of registration of the electrical contractor who undertakes the electrical installation in terms of the Electrical Installations Regulations;
 - 9) the preliminary hazard identification undertaken by a competent person;
 - 9) Project specific organogram which outlines the roles of relevant appointments by the OHS Act. and
 - 10) the contractor's health and safety plan;
 - 11) the emergency procedures;
 - 12) the procedure for the issuing and replacement of lost, stolen, worn or damaged personal protective clothing and equipment; and
 - 13) proof that the contractor and all the subcontractors are registered and in good standing with the compensation fund or with a licensed compensation insurer relevant to the type of work performed;
- b) the following documents, as relevant, which shall be placed in the file after construction activities have commenced
- 1) the letters of appointments, if relevant, together with a brief curriculum vitae (CV) of:
 - persons who are required to assist the construction supervisor;
 - construction supervisor for the site in respect of construction work covered by the Construction Regulations;
 - competent persons;
 - assistants of construction supervisor; and
 - designers of temporary works;
 - 2) Project Specific organogram, outlining the Health and Safety Site Team and their roles as required and as related to the relevant appointments by the OHS ACT.
 - 3) each and every subcontract agreement and each and every subcontractor's approved health and safety plan;
 - 4) proof that every subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer relevant to the type of work performed;
 - 5) proof of all subcontractor's induction training whenever it is conducted;
 - 6) copies of the minutes of the contractor's subcontractor's health and safety meetings;

- 7) copies of each of the contractor's subcontractors' health and safety policy, signed by the chief executive officer, which outlines the contractor's objectives and how they will be achieved and implemented by the contractor;
- 8) the health and safety plans of all the contractor's subcontractors who are required to provide such plans;
- 9) copies of the fall protection plan and each revision thereof;
- 10) a comprehensive and updated list of all the subcontractors employed on site by the contractor, indicating the type of work being performed by such sub-contractors;
- 11) the outcomes of the monthly audits for compliance with the approved health and safety plan of each and every sub-contractor working on the site;
- 12) any report made to an inspector by the health and safety committee;
- 13) the minutes of all health and safety meetings and any recommendations made to the contractor by the health and safety committee;
- 14) the findings of all audit reports made regarding the implementation of the contractor's or a subcontractor's health and safety plan;
- 15) the inputs of the safety officer, if any, into the health and safety plan;
- 16) details of induction training conducted whenever it is conducted including the list of attendees;
- 17) proof of the following where suspended platforms are used:
 - a certificate of system design issued by a professional engineer, professional certificated engineer or a professional engineering technologist;
 - proof of competency of erectors, operators and inspectors;
 - proof of compliance of operational design calculations with requirements of the system design certificate;
 - proof of performance test results;
 - sketches indicating the completed system with the operational loading capacity of the platform;
 - procedures for and records of inspections having been carried out;
 - procedures for and records of maintenance work having been carried out;
 - proof that the prescribed documentation has been forwarded to the provincial director;
- 18) letters of appointments for competent persons to supervise the activities which law requires to be so supervised;
- 19) a copy of risk assessments made by competent persons;
- 20) records of the register of inspections made by a competent person immediately before and during the placement of concrete or any other load on formwork;
- 21) the names of the first aiders on site and copies of the first aid certificates of competency;

- 22) the names of the persons the persons who are in possession of valid certificate of competency in first aid and copies of such certificates;
- 23) medical certificates of fitness for the contractor's and subcontractors' employees specific to the construction work to be performed and issued by an occupational health and safety practitioner;
- 24) details of all incidents together with the Contractor's investigative report on such incident;
- 25) the record of inspections carried out by the designers of structures to ensure compliance with designs; and
- 26) any other documentation required in terms of regulations issued in terms of the Act including a record of all drawings, designs, materials used and other similar information concerning the completed structure;

4.2.5.2 The health and safety file shall be made available for inspection by any inspector, subcontractor, the contract manager, the employer's health and safety agent or employee of the contractor upon the request of such persons.

4.2.5.3 The health and safety file shall be updated to ensure that its contents always reflect the latest available information.

4.2.5.4 The contractor shall hand over a copy of the health and safety file to the employer's health and safety agent upon completion of the contract and if relevant, a certificate of compliance accompanied by a test report for the electrical installation in accordance with the provisions of the Electrical Installation Regulations.

4.2.6 Health and safety committee

4.2.6.1 The contractor shall convene health and safety meetings whenever more than two health and safety representatives have been appointed for the site. These meetings shall be attended by all health and safety representatives and persons nominated by the contractor. Such meetings shall be convened whenever necessary but at least once every month to:

- a) make recommendations to the contractor regarding any matter affecting the health or safety of persons on the site; and
- b) discuss any incident on the site in which or in consequence of which any person was injured, became ill or died.

4.2.6.2 The contractor shall consult with the health and safety committee on the development, monitoring and review of the risk assessment.

4.2.6.3 The contractor shall ensure that minutes of the health and safety committee meetings are kept. The employer's health and safety agent shall be invited to attend such meetings as an observer.

4.2.7 Inspections, formal enquires and incidents

4.2.7.1 The contractor shall inform the relevant safety representative:

- a) beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector; and
- b) as soon as reasonably practicable of the occurrence of an incident on the site.

4.2.7.2 The contractor shall record all incidents and notify the employer's health and safety agent of any incident, except in the case of a traffic accident on a public road, as soon as possible after it has occurred and report such incidence to an inspector of the department of labour and notify the Provincial Director of the Department of Labour of such incident within 7 days on the prescribed form

4.2.7.3 The contractor shall investigate all incidents and issue the employer's health and safety agent with copies of such investigations. The Investigations shall be conducted by a competent person.

4.2.7.4 The contractor shall in the event of an incident in which a person dies, or is injured to such an extent that he is likely to die, or suffered the loss of a limb or part of a limb:

- a) notify the Provincial Director of the Department of Labour of such incident by telephone, facsimile or similar means of communication;
- b) ensure that no person disturbs the site at which the incident occurred or remove any article or substance involved in the incident therefrom, without the consent of an inspector, unless an action is necessary to prevent a further incident, to remove the injured or dead, or to rescue persons from danger; and.
- c) provide the Provincial Director of the Department of Labour with a report which includes the measures that the contractor or his subcontractor intend to implement to ensure a safe site as reasonably practicable.

4.2.7.5 The contractor shall notify the Provincial Director of the Department of Labour of the death of any person which results from injuries sustained in an incident.

4.2.7.6 The Principal Contractor shall immediately notify Project Management of any hazardous or potentially hazardous situations arising during the performance of activities.

4.2.8 Personal protective equipment and clothing

A PPE needs analysis is to be conducted in accordance with the HIRA. PPE is to be issued free of charge. The Principal Contractor is to indicate procedure for Lost or Stolen and Worn Out or Damaged PPE.

The contractor shall ensure that:

- a) all workers are issued with the necessary personal protective clothing;
- b) all workers are identifiable at all times by having the company for which they work for printed on the back or front of their overalls; and
- c) clear procedures are in place for the replacement of lost, stolen, worn or damage personal protective clothing.

The following PPE shall be used on site as minimum required for everyone on site:

- a) Steel toe safety shoes/boots
- b) Hard hat
- c) Reflective vest
- d) Work suit

4.3 Appointments

4.3.1 Construction manager

- The contractor shall appoint in writing one full time competent person as the construction manager with the duty of managing all the construction on a single site including that of ensuring occupational health and safety compliance.
- Where appropriate, the contractor shall appoint in writing one or more assistant construction managers.

4.3.2 Appointment of construction health and safety officers

The contractor shall after consultation with the employer after considering the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, prior to commencing

the work and if necessary, appoint a full-time or a part-time suitably qualified health and safety officer to assist in the control of all health and safety related aspects on the site.

4.3.3 Construction supervisors

4.3.3.1 The construction manager shall in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

4.3.3.2 A contractor shall after considering the size of the project and if considered necessary, appoint in writing one or more competent employees for different sections of the work to assist the construction supervisor.

4.3.4 Competent persons

4.3.4.1 The contractor shall appoint in writing competent persons to supervise or inspect, as relevant, any of the following:

- a) formwork and support work operations;
- b) excavation work;
- c) demolition work;
- d) scaffolding work operations;
- e) suspended platform work operations;
- f) material hoists;
- f) bulk mixing plants;
- g) temporary electrical installations;
- h) the stacking and storage of articles on the site; and
- i) fire equipment.

4.3.4.2 The contractor shall appoint in writing competent persons to:

- a) induct employees in health and safety; and
- b) prepare and update as necessary a fall protection plan and to provide the construction manager with a copy of the latest version of such plan.

4.3.5 Health and safety representatives

4.3.5.1 The contractor shall appoint in writing one health and safety representative, whenever there are more than 20 employees on the site, to:

- a) review the effectiveness of health and safety measures;
- b) identify potential hazards and potential major incidents;
- c) in collaboration with his employer, examine the causes of incidents;
- d) investigate complaints by any employee of the contractor relating to that employee's health or safety on the site;
- e) make representations to the contractor on matters arising from a), b), c) or d) or on general matters affecting the health or safety of the employees at the workplace;
- g) inspect the site with a view to, the health and safety of employees, at regular intervals;
- h) participate in consultations with inspectors at the workplace and accompany inspectors on inspections of the workplace; and
- i) participate in any internal health or safety audit.

5. The contractor shall provide the health and safety representatives with the necessary assistance, facilities and training to carry out the functions established in 4.3.1

4.4 Employer's health and safety agent

4.4.1 The employer's health and safety agent shall:

- a) audit the contractor's compliance with the requirements of this specification prior to the commencement of any physical construction activities on the site;
- b) accept or reject the contractor's health and safety plans, giving reasons for rejecting such plans;
- c) monitor the effective implementation of all safety plans;
- d) conduct periodic and random audits on the health and safety file to establish compliance with the requirements of this specification;
- e) visit the site at regular intervals to conduct site inspections, and based upon such visits issue, wherever necessary, Improvement Notices, Contravention Notices and Prohibition Notices, to the contractor or any of the contractor's subcontractors with a copy to the contract manager and, where relevant, to the contractor.

4.5 Creating and maintaining a safe and healthy work environment

4.5.1 General

4.5.1.1 The contractor shall with respect to the site and the construction work that are contemplated:

- a) cause a preliminary hazard identification to be performed by a competent person before commencing any physical construction activity;
- b) evaluate the risks associated with the identified hazard to the health and safety of such employees and the steps that need to be taken to comply with the Act; and
- c) as far as is reasonably practicable, prevent the exposure of such employees to the hazards concerned or, where prevention is not reasonably practicable, minimize such exposure.

4.5.1.2 The contractor shall ensure that:

- a) all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
- b) no structure or part of a structure is loaded in a manner which would render it unsafe; and
- c) account of information, if any, provided by the designer of the structure is taken into account in the risk assessment;

Note: The information provided by the designer should outline known or anticipated dangers or hazards relating to the work and make available all information required for the safe execution of the work. It should provide as relevant, geotechnical information (or make reference to reports provided in the site information), the loading the structure is designed to withstand, the methods and sequence of construction.

4.5.1.3 The contractor shall carry out regular inspections and audits to ensure that the work is being performed in accordance with the requirements of this specification. The Principal Contractor shall conduct monthly OHS audits of the project, including the sub-contractor audits, to ensure compliance with the OHS Act and OHSS. Records of audits must be kept and non-conformance reported, investigated and corrective action must be taken to prevent re-occurrence.

4.5.1.4 The appointed OHS agent, shall conduct monthly Audits on site. All documentation held by the principal contractor shall be available for inspection. The Principal Contractor is required to participate in the Audit and provide any additional information required by the inspector/auditor.

4.5.1.5 The Principal Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the OHS Act and the OHSS. The Principal Contractor shall ensure that all records of incidents, training. Routine inspections etc. are kept on site. All documents shall be available for inspection when required by the inspector/auditor.

4.5.1.6 A table of intended inspections shall be included in the H&S plan, including responsible person and frequency. Inspection registers must be kept on the H&S File.

4.5.1.7 All construction materials and equipment shall be stacked and stored in accordance with legislation. All materials shall be neatly stacked in a designated laydown area within the confines of the Principal Contractor's allocated construction area.

4.5.1.8 The Principal Contractor shall ensure that a separate entrance/exit to the construction site is opened and erected for the sole use of construction activities. Site access shall be strictly monitored and signage be displayed for speed restrictions. All employees as well as visitors shall be informed during induction and made aware of the acceptable speed limit onsite. The speed limit is set to not exceed 20km/h.

4.5.1.9 The Principal Contractor shall ensure that all construction plant onsite complies with the requirements of the OHS ACT. The contractor's appointed representative shall inspect and keep records of inspections of the tools and equipment used on site. Only authorised persons are to use machinery under proper supervision. Appropriate PPE and clothing and as specified by the HIRA, shall always be provided, and maintained in good condition. The Principal Contractor shall ensure that any hired plant and machinery brought to site is safe for use and the plant is in accordance with the Act and its Regulation. operate the machinery, proof of medical certificate of fitness and undergo a health and safety induction, appropriate tool box talks and be issued with the necessary PPE.

4.5.1.10 Where noise is identified as a hazard, the requirements of the Noise Induced Hearing Loss regulations must be complied with and means of compliance is to be stipulated in the H&S Plan. Appropriate PPE shall always be provided.

4.5.1.11 The Principal Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

4.5.1.12 Contractor shall ensure that all ladders onsite are numbered and inspected regularly by a legal appointed personnel and keep record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

4.5.1.13 Principal Contractor shall ensure that use and storage of all explosive powered tools and portable electrical tools are in compliance with relevant legislation. The Principal Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

4.5.1.14 The contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of prevalent on site and the precautions to be followed to avoid or minimise those dangers. During site establishment the construction area should be permanently hoarded-off to prevent access of non-construction staff into the construction area. Appropriate health and safety signage shall always be strategically displayed onsite for awareness's. The contractor has a duty in terms of the OHS ACT to do all that is reasonably practicable to prevent members of the public and others being affected by the construction processes to be aware and put preventative measures in place.

4.5.2 Risk assessment

4.5.2.1 The contractor shall before the commencement of any work on site and during construction work, cause a risk assessment to be performed by a competent person appointed in writing. Such an assessment shall as a minimum:

- a) identify hazards to which persons may be exposed to;
- b) analyse and evaluate the identified risks associated with the identified hazards;
- c) document a plan of safe work procedures, including the use of any personal protective equipment or clothing and the undertaking of periodic "toolbox talks" or inductions before undertaking hazardous work, to mitigate, reduce or control the risks and hazards that have been identified;
- d) provide a monitoring plan; and
- e) provide a review plan.

Note: A risk assessment is an important step in protecting workers as well as complying with the law. It helps to focus on the risks that really matter in a particular workplace – the ones with the potential to cause real harm. Workers and others have a right to be protected from harm caused by a failure to take reasonable control measures. The following four steps are suggested:

- 1) Identify the hazards by looking at what could reasonably be expected to cause harm, ask employees or their representatives what they think, obtain advice from trade associations or publications on health and safety, check manufacturer's instructions or data sheets for chemicals and equipment as they can be very helpful in spelling out the hazards and putting them in their true perspective, review accident and ill-health records, think

about long-term hazards to health (e.g. high levels of noise or exposure to harmful substances) as well as safety hazards etc.

- 2) Identify who may be harmed and how by identifying how individuals and groups of people might be harmed i.e. what type of injury or ill health might occur.
- 3) Evaluate the risks and decide on precautions by doing everything 'reasonably practicable' to protect people from harm i.e. by looking at how things are done, what controls are in place and how the work is organised and comparing this against good practice to see if more can be done to bring practices up to standard. Consider if the hazard can be removed all together, and if not how can the risks be controlled so that harm is unlikely, e.g. try a less risky option (e.g. switch to using a less hazardous chemical); prevent access to the hazard (e.g. by guarding); organise work to reduce exposure to the hazard (e.g. put barriers between pedestrians and traffic); issue personal protective equipment (e.g. clothing, footwear, goggles etc.); and provide welfare facilities (e.g. first aid and washing facilities for removal of contamination).
- 4) Record the findings by writing down the findings of the risk assessment.

4.5.2.2 The contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment.

4.5.2.3 Notwithstanding the provisions of the fall protection plan, the contractor shall ensure that:

- a) all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
- b) no person works in an elevated position, unless such work is performed safely as if working from a scaffold or ladder;
- c) notices are conspicuously placed at all openings where the possibility exists that a person might fall through such openings;
- d) fall prevention and fall arrest equipment is:
 - suitable and of sufficient strength for the purpose or purposes for which it is being used having regard to the work being carried out and the load, including any person, it is intended to bear; and
 - securely attached to a structure or plant and the structure or plant and the means of attachment thereto is suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who is liable to fall;
- e) fall arrest equipment is only used where it is not reasonably practicable to use fall prevention equipment; and
- f) suitable and sufficient steps are taken to ensure, as far as is reasonably practicable, that in the event of a fall by any person, the fall arrest equipment or the surrounding environment does not cause injury to the person.

4.5.2.4 Where roof work is being performed on a construction site, the contractor shall ensure that it is indicated in the fall protection plan that:

- a) the roof work has been properly planned;
- b) the roof erectors are competent to carry out the work;
- c) no employees are permitted to work on roofs during inclement weather conditions or if weather conditions are a hazard to the health and safety of the employees;
- d) prominent warning notices are to be placed where all covers to openings are not of sufficient strength to withstand any imposed loads and where fragile material exists;
- e) the areas mentioned in paragraph (d) are to be suitably barricaded off to prevent persons from entering;
- f) suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and
- g) there is suitable and sufficient guard-rails or barriers and toe-boards or other similar means of protection to prevent, so far as is reasonably practicable, the fall of any person, material or equipment.

4.5.3 Health and safety plans

4.5.3.1 The contractor shall prior to commencing the work to which this specification applies, submit to the employer's health and safety agent for approval a suitable and sufficiently documented health and safety plan, based on this specification, the health and safety specification and the risk assessment that is conducted.

4.5.3.2 The health and safety plan shall as a minimum provide:

- a) the information contained in Table 1 in respect of each of the hazards associated with work falling within the scope of the contract); and
- b) an outline of the manner in which the contractor intends complying with the requirements of this specification.

Table 1: Example of the format of a health and safety plan

What are the hazards relating to work tasks?	Who might be harmed and how?	What are the safe work procedures for the site?	What further action is necessary (monitoring and review)?	Action by whom	Action by when

4.5.3.3 The contractor shall discuss the submitted health and safety plan with the employer's health and safety agent, modify such plan in the light of the discussions and resubmit the modified plan for approval.

4.5.3.4 The contractor shall apply the approved health and safety plan from the date of its commencement and for the duration of the work to which this specification applies.

4.5.3.5 The contractor shall conduct periodic audits for compliance with the approved health and safety plan at intervals agreed upon with the employer's health and safety agent, but at least once every month.

4.5.3.6 The contractor shall review and update the health and safety plan whenever changes to the works are brought about or following the occurrence of an incident.

4.5.4 Responsibilities towards employees and visitors

4.5.4.1 The contractor shall as far as is reasonably practicable, cause every employee to be made conversant with the hazards to his health and safety attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with respect to those hazards or safe work procedures.

4.5.4.2 The contractor shall ensure that all employees under his or her control and the employees of his subcontractors who are performing construction work are:

- a) informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment; and
- b) give project specific inductions to all new employees and visitors on site. Proof of inductions in a form of attendance registers must be kept in the H&S File.
- b) Health and safety induction training shall be issued by a competent person.

4.5.4.3 The contractor shall cause a record of training to be kept which indicates the training dates, the names, identity numbers and job description of all those who attended such training and the name, identity number and competence of the person who provided the training.

4.5.4.4 The contractor shall not allow or permit any employee to enter the site, unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

4.5.4.5 The contractor shall ensure that each visitor to a construction site, save where such visitor only visits the site office and is not in direct contact with the construction work activities:

- a) undergoes health and safety instruction pertaining to the hazards prevalent on the site; and
- b) is provided with the necessary personal protective equipment.

4.5.4.6 The contractor shall provide suitable on-site signage to alert workers and visitors to health and safety requirements. The Principal Contractor shall be responsible to maintain the quality and replacement of signage.

Such signage shall include but not be limited to:

- a) unauthorized entrance prohibited;
- b) signage to indicate what personal protective equipment is to be worn (mandatory); and
- c) activity related signs (general signage).

4.5.4.7 The contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace

4.5.5 Subcontractors

4.5.5.1 The contractor may only subcontract work in terms of a written subcontract and shall only appoint a subcontractor should he be reasonably satisfied that such a subcontractor has the necessary competencies and resources to safely perform the work falling within the scope of the contract. Such a subcontract shall require that the subcontractor:

- a) co-operate with the contractor as far as is necessary to enable both the contractor and sub-contractor to comply with the provisions of the Act; and
- b) as far as is reasonably practicable, promptly provide the contractor with any information which might affect the health and safety of any person at work carrying out work or any person who might be affected by the work of such a person at work or which might justify a review of the health and safety plan.

4.5.5.2 The contractor shall provide any sub-contractor who is submitting a tender or appointed to perform a sub-contract falling within the scope of the contract, with the relevant sections of this specification and the health and safety specification.

4.5.5.3 The contractor shall discuss and negotiate with each subcontractor performing construction work the subcontractor's health and safety plan and approve that plan for implementation.

4.5.5.4 The contractor shall take reasonable steps as are necessary to ensure that:

- a) potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
- b) each subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to their performance of work on site;
- c) all the subcontractor's employees have a valid medical certificate of fitness specific to the construction work which are to be performed which is issued by an occupational health and safety practitioner;
- d) all sub-contractors co-operate with each other to enable each of those sub-contractors to comply with the requirements of the Act and associated regulations;
- e) each subcontractor performing construction work has and maintains a health and safety file containing the relevant information described in 4.2.5; and
- f) each sub-contractor's health and safety plan is implemented and maintained.

4.5.5.5 The contractor shall conduct periodic document verifications and audits for compliance with the approved health and safety plan of each and every sub-contractor working on the site at intervals agreed upon with such subcontractors, but at least once per month.

4.5.5.6 The contractor shall stop any subcontractor from executing construction work which is not in accordance with the contractor's or subcontractor's health and safety plan for the site or which poses a threat to the health and safety of persons.

4.5.5.7 The contractor shall ensure that where changes to the works occur including design changes, sufficient health and safety information and appropriate resources are made available to subcontractor to execute the work safely.

4.5.5.8 The contractor shall ensure that:

- a) every subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site;
- b) potential subcontractors submitting tenders have made provision for the cost of health and safety measures during the construction process; and

- c) every subcontractor has in place a documented health and safety plan prior to commencing any work on site which falls within the scope of the contract.

4.5.5.9 The contractor shall receive, discuss and approve health and safety plans submitted by subcontractors.

4.5.5.10 The contractor shall ensure that all subcontractors are informed regarding any hazard as stipulated in the risk assessment before any work commences, and thereafter at such times as may be determined in the risk assessment.

4.5.5.11 The contractor shall reasonably satisfy himself that all employees of subcontractors are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

4.5.5.12 The contractor shall satisfy himself and ensure that all subcontractor employees deployed in the site are:

- a) informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment; and
- b) issued with proof of health and safety induction training issued by a competent person and carry proof such induction when working on site.

4.5.5.13 The contractor shall undertake a risk assessment together with subcontractors whenever subcontractors are working in close proximity to other subcontractors particularly activities involve excavations, the moving of earth, the movement of heavy machinery and working at heights.

4.5.6 First aid, emergency equipment and procedures

4.5.6.1 The contractor shall where more than five employees are employed at a workplace, provide a first aid box or boxes at or near the workplace which shall be available and accessible for the treatment of injured persons at that workplace. Such first aid boxes shall contain suitable first aid equipment which includes the items listed in the General Safety Regulations issued in terms of the Act.

4.5.6.2 The contractor shall ensure that it appoints a trained Level 2 first aider(s) onsite. The appointed First Aider(s) are to be sent for accredited first aid training **before** starting on site and the contractor shall keep the valid certificates on site. The contractors shall provide an onsite First Aid Box, adequately always

stocked, and ensure that the First Aid Box is accessible and fully controlled by a qualified First Aider. The appointed person shall be readily available during normal working hours, be in possession of a valid certificate of competency.

4.5.7 Facilities for workers

4.5.7.1 The contractor shall provide and keep clean and fit for use at or within reasonable access of the site:

- a) at least one shower facility for every 15 workers;
- b) at least one sanitary facility for every 30 workers;
- c) changing facilities for each gender; and
- d) sheltered eating areas.

4.5.7.2 A contractor shall provide reasonable and suitable living accommodation for the workers at construction sites which are remote from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

4.5.8 Design of temporary work

The contractor shall:

- a) provide the health and safety agent with the names and contract particulars of the designers involved in the design of temporary works;
- b) issue the designers with a copy of the health and safety specification as well as any pertinent information contained in the contract; and
- c) Provide the health and safety agent with certificates issued by the designer of the temporary works that such works are fit for purpose before such works are used in support construction activities.

4.6. Occupational health

4.6.1 The Principal Contractor shall ensure that all employees undergo Pre-employment medical examination and certified fit for duty and conduct Exit- medicals upon demobilization. These medical examinations must be conducted by an Occupational Health Practitioner and fitness certificates must be kept in the OHS File for the duration of the project.

4.6.2 The construction operating during the Coronavirus (Covid-19) pandemic need to ensure they are protecting their workforce and minimising the risk of spread of infection. This includes an establishment if all employees are fit for works with no Covid-19 symptoms. The consideration of how personnel travel to and from site and a range of other applicable matters to manage the spread of the virus on site daily.

5. General Safety

The Contractor Shall be the responsible party on site to ensure that the provisions of the Occupational health and Safety Act No. 85 of 1993 and the Construction Regulations (2014) are strictly adhered to and administered for the duration of the contract (i.e. until the completion certificate is issued). The Mngquma Local Municipality will not be held liable for safety on site.

5.1.1 The Contractor shall at all times ensure that his operations do not endanger any member of the public, or any municipal staff working on, or visiting the site. The Contractor shall maintain barricades and/or fencing for the duration of the Contract.

5.1.2 The Contractor has to erect and maintain road signs for the duration of the contract to warn both public and motorists about construction activities taking place. If the Employers Agent deems the road where the Contractor is working busy, the Contractor shall provide an alternative route for both public and motorists.

5.1.3 The Contractor has to take cognisance of the prevalence of STD's, TB and waterborne diseases. The Contractor must ensure the safety of his workers and surrounding community against the spread of these diseases.

5.2 HIV/AIDS Awareness

The following are the minimum requirements to be provided by the Contractor:

- Monthly talks on HIV and AIDS
- Provision of condoms
- Voluntary counselling and testing (VCT's)
- Company policy on HIV/AIDS.

6. PENALTIES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance, the Principal Contractor or other Contractor shall not have a claim for extension of time or any other compensation.

In cases of any **repetitive non-conformances**, the non-conforming party shall be penalised as per the table below:

The following table constitute examples of the types of non-conformances that will attract penalties:

Minor: Fine: R50/count	Medium: Fine: R500/count and a nonconformance	Severe: Fine: R5000/count, a nonconformance and/or activity stoppage
Non-use of basic PPE supplied (e.g. Overalls, Safety Shoes, Hardhats) per person	Toilets not supplied or regularly serviced; lack of drinking water	Principal Contractors working without OHS Plan approval or OHS file onsite
Non completion of registers for tools, plant and equipment on site	Principal contractor not audited or sub-contractor not audited by the principal contractor	Workers transported in contravention of the OHS Plan or legal requirements
Lack of OHS signage at work areas	Working without training or outstanding appropriate OHS Method Statements / SWP / HIRA	Invalid/expired Letters of Good Standing with licensed Compensation Insurer
Tools and equipment identified in poor condition/ defective during inspections	Non-conformances identified during the previous audit and not addressed within the agreed time frame	Allow people to work at heights without proper training and PPE
Outstanding legal appointments	No internal monthly Audit Report on file.	Fall Arrest Harness not tied off / worn when a risk of falling exists
	No Medical Certificates of Fitness for relevant workers	Threat to the OHS of persons
	Unsafe work at heights	3 rd Offence on Unsafe Work at Heights

	Poor Housekeeping and unsafe stacking	Failure to submit consolidated H&S report and relevant document.
	Public safety compromised- poor access control to site. Hoarding/ barricade not installed/ maintained	
	Emergency equipment (e.g. fire extinguisher, first aid box) not provided	

Note 1: Penalties incurred for non-compliance will not relieve the Contractor from any claims for damages under common law. For example, claims arising from damage to persons or property due to fire, or injury to persons or livestock due to unmarked hazards, will remain the Contractors responsibilities.

Note 2: The imposition of the penalties does not replace Contractors liabilities stipulated in relevant legislation for contravention or failure to comply. The client shall not be responsible for any penalties imposed on the Contractor in terms of any statutory requirements.

SPECIFICATION ENV: ENVIRONMENTAL MANAGEMENT

1.Scope

This Specification covers the requirements for controlling the impact on the environment of construction activities.

2. Interpretations

This specification does not remove the responsibility of the Client to obtain the necessary approvals envisaged in terms of Regulations in terms of Chapter 5 of the National Environmental Management Act (Act No. 107 of 1998).

The following supporting documents shall apply but not limited:

1. National Environmental Management Act (Act No.107 of 1998).
2. Forest Act, No 122 of 1984.
3. Provincial Nature Conservation Ordinances.
4. Minerals and Petroleum Resources Development Act, No 28 of 2002.
5. National Water Act, 1998.
6. Health Act, No 63 of 1977
7. Conservation of Agricultural Resources Act, No 43 of 1983. Particularly Sections 6, 7, 25 and GN R1048.
8. Atmospheric Pollution Prevention Act, No 45 of 1965.
9. SANS 1200 A or SANS 1200 AA, as applicable;

2. Definitions.

For the purposes of this Specification the definitions and abbreviations given in the applicable specifications listed and the following definitions and abbreviations shall apply:

3.1 Environment

Environment means the surroundings within which humans exist and that are made up of -

- i. the land, water and atmosphere of the earth;
- ii. micro-organisms, plant and animal life;
- iii. any part or combination of i) and ii) and the interrelationships among and between them;
- iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.

3.2 Potentially Hazardous Substance

A Potentially Hazardous Substance is a substance which, in the reasonable opinion of the Engineer/ECO/EO, can have a deleterious effect on the environment.

3.3 Method Statement

The Method Statement is a written submission by the Contractor to the Engineer/ECO/EO, in response to the Specification or a request by the Engineer/ECO/EO, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, identified by the relevant specification or the Engineer/ECO/EO when requesting the Method Statement, in such detail that the Engineer/ECO/EO is enabled to assess whether the Contractor's proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications.

The Method Statement shall cover applicable details with regard to:

- i. construction procedures,
- ii. materials and equipment to be used,
- iii. getting the equipment to and from site,
- iv. how the equipment/ material will be moved while on site,
- v. how and where material will be stored,
- vi. the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur,
- vii. timing and location of activities,
- viii. compliance/ non-compliance with the Specifications,
- ix. any other information deemed necessary by the Engineer/ECO/EO.

3.4 Reasonable

Reasonable means, unless the context indicates otherwise, reasonable in the opinion of the Engineer/ECO/EO after he has consulted with a person, not an employee of the Client Directorate, suitably experienced in "environmental implementation plans" and "environmental management plans" (both as defined in the National Environmental Management Act, No 107 of 1998).

3.5 Solid Waste

Solid waste, means all solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, domestic waste, dead vegetation, asphalt products, etc.

3.6 Contaminated Water

Contaminated water is water contaminated by the Contractor's activities containing cements, concrete, lime, paint products, thinners, turpentine, chemicals, fuels, oils, washing detergents, etc.

3.7 Working Area

The Working Area means any area within the boundaries of the Site where construction is taking place.

3.8 Contractor's Camp

The Contractor's Camp is the area designated for all the Contractor's temporary offices, storage areas, plant parking areas, staff welfare facilities etc.

3.9 Borrowing activities

Where Local borrow pits are used to source material, the contractor must ensure the following:

- That borrow pits are secured to prevent unauthorised access.
- That relevant caution signage is displayed to forewarn motorists and members of the community with regards to borrow pit activities as well as movement of construction vehicles.
- That when digging the contractor digs sideways creating a slope and not downwards to create a deep dam.
- That approval from the local chief is obtained and filed for use of the borrow pit.
- That when done with the sourcing of materials the borrow pit is rehabilitated so that it does not create a dam that will expose the children to a possibility of drowning.

4. Requirements

4.1 Materials

4.1.1 Materials handling, use and storage

- The Contractor shall ensure that any delivery drivers are informed of all procedures and restrictions (including "no go" areas) required to comply with the Specifications. The Contractor shall ensure that these delivery drivers are supervised during off loading, by someone with an adequate understanding of the requirements of the Specifications.
- Materials shall be appropriately secured to ensure safe passage between destinations. Loads including, but not limited to sand, stone chip, fine vegetation, refuse, paper and cement, shall have appropriate cover to prevent them spilling from the vehicle during transit. The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.
- All manufactured and/ or imported material shall be stored within the Contractor's camp, and, if so required by the Project Specification, out of the rain. All lay down areas outside of the construction camp shall be subject to the Engineer/ECO/EO's approval. Provide specifications for location, demarcation, permitted heights, stabilisation, weed-, dust- and erosion control of stockpiles.

4.1.2 Hazardous substances

- Hazardous chemical substances (as defined in the Regulations for Hazardous Chemical Substances) used during construction shall be stored in secondary containers. The relevant Material Safety Data Sheets (MSDS) shall be available on Site. Procedures detailed in the MSDSs shall be followed in the event of an emergency situation.
- If potentially hazardous substances are to be stored on site, the Contractor shall provide a Method Statement detailing the substances/ materials to be used, together with the storage, handling and disposal procedures of the materials. Hazardous substances shall be stored out of flood risk areas and disposal of these substances shall be at a licensed waste disposal facility.

4.2 Plant

4.2.1 Fuel and Oil

- Unless allowed by the Project Specification, fuel shall not be stored on site but shall be transported to the site as and when required.
- Where reasonably practical, plant shall be refuelled at a designated re-fuelling area or at the workshop as applicable. If it is not reasonably practical, then the surface under the temporary

refuelling area shall be protected against pollution to the reasonable satisfaction of the Engineer/ECO/EO prior to any refuelling activities.

- The Contractor shall ensure that there is always a supply of absorbent material (not saw dust) readily available to absorb/ breakdown and where possible is designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to handle a minimum of 200l of hydrocarbon liquid spill. This material must be approved by the Engineer/ECO/EO prior to any refuelling or maintenance activities.
- A Method Statement must be provided detailing how these liquids will be stored, handled and disposed of. SANS 10131: Installation of above-ground tanks must be adhered to.

4.2.2 Ablution facilities

- Washing, whether of the person or of personal effects and acts of excretion and urination are strictly prohibited other than at the facilities provided.
- The Contractor shall ensure that no spillage occurs when toilets are cleaned or emptied and that the contents are properly stored and removed from the Site.
- Provision shall be made for employee facilities including: shelter, toilets and washing facilities.
- Toilet facilities supplied by the Contractor for the workers shall occur at a maximum ratio of 1 toilet per 30 workers.
- Sanitation facilities shall be located within 100 m from any point of work, but not closer than 50 m to any water body.
- Toilets shall be within the Contractor's Camp and at work areas more than 50m from the Contractor's Camp.
- All temporary/ portable toilets shall be secured to the ground to the satisfaction of the Engineer/ECO/EO to prevent them toppling due to wind or any other cause.
- These facilities shall be maintained in a hygienic state and serviced regularly.
- Toilet paper shall be provided.
- Discharge of waste from toilets into the environment and burial of waste is strictly prohibited.

4.2.3 Eating areas

- The Contractor shall designate eating areas, subject to the approval of the Engineer/ECO/EO. These shall be clearly demarcated.
- The feeding or leaving of food for any animal is strictly prohibited. Sufficient bins shall be present in this area.
- Any cooking on Site shall be done on well-maintained gas cookers with fire extinguishers present.

4.2.4 Solid waste management

- The site shall be kept neat and clean at all times. Littering is prohibited.
- No on-site burying or dumping of any waste materials, vegetation, litter or refuse shall occur.
- The Contractor shall provide scavenger and weatherproof bins with lids of sufficient number and capacity to store the solid waste produced on a daily basis.
- The lids shall be kept firmly on the bins at all times.
- Bins shall not be allowed to become overfull and shall be emptied regularly, at least once a week. Waste from bins may be temporarily stored on Site in a central waste area that is weatherproof and scavenger-proof, and which the Engineer/ECO/EO has approved.
- All solid waste shall be disposed of off-site at an approved landfill site. The Contractor shall supply the Engineer/ECO/EO with a certificate of disposal.

4.2.5 Contaminated Water Management

- Potential pollutants of any kind and in any form shall be kept, stored, and used in such a manner that any escape can be contained and the water table not endangered.
- Water containing such pollutants as cements, concrete, lime, chemicals and fuels shall be discharged into a conservancy tank for removal from the site to a licensed disposal facility.
- This particularly applies to water emanating from concrete batching plants and concrete swills, and to runoff from fuel depots/workshops/truck washing areas.
- Wash down areas shall be placed and constructed in such a manner so as to ensure that the surrounding areas are not polluted.
- Should it be necessary to dispose of contaminated water into the municipal sewer or stormwater system, written permission is required from the Engineer/ECO/EO/relevant Municipal Official.
- Should contaminated water be released into the environment, specifically into a water course, monitoring thereof shall commence in accordance to the National Water Act, 1998 (Act 36 of 1998)).
- Contaminated water must not be released into the environment without authorisation from the relevant authority.
- A Method Statement is required from the Contractor detailing the management of contaminated water. The Contractor shall notify the Engineer/ECO/EO immediately of any pollution incidents on Site.

4.2.6 Site structures

- All site establishment components (as well as equipment), shall be positioned to limit visual intrusion on neighbours and the size of area disturbed.

- The type and colour of roofing and cladding materials to the Contractor's temporary structures shall be selected to reduce reflection.

4.2.7 Lights

- The Contractor shall ensure that any lighting installed on the site for his activities does not interfere with road traffic or cause a reasonably avoidable disturbance to the surrounding community or other users of the area.
- Lighting installed shall, as far as practically possible, be energy efficient.
- Lighting utilised on site shall be turned off when not in use.

4.2.8 Workshop, equipment maintenance and storage

- Where practical, all maintenance of equipment and vehicles on Site shall be performed in the workshop.
- If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain the approval of the Engineer/ECO/EO prior to commencing activities.
- The Contractor shall ensure that in his workshop and other plant maintenance facilities, including those areas where, after obtaining the Engineer/ECO/EO 's approval, the Contractor carries out emergency plant maintenance, there is no contamination of the soil, water sources or vegetation.
- The workshop shall have a smooth impermeable floor either constructed of concrete or thick plastic covered with sufficient sand to protect the plastic from damage.
- The floor shall be bunded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil).
- The Engineer/ECO/EO must approve a Method Statement detailing the design and construction of the workshop.
- When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants.
- Drip trays shall also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles).
- Drip trays, sumps and bunds must be emptied regularly, especially before a known rain event and after a rain event, and the contents disposed of at a licensed disposal facility.
- All vehicles and equipment shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from the Site.
- The washing of equipment shall be restricted to urgent or preventative maintenance requirements only.
- All washing shall be undertaken in the workshop or maintenance areas, and these areas must be equipped with a suitable impermeable floor and sump/oil trap.
- The use of detergents for washing shall be restricted to low phosphate/ nitrate and low sudsing-type detergents.

4.3 Methods and Procedures

4.3.1 Method Statements

- The Contractor shall not commence the activity until the Method Statement has been approved and shall, except in the case of emergency activities, allow a period of two weeks for approval of the Method Statement by the Engineer/ECO/EO. Such approval shall not unreasonably be withheld.

- The Engineer/ECO/EO may require changes to a Method Statement if the proposal does not comply with the specification or if, in the reasonable opinion of the Engineer/ECO/EO, the proposal may result in, or carries a greater than reasonable risk of, damage to the environment in excess of that permitted by the Specifications.
- Approved Method Statements shall be readily available on the site and shall be communicated to all relevant personnel. The Contractor shall carry out the Works in accordance with the approved Method Statement. Approval of the Method Statement shall not absolve the Contractor from any of his obligations or responsibilities in terms of the Contract.

4.3.2 Environmental Awareness Training

- Within seven days of the Commencement Date, the Contractor's site staff including foremen, and site management staff shall attend an environmental awareness training course. The Contractor shall liaise with the Engineer prior to the Commencement Date to fix a date and venue for the course.
- The contractor shall provide a suitable venue with facilities as required by the Specification Data and ensure that the specified employees attend the course.
- Any new employees coming on to the site after the initial training course and the Contractor's suppliers and subcontractors shall also attend this course.
- The Contractor shall ensure that all attendees sign an attendance register, and shall provide the Engineer with a copy of the attendance register the day after each course.

4.3.3 Contractor's Environmental Representative

- The Contractor shall appoint an environmental representative (called an Environmental Site Officer) who shall be responsible for undertaking a daily site inspection to monitor compliance with this Specification and the relevant Project Specification.
- The Contractor shall forward the name of the environmental representative to the Engineer/ECO/EO for his approval seven days prior to the date of the environmental awareness training course.
- The Contractor's environmental representative shall complete daily Site Inspection Forms and these shall be submitted to the Engineer/ECO/EO once a week.

4.3.4 Site Division and Site Demarcation

- The Contractor shall restrict all his activities, materials, equipment and personnel to within the area specified.
- The area of the site shall be fenced where possible.

- A Method Statement detailing the layout and method of establishment of the construction camp (including all buildings, hostels, offices, lay down yards, vehicle wash areas, fuel storage areas, batching areas and other infrastructure required for the running of the project) shall be provided.

4.3.5 Access routes / haul roads

- On the Site, and, if so required by the Project Specification, within such distance of the Site as may be stated, the Contractor shall control the movement of all vehicles and plant including that of his suppliers so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic and that all relevant laws are complied with. In addition, such vehicles and plant shall be so routed and operated as to minimise disruption to regular users of the routes not on the Site.
- On gravel or earth roads on Site and within 500m of the Site, the vehicles of the Contractor and his suppliers shall not exceed a speed of 20 km/hr as far as possible the Contractor shall use existing access and haul routes.
- Damage to the existing access roads as a result of construction activities shall be repaired to the satisfaction of the Engineer/ECO/EO, using material similar to that originally used.
- The cost of the repairs shall be borne by the Contractor.

4.3.6 Construction Personnel Information Posters

- As required by the Project Specification, the Contractor shall erect and maintain information posters for the information of his employees depicting actions to be taken to ensure compliance with aspects of the Specifications.
- Such posters shall be erected at the eating areas and any other locations specified by the Engineer/ECO/EO.

4.3.7 Fire Control

- No fires may be lit on site. Any fires, which occur, shall be reported to the Engineer/ECO/EO immediately. Smoking shall not be permitted in those areas where it is a fire hazard.
- Such areas shall include the workshop and fuel storage areas and any areas where the vegetation or other material is such as to make liable the rapid spread of an initial flame. In terms of the National Environmental Management: Air Quality Act and Community Fire Safety Bylaw, burning is not permitted as a disposal method.
- The Contractor shall ensure that there is basic fire-fighting equipment available on Site at all times. This shall include at least rubber beaters when working in urban open spaces and fynbos areas, and at least one fire extinguisher of the appropriate type when welding or other “hot” activities are undertaken.

4.3.8 Emergency Procedures

- The Contractor shall ensure that his employees are aware of the procedure to be followed for dealing with spills and leaks, which shall include notifying the Engineer/ECO/EO and the relevant authorities.
- The Contractor shall ensure that the necessary materials and equipment for dealing with spills and leaks is available on Site at all times.
- Treatment and remediation of the spill areas shall be undertaken to the reasonable satisfaction of the Engineer/ECO/EO.
- In the event of a hydrocarbon spill, the source of the spillage shall be isolated, and the spillage contained. The area shall be cordoned off and secured.
- The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/ breakdown and where possible is designed to encapsulate minor hydrocarbon spillage.
- The quantity of such materials shall be able to handle a minimum of 200 l of hydrocarbon liquid spill.

4.3.9 Safety

- Telephone numbers of emergency services, including the local firefighting service, shall be posted conspicuously in the Contractor's office near the telephone.
- No unauthorised firearms are permitted on Site.

4.3.10 Community Relations

- The Contractor shall record any complaints or queries from the public, as well as the action taken in response, in the site request book.
- Complaints and associated responses shall be communicated to the Engineer on a weekly basis.
- The Contractor's contact details shall be posted on the site board to enable the public to telephone should they have any queries or complaints.

4.3.11 Protection of Natural Features

- The Contractor shall not deface, paint, damage or mark any natural features (e.g. rock formations) situated in or around the Site for survey or other purposes unless agreed beforehand with the Engineer/ECO/EO.
- Any features affected by the Contractor in contravention of this clause shall be restored/ rehabilitated to the satisfaction of the Engineer/ECO/EO.

- The Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

4.3.12 Protection of Flora and Fauna

- Except to the extent necessary for the carrying out of the Works, flora shall not be removed, damaged or disturbed nor shall any vegetation be planted.
- Trapping, poisoning and/ or shooting of animals is strictly forbidden. No domestic pets or livestock are permitted on Site.
- Where the use of herbicides, pesticides and other poisonous substances has been specified, the Contractor shall submit a Method Statement.

4.3.13 Erosion and Sedimentation Control

- The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities and shall, in addition, comply with such detailed measures as may be required by the Project Specification.
- Where erosion and/or sedimentation, whether on or off the Site, occurs despite the Contractor complying with the foregoing, rectification shall be carried out in accordance with details specified by the Engineer/ECO/EO.
- Where erosion and/or sedimentation occur due to the fault of the Contractor, rectification shall be carried out to the reasonable requirements of the Engineer/ECO/EO.
- Any runnels or erosion channels developed during the construction period or during the vegetation establishment period shall be backfilled and compacted, and the areas restored to a proper condition.
- Stabilisation of cleared areas to prevent and control erosion shall be actively managed. The method of stabilisation shall be determined in consultation with the Engineer/ECO/EO.

4.3.14 Protection of Archaeological and Palaeontology Remains

- The Contractor shall take reasonable precautions to prevent any persons from removing or damaging any fossils, coins, articles of value or antiquity and structures and other remains of archaeological interest discovered on the Site, immediately upon discovery thereof and before removal.
- The Contractor shall inform the Engineer immediately of such a discovery and carry out the Engineers instructions for dealing therewith.
- All works within the vicinity of the discovery must cease immediately and the area shall be cordoned off until such a time as the Engineer authorises resumption of the works in writing.

4.3.15 Stockpiling

- The Engineer shall identify suitable sites for stockpiling.
- Stockpiles shall be convex in shape, shall be no higher than 2m and shall be located so as to cause minimal disturbances. Where required, appropriate precautions shall be taken to prevent the erosion and limit the compaction of the stockpile.
- The Contractor shall ensure that all stockpiles do not cause the damming of water or run off, it is itself washed away.

4.3.16 Dust

- The Contractor shall take reasonable measures to minimise the generation of dust as a result of construction activities to the satisfaction of the Engineer.
- Appropriate dust suppression measures, e.g. dampening with water, shall be used when dust generation is unavoidable, particularly during prolonged periods of dry weather.
- Dust suppression measures shall be agreed upon in consultation with the Engineer

4.3.17 Dealing with traffic

- The contractor shall ensure that adequate warning signage is placed at intersections with established roads in accordance with traffic safety requirements.

4.3.18 Existing services and infrastructures

- The Contractor shall ensure that existing services, (road, pipelines, power lines and telephone services) are not damaged or disrupted unless required by the Contract and then this shall only take place with the permission of the Engineer.
- The Contractor will be responsible for the repair and reinstatement of any existing infrastructure that is damaged or services which are interrupted. Such repair or reinstatement will be to the Contractor's cost, and shall receive top priority over all other activities. A time limit may be stipulated by the Project Manager in consultation with the Engineer.
- Any trenching that restricts access to resident's property is to be adequately barricaded during work and restored within 24 hours of opening.
- Temporary access is to be provided to occupied premises at all times. Where cross-overs are in place, these are to have adequate safety barricades so as to not cause harm.

4.3.19 Sharing of common facilities between different contractors

- Where different contractors operate on the same site, it is essential that there be cooperation between the different parties to limit the work, and access, footprint on the work site. In the case of access roads, any existing facilities are to be considered first for use.
- Where necessary the contractors shall draw up an agreement for the shared responsibilities of the site and to define responsibilities for opening, maintenance and closure (rehabilitation).
- In the event of a contractor electing not to share a resource, they may not proceed with an alternative approach until approval from the PECO and the engineer is available in writing.
- Unnecessary work will attract an immediate environmental penalty.

4.13.20 Control of storage areas

- All areas used for the storage of materials shall be clearly demarcated and should not allow unauthorised access especially if there is any danger to the residents.
- The storage of sand, stone, bricks and large pipes is not to take place on areas without removing and protecting topsoil. Rehabilitation of the site after use is the contractor's responsibility.
- Care must be taken that pipe stacks and coils do not pose a danger to the general public.
- Stack heights are not to exceed 1.5 metres. Large pipe sections are to be placed in such a manner that they are not able to roll and there must be adequate fire breaks in place to ensure that the storage site is safe and secure.

4.13.21 Open trench protection

- Adequate measures must be taken to prevent humans or stock from injuring themselves by falling into any open work areas on the site.
- Particular care is to be taken in public access ways.
- Any water that is dammed on the site, and exceeds 1.2 metres depth, shall have a functional life buoy and 30 metres of cord within 20 metres of the site.
- Staff shall be trained in the use of the life buoy as a rescue aid.
- Compliance with Requirements and Penalties

4.13.22 Protection of the public

- The Contractor shall be responsible for protecting the public from anything dangerous to persons or property and for the safe and easy passage of pedestrians, vehicular traffic and rail traffic in those areas affected by the Works.
- This clause shall apply from the time that any portion of the Works shall be commenced until the completion of all outstanding works, which the Contractor has undertaken to finish during the

period of maintenance. Any excavation, material dumps, spoil dumps or other obstructions likely to cause injury to any persons or animal shall be suitably barricaded.

5.1 Compliance

- Environmental management is concerned not only with the final results of the Contractor's operations to carry out the Works but also with the control of how those operations are carried out. Tolerance with respect to environmental matters applies not only to the finished product but also to the standard of the day-to-day operations required to complete the Works.
- It is thus required that the Contractor shall comply with the environmental requirements on an ongoing basis and any failure on his part to do so will entitle the Engineer/ECO to certify the imposition of a fine subject to the details set out in the Project Specification.
- The Engineer/ ECO shall have the right to order work to be stopped in the event of significant infringements of the Environmental Specifications until the situation is rectified in compliance with the specifications. In the event of this happening the Contractor shall not be entitled to claim for delays.
- In terms of compliance with this specification all contractors are required to achieve an overall compliance level of more than 75%.

6. Measurement and Payment

6.1 Basic principles

- Penalties incurred for non-compliance will not relieve the Contractor from any claims for damages under common law. For example, claims arising from damage to persons or property due to fire, or injury to persons or livestock due to unmarked hazards, will remain the Contractors responsibilities.
- Significant violation of the EMP specifications will be adjudicated using an Impact Level rating system. The rating system is defined as follows:

6.1.1 Level 1 incident

Environmental incidents not covered in Level 2 and Level 3.

6.1.2 Level 2 incident

Incidents which resulted in any of the following:

- a) A moderate impact on the physical or biological environment (air, land, water or habitats) with limited impairment of ecosystem function or surface/ground water resource.
- b) An inconvenience/disturbance/disruption/annoyance (including odour, dust, noise, traffic problem, loss of water supply) of moderate duration and with medium impact.
- c) A minor impact on fauna or flora in a statutory designated area or a declared no-go area.

6.1.3 Level 3 incident

Incidents which resulted in any of the following:

- a) A significant impact on the physical or biological environment (air, land, water or habitats) with extensive or long-term impairment of ecosystem function or surface/ground water resource.
- b) An inconvenience/disturbance/disruption/annoyance (including odour, dust, noise, traffic problem, loss of water supply) of long duration and/or with a long-term effect on the environment and/or community. An impact on protected species or habitats.
- c) The penalties that apply to the above incident rating system shall be determined as follows:

Penalty - Level 1 incident: R -1 000.00

Penalty - Level 2 incident: R -2 500.00

Penalty - Level 3 Incident: R -5 0000.00

Note: The imposition of the penalties does not replace Contractors liabilities stipulated in relevant legislation for contravention or failure to comply. The client shall not be responsible for any penalties imposed on the Contractor in terms of any statutory requirements. Penalties incurred for non compliance will not relieve the Contractor from any claims for damages under common law. For example, claims arising from damage to persons or property due to fire, or injury to persons or livestock due to unmarked hazards, will remain the Contractors responsibilities.

PART C4: SITE INFORMATION

SITE INFORMATION

The proposed project is situated in suburb of Butterworth at Extension Seven (7) 32°19'58"S
28°09'21"E